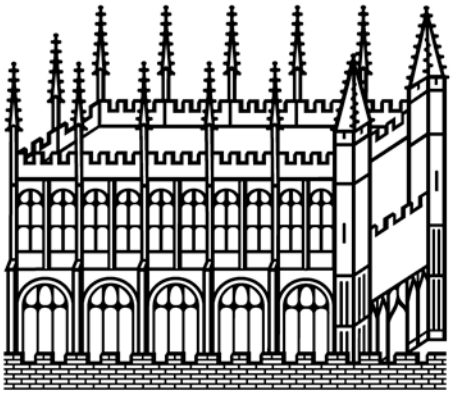

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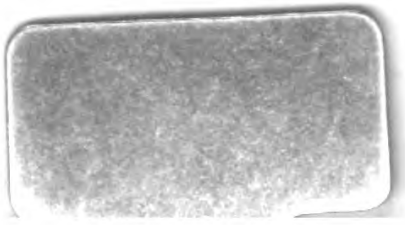



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THE

MEDICAL

QUARTERLY REVIEW.

VOL. III.



LONDON:

J. SOUTER, 73, ST. PAUL'S CHURCH-YARD;

SOLD ALSO BY BURGESS AND HILL; J. CHURCHILL; E. COX; J. HIGHLEY; RENSHAW AND RUSH, &c.

W. JACKSON, NEW YORK, AGENT FOR THE UNITED STATES.

1835.

J. AND C. ADLARD, PRINTERS,
BARTHOLOMEW CLOSE.

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No. V. OCTOBER 1, 1834.

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THE

MEDICAL QUARTERLY REVIEW.

ADDRESS.

It has long been the custom of belligerents, at the commencement of a war, to issue a manifesto, in which they declare the grounds of the contest, and the objects which it is intended to attain: and, at the opening of a literary campaign, it is usual to send forth a similar declaration, which is called a Prospectus. Again, the General publishes his dispatches, in which he enumerates the fertile provinces conquered, and the hostile armies destroyed: and we see no reason why an Editor should not, in like manner, give a Retrospective Review of his own Journal, and touch upon the valuable works analysed by the able pens of his contributors, or hint the fact, that in his pages sundry quackish sciolists have met with a tithe, or so, of the castigation they merited.

In the first place, then, we have given a number of real reviews, and not merely dry abridgments, or extracts, with a few sentences interposed to keep the peace between them. Thus, for example, the reviews of Lawrence, Mayo, Uwins, Magendie, Roupell, Wilson Philip, and Thomson, will be found to exhibit something like a general view of the subject under consideration, or, at least, will be found replete with matter not derived from the book reviewed. In the case, indeed, of some German works of great merit, which were not likely to fall into our readers' hands, we have gone further than this, and have given such an abstract, as, for ordinary purposes, may supersede the necessity of consulting the original. As examples of these epitomizing reviews, we may cite those of Beck *upon Bronchocele*, and Kramer *on Chronic Deafness*.

We promised, too, in our Prospectus, that even the smallest features of current medical literature should not escape that

faithful chronicler, the Medical Quarterly Review; and in this point also we flatter ourselves that we have amply redeemed our pledges. Without the formality of a regular list, we have given something like a *catalogue raisonnée* of new books, good, bad, and indifferent: and if the latter classes have been more numerous than we could have wished, we hope that we shall not be blamed for having announced the fact with the most Rhadamanthine impartiality. But we are sure that we shall not be blamed; for, if there is one quality which above all others is universally appreciated, it is honesty; and, whatever faults may be found or fancied in our 1000 pages, we are quite certain that partiality and prejudice are not among the number. Some well-meaning persons, indeed, accustomed to the honied phrases of courtly criticism, may perceive nothing but harshness in the voice of truth; but we would ask these soft and milky readers to inquire what has been the fate of the books which we have condemned, and, if our censures have not been confirmed by the trunk-maker and the pastrycook, we will readily confess that our judgment has been too severe; but, if these abortive attempts have already sunk into oblivion, we must still continue our course, and, in the language of Aristophanes, "call a spade a spade, and Cleon a knave."

Our ORIGINAL COMMUNICATIONS have been more numerous than we expected, and, did we not exercise the most fastidious judgment in the selection, they might be far more numerous; but in this single point we confess that we lean rather towards rigour than indulgence; and contributions authenticated by the most respectable names have been rejected, when deficient in instruction or novelty.

In our COLLECTANEA we have endeavoured to avoid the Scylla as well as the Charybdis of Journalists: we have neither confined ourselves to three or four meagre quotations, nor have given a chaos of extracts, through which no human patience could toil; and, without neglecting practical matter, we have willingly inserted interesting facts from many of the cognate sciences, believing that these are the things, "quæ quamvis medicum non faciant, aptiorem tamen ad medicinam reddunt."

Such have been the chief points at which we have aimed, —with what success it is for the profession to determine.

REVIEWS.

On the Anatomy and Diseases of the Neck of the Bladder, and of the Urethra: being the Substance of the Lectures delivered in the Theatre of the Royal College of Surgeons, in the year 1830, *and in the Westminster Hospital, in* 1833 *and* 1834, by G. J. GUTHRIE, F.R.S., Surgeon to the Westminster Hospital, and to the Royal Westminster Ophthalmic Hospital, &c.—London, 1834. 8vo. pp. 284; three coloured Plates.

THERE are certain diseases which, either from their importance, the frequency of their occurrence, or the great relief afforded them by our art, are at all times interesting to the profession; and there are also certain authors who, from their reputation and talents, at once command public attention to their works. Among such authors Mr. Guthrie most deservedly ranks high; and the diseases of the urethra are pre-eminent in interest, perhaps, above all others which fall to the care of the surgeon. Hence, when the present work was announced, our expectations were raised to no ordinary degree; but we must confess that, since its perusal, they have given place to astonishment. Originality we expected from Mr. Guthrie's zealous industry and known independence of mind; but we were not prepared to find an attempt at novelty in every branch of the subject. It avails not with our author that these diseases, and the structures in which they arise, have been studied with the greatest assiduity, by the ablest surgeons and the most dexterous anatomists; their researches, in his opinion, have led only to errors, while their mis-statements are at least as numerous. On the anatomy, the physiology, and pathology of the bladder, urethra, and prostate gland, new facts are stated, and new hypotheses broached. Such a work would naturally excite attention, though written by an unknown hand; but, coming from Mr. Guthrie, it deserves, and shall receive, our most diligent and impartial consideration.

The first lecture is devoted to the *Anatomy of the Bladder*, which is described after the manner of the French anatomists, an abstract of which may be found in Sir Charles Bell's Treatise on Anatomy. Our author states that he differs from that distinguished anatomist as to the general insertion of the muscles of the ureters, which he believes to be inserted not into the posterior margin of the prostate gland, but into the uvula vesicæ. He adds, however, that the fibres of the bladder vary much with regard to the man-

ner of their insertion into the prostate, and that some of them may follow the course mentioned by Sir C. Bell. We apprehend that there is not much difference in the statements of these two writers; for Sir C. Bell does not say that they are inserted into the posterior margin of the prostate: his words are these, "Where these columns unite, they are most fleshy, and their fibres are more intricate; then, directing their course towards the lower and backmost part of the prostate, they degenerate into tendon, and are inserted into the portion called the third lobe of the prostate."* Now, when the relative situations of the transverse lobe of the prostrate, and of the uvula vesicæ, are examined, the one will be found just anterior to the other, and so closely in contact, that, though admirably adapted for matter of disputation, it can never be of the slightest importance whether the fibres of these muscles are inserted into the one or the other. But, be that as it may, the truth can only be established by frequent and very minute dissection; and, as our attention has never been specially directed to this subject, we do not feel ourselves authorised to give any opinion.

We are, however, more competent to form a judgment on the value of a new hypothesis, brought forward by our author, as to the use of the oblique entrance of the ureters into the bladder. We quote the passage containing it in his own words:

"It is presumed that the ureters have no valves at their orifices to prevent the reflux of urine into them after it has passed into the bladder, that they enter obliquely to answer this purpose, and that the coats of the distended bladder, pressing on them in their oblique passage, prevents this reflux from taking place. It appears to me that this mechanism is for the very reverse object; and that the ureter opens on the peculiar condensed structure, in order that the orifice may be constantly patulous; and the obliquity of the passage through the coats is for the purpose of giving facility to its being pressed upon by the muscular coats of the bladder, when the viscus is in a distended state, and in order to delay, if not to prevent, the further flow of urine into it. When the bladder is contracted and empty, the urine passes readily into and gradually dilates it, until the desire for expulsion comes on, and leads to its evacuation; but a little more or a little less seems to have no influence in preventing the urine from finding its way in, the weight of urine descending from the kidney, readily overbalancing to a certain point the resisting power of the coats of the bladder. When the bladder is however distended, its coats no longer yield easily, the ureter is pressed upon by the muscular wall in its passage through it, and the further entrance of urine is in a great measure prevented. If this process be

* Bell's Anatomy, vol. iii. p. 395, sixth edition.

long continued, the ureter above this part dilates from the size of a crow's quill to that of a man's thumb, and even larger; the pelvis of the kidney also dilates, a low or chronic inflammation is induced, the secretory organs are pressed upon and partially removed, so that the kidney may become almost an empty bag separated by partitions, indicating only the former existence of its lobes. A total suppression of the secretion may under these circumstances take place at any time. The most remarkable example of the kind which has come under my observation occurred in the case of a lady, who suffered from a cancer of the uterus; the disease after a time extended towards the ureters, which at last were embraced and pressed upon by it as they entered the bladder. The lady, as this took place, began to suffer more than commonly from derangement in her urinary apparatus; the bladder was found ultimately, on passing the catheter, to contain little or no water; she fell into a state of low fever, became paralytic, afterwards comatose, and died. On examination, the ureters were found impervious at the part where they were grasped by the diseased structure; above this they were greatly enlarged, the kidneys were also dilated, and she had died paralytic and apoplectic, as all persons do in whom the suppression of the secretion is complete. The same changes take place, as I shall hereafter show, in most cases of chronic disease of the bladder; and it is a provision of nature for which this mechanism is intended, to prevent the too rapid flow of urine into the bladder, rather than to prevent a distention of the ureters, which could not, I believe, occur in this way, for some part of the bladder or urethra would yield by rupture or ulceration before the pressure on the secreting vessels of the kidney would be so great as to put a stop to their office, or to dilate the ureters. Nature can accommodate herself for several days, and in some instances for weeks, to a complete suppression of the secretion of urine; and for a very long time to a partial secretion of it. If the natural quantity usually secreted varies from two to two pints and a half in the twenty-four hours, and an obstruction takes place preventing its evacuation, the bladder will be considerably distended; but the same quantity will not be secreted during the second twenty-four hours, and still less during the third; when relief must be obtained by surgical means, if it does not occur otherwise, or great mischief will ensue. The provision of nature is therefore, as far as possible, to protect the bladder and urethra, rather than the constitution of the patient, the bladder and urethra being more susceptible of mischief than the system at large. I am more disposed to believe that the two bands on the triangular space, called the muscles of the ureters, are better fitted for keeping the part fixed, and for strengthening and raising it up when necessary, than for keeping open, and in a straight line, the channel of the ureters, which hardly stand in need of such particular apparatus to effect this object." (P. 6.)

If we understand Mr. Guthrie rightly, his opinion is, that the object of this peculiar formation is not to prevent the

regurgitation of urine into the kidneys, but to obstruct its passage into the bladder, when that viscus is overdistended from disease. Several objections present themselves to this hypothesis: 1st, if this structure be not intended to prevent the return of urine into the kidneys, there is no other provided for the purpose: why, then, does it not make its way thither? 2dly. If it be intended to obstruct the passage of the urine into the over-distended bladder, it is obviously inefficient; for every one knows that, though the urine enters the bladder, under these circumstances, more slowly than ordinary, yet that it does continue to enter until the bladder or urethra gives way, or ulcerates, from pressure. 3dly. It is not usual for nature to provide two separate apparatus for the same purpose: the resistance of the muscular coat of the bladder must surely, without any refined calculation, be sufficient to counterbalance the mere weight of the urine in the ureters: where, then, is the necessity for this formation? Lastly, in the construction of the frame, provision is more frequently made for purposes of constant utility, than for the changes produced by a disease which does not affect one person in a hundred. For these reasons, we do not scruple to reject Mr. Guthrie's hypothesis as to the common use to which this structure is applied: we are nevertheless willing to concede, that, if the ureters be pressed upon, so as to prevent the exit of the urine, the same pressure will most probably impede its entrance. It appears to us that, in his search after novelty, he has overlooked the palpable and simple truth, and from a particular instance deduced a general conclusion. There is an anecdote told of a celebrated French physiologist of the present day, who, when describing the use of the rectum, stated to his hearers that it was intended to nourish the patient when circumstances prevented his being fed by the mouth.

There are one or two other parts of the above quotation which call for some comment. The author states that patients with complete suppression of the secretion of urine always die apoplectic and paralytic. We believe this generalization to have been made much too hastily. It is true that they not unfrequently die comatose; but coma is one thing, and apoplexy and paralysis are others. We would refer Mr. Guthrie and our readers to Cases 1, 2, and 4, of suppression of the secretion of urine, in the first volume of Sir Everard Home's Treatise on the Prostate Gland, where the patients died (as, according to our experience, they generally do,) with symptoms of typhoid irritative fever. We should not have noticed this inaccuracy in ordinary cases,

but should have attributed it to the off-handed style of an eloquent extempore speaker, were it not that the work contains so many new facts and opinions, that we seize every internal evidence afforded by the book, as to the degree of caution exercised by the author in making his statements.

Again, in the last sentence of our quotation, he says, that "he is disposed to believe that the muscles of the ureters are better fitted for keeping the part fixed, and for strengthening and raising it up when necessary, than for keeping open, and in a straight line, the channel of the ureters, which scarcely stand in need of such particular apparatus to effect this object." We have not time to enter into the examination of the hypothesis contained in the first part of this passage, but we must confess our perfect inability to comprehend its termination. We were not aware that anybody ever asserted that the use of these muscles was to keep the parts straight, and the orifices open: we do indeed know that the very contrary idea was entertained by their discoverer, Sir C. Bell, and has been generally believed by anatomists. The following are the words of Sir C. Bell, which we should have thought it difficult to misunderstand: "The use of these muscles is to assist in the contraction of the bladder, and at the same time to *close* and support the mouths of the ureters."—"These muscles, which I have now described, guard the orifices of the urethra, by preserving the *obliquity* of the passage, and by pulling down the extremities of the urethra," &c. (Pp. 398, 399, vol. iii. of *Bell's Anatomy*, sixth edition.)

Mr. Guthrie entertains the opinion that the neck of the bladder is elastic, or partly so: we shall not suffer ourselves to enter into a discussion upon the subject, as we fear that, like that upon the middle coat of the arteries, it would be endless. We deem it right, however, to give his opinion in his own language, especially as it is accompanied by a very minute description of the direction of the muscular fibres of the bladder.

"The longitudinal muscular coat of the bladder is composed of a layer of fibres, which have in some parts little lateral connexion with each other, and are consequently capable of easy separation. The manner in which they are disposed you can see in the fresh bladder before you, as well as the points of communication between their respective fibres. If this coat be dissected off, by making an incision extending from the centre of the fore part of the prostate to the summit of the bladder, and if it be then turned outwards to the right and left, it will be seen that it passes over the prostate, and is not confined to the bladder alone. As the fibres descend from

the top and sides of the summit, they sweep by the ureters, becoming more compact and firm, and in many cases some are reflected back upon the ureters, fixing and steadying them in their places. They then lie upon the sides of the prostate, being partly inserted into it and into a tendon, which they form on the fore part of the prostate, and which is usually double, one proceeding from each side. These tendons are in connexion on their upper part with the pelvic fascia, and are commonly termed the inferior ligaments of the bladder, and by the French, the pubio prostatic ligaments. In the preparation I now show you there was but one tendon in the centre, and the fibres from each side converged, and were inserted into it. My old master and friend, the late Mr. Wilson, who was perhaps the best, as he was certainly the most laborious anatomist of his early days in London, used to say that the number of those tendons was uncertain, that he had often found three, and even more; be they however more or less in number, they run on to be inserted into the pubes near its symphisis. If the attachment which the pelvic fascia, descending from the pubes, has with them, be dissected off, some fibres will often be seen arising from them a little anterior to the prostate, and running backwards and downwards in a radiated form, as you see in this preparation, to the fore part and sides of the prostate gland. These are the fibres which modern French anatomists depict in this situation, particularly Blandin; and they are, I presume, the anterior compressors of the prostate of Winslow, mentioned also by British anatomists, but not shown in their engravings of these parts, any more than those which I have been describing as belonging to the bladder, and compressing the prostate in a more marked manner. The longitudinal fibres of the bladder cannot embrace the back part of the prostate on account of the vesiculæ seminales, which would interfere with their continuance in this direction; they are, therefore, inserted into a sort of tendinous line, short of, but attached to the posterior part of the prostate. In these preparations, and in others on the table, you will see this apparent termination, which is underneath the uvula of the neck of the bladder. They do not, however, always terminate at this part; for in one preparation a strong band of muscular fibres is seen going into the prostate; and Mr. Hancock, who dissected it, was obliged to divide a portion of the gland, to show them terminating, and apparently inserted into the verumontanum with the ejaculatory ducts, which they appeared to surround." (P. 13.)

"The strong transverse and spiral cords, observable in the inner layer of the muscular coat of the bladder, you can see from the inside without any preparation, except at the neck of the bladder, where they are rarely or scarcely perceptible. These gentlemen and I have made many attempts to discover circular fibres around the neck of the bladder, but we have not succeeded satisfactorily, so as to show any of importance. In this preparation there are some transverse fibres, crossing directly over the opening from the bladder

into the urethra, and they are the most marked I have seen or could discover, although the mucous membrane has been carefully dissected off in several of the preparations before you, both in the recent state, and after lying some days in spirits. I am of opinion then, that the portion of the bladder surrounding the opening into the urethra possesses but little muscular contractility, whilst it is endowed with a considerable degree of elasticity, which any one may ascertain by stretching the part. When the two muscular layers of the bladder contract, its tendons, inserted into the pubes, become with the prostate generally the fixed points, the urine is forced against the orifice of the urethra, which yields by its elasticity, and returns to its former state when the pressure is removed. I am aware that, in certain paralytic states of the bladder, the urine may be made to flow by pressing on the abdomen immediately over it, which cannot be done in a healthy person, and this would seem to imply that a muscular power was the cause of the urine being retained; although, on the other hand, the urine is retained and collected in considerable quantity in some paralytic cases without making its escape when assisted by the erect position, implying that there is also an elastic power acting at the neck of the bladder. That fibres have been described surrounding this part is undoubted, but no anatomist has dissected them in such menner as to admit of their being truly called a sphincter muscle, although that is the name given to them. It is possible that this part may be both muscular and elastic, and I am willing to take that view of it, but it is right I should tell you it has been supposed by the older anatomists, that the muscular power which prevented the flow of urine resided in those muscles which surround the membranous part of the urethra." (P. 15.)

"The term, neck of the bladder, is one which has several meanings; some anatomists confining it to one part, some to another, and even including the whole of that portion of the urethra which passes through the prostate gland. I always however understand, and shall speak of the neck of the bladder, as of the small part surrounding the very opening itself into the urethra, and which therefore is a ring, a little broader or thicker than the bladder itself. It is that portion on which the uvula is situated, the urethra being before, the bladder behind it; and the abruptness with which the opening commences, when viewed from within, appears to me to warrant the acceptation of the term, whilst the diseases which affect this part render it worthy of an accurate definition." (P. 17.)

The second lecture is upon the *Anatomy and Pathology of the Prostate Gland.* We shall omit the description of the former, as it resembles closely those which may be found in the best works on anatomy. The author objects to the term lobe being given to the transverse portion of the prostate, as in a healthy state there is no lobular appearance.

This is a matter of but little importance; so long as the form of the part is clearly understood, it may be termed either transverse portion, or third lobe, without any ill consequences. We are sorry, however, to find that Mr. Guthrie cannot leave the memory of the unfortunate Sir Everard Home, without casting his stone upon it: we had hoped that the controversy about the originality of his discoveries would, after his death, have slept in peace. Sir Everard Home was undoubtedly a very clever man, and a very great surgeon; and, if he erred somewhat on the score of manner, so as to render himself unpopular with his professional brethren, he suffered severely for his folly during his life-time, and has left an example to all future practitioners, by which they may take warning to avoid the rock on which he split.

We now arrive at some of Mr. Guthrie's new views with regard to *Disease of the Neck of the Bladder*. We quote the passage containing them.

"The prostate is applied above and to the sides of the neck of the bladder, but is generally wanting at the under part, unless the bar uniting the lateral lobes, or, as it is termed, the third lobe, is unusually large. The under portion of the neck of the bladder is not then always surrounded by the prostate, and the uvula vesicæ, the crète vesicale of the French, is not necessarily connected with its third lobe, or with any other part of it. On the fore part and sides the outer or longitudinal layer of fibres of the bladder pass over the prostate; on the under part they generally stop short of it, but sometimes perforate its under surface. The middle layer and the elastic or superadded structure appear to be attached to it, whilst the mucous coat, which possesses no peculiar properties, seems only to be connected with it through the medium of the cellular texture uniting it with the subjacent parts.

"It appears then that the following facts may be deduced from the preceding statements:

"1. That the elastic structure at the neck of the bladder may be diseased without any necessary connexion with the prostate gland.

"2. That the prostate may be diseased without any necessary connexion with the elastic structure.

"The preparation I now place before you is the most valuable one in my possession. It shows the elastic structure at the neck of the bladder diseased, without any affection of the prostate, and particularly of the third lobe. The patient passed his water with great difficulty, in consequence of the barrier formed by this unyielding structure, and died ultimately of the disease, after much suffering. This case and dissection establish in the most clear and decided manner the fact I have been endeavouring to impress upon you, viz. of a separate disease of the neck of the bladder, which

has been hitherto considered as dependent on an affection of the third lobe of the prostate. To prove this has been the principal object in making all the dissections you have seen." (P. 22.)

" In this preparation of Mr. Andrews' the right lobe of the prostate is seen of more than twice its natural size; the left is a little larger than usual. When the bladder was opened, the orifice into the urethra was found dilated to the size of the end of the little finger, and perfectly round at its upper half, but this opening was nearly closed by the enlarged right lobe of the prostate, which lay in front of it, and pushed the urethra to the left, whilst it had drawn up the mucous membrane of the bladder so as to form a bar across its under part. This bar is quite membranous, and does not include the elastic structure which is not diseased, neither is that part called the third lobe, nor is there any projection into the bladder, save the bar or valve formed by its mucous membrane at the very meatus. This patient was eighty years of age, had passed his urine with much straining long previously to the last attack, which came on a few days before he died. The catheter was passed with considerable difficulty, and he sunk, at his time of life, under the irritation induced constitutionally. The bladder was very large, and but little thickened; the transverse bands on the back part are particularly isolated and strong. In the oval hollow behind the triangular space there were fifty small stones.

" In this case the disease was exactly the reverse of the other; the prostate was alone affected, and the bar formed at the neck of the bladder consisted of its mucous membrane, elevated and drawn tight across the under part of the opening, in consequence of its connexion with the prostate through the subjacent parts. If the prostate could have been removed, the mucous membrane forming the bar would have fallen back into its proper place. If this bar could have been divided, a great obstruction to the flow of urine would have been removed, and a proportionate relief obtained. When there is a third lobe of the prostate, and it is diseased and projects into the bladder, the elastic structure of this part usually partakes of the evil, forms a hard firm bank in addition to the nipple-like valve, and between them the retention of urine may become complete. This disease, with its complication, is much less curable than the disease of the neck of the bladder alone, and the necessity for a distinction between them is so much the greater, believing, as I do, that relief from this latter complaint is always in the hands of the surgeon.

" In its simple or first stage, when there is only a defect of elasticity, it gives rise to stricture at the very neck or orifice of the bladder, curable by common means, if properly applied. In its second stage, when the bar is formed, and becomes more or less rigid, a small bougie rests against it, and if made of soft materials bends, and cannot be made to proceed; if a solid instrument, it passes in one of the hollows on each side of the white central line,

which are also deepened by the elevation of the uvula vesicæ, catches on the valve at the entrance, and, when the handle of the instrument is depressed, it raises it, bladder, rectum and all, upon its point, until the pain or the resistance induces the surgeon to forego the depression, or the valve yields or is torn, when it finds its way into the bladder; or perhaps the surgeon, not possessing much experience, is satisfied with the distance the instrument has gone in, and supposes he has passed it into the bladder. This is one of the evils which arises from the attention which has been paid to the length of the urethra with regard to inches only; for, when a man is told that the urethra is often only eight inches long, and finds his instrument has passed perhaps more than nine, he may deceive himself, although his patient is not relieved. I had a gentleman from America under my care lately under these circumstances. He had never passed his bougie beyond the neck of the bladder, although he and his surgeon supposed they had done so. When I succeeded in doing it, he became sensible of the difference; and I desired him, on his taking leave, always to use in future a No. 12 catheter, with a very round point, that the passage of urine through it might convince him of the fact." (P. 24.)

We shall make no observation on his views for the present, as a better opportunity will present itself, in another part of this review.

The author next adverts to the *Formation of the Pouches in the Bladder*, by the protrusion of the mucous membrane between the fibres of the muscular coat. As to the manner in which they arise, all surgeons, we believe, agree, viz. from obstruction to the free passage of the urine under ordinary efforts, and the consequent violent contraction of the bladder. Mr. Guthrie, however, appears to limit them only to cases of disease of the neck of the bladder. If this be his intention, we are certain that he is mistaken, for, within the last few months, we have had the opportunity of examining the body of a patient who died of disease of the kidney, in whom both the neck of the bladder and prostate were, as far as we could discover, perfectly healthy, but who had an extremely small stricture just anterior to the bulb: nevertheless, there were three distinct pouches, and one of them of considerable size.

Our author attributes what he terms the fluttering blows of the bladder, to the sudden descent of these pouches upon the catheter. He states that he formerly believed that "they depended upon some unusual action of the oval cavity of the fundus, or of the base of the triangular space, acted upon irregularly by their own fibres, and by those passing perpendicularly and across by the sides of the neck of the bladder, and which have been considered as a sphincter."

His opinion was changed by examining the body of a patient in whom this particular blow occurred, and discovering five pouches in his bladder.

We must confess that, in spite of this case, we are more inclined to believe in his former hypothesis than in the latter, for we have met with this blow, not long since, in a case where we have not the slightest suspicion of the existence of pouches.

We have only to turn over two pages, and we find another, and still greater novelty; no less a one than the discovery of the prostate in the female!

"It is usually said that the female has not a prostate, but merely an erectile tissue surrounding the neck of the bladder, to which I do not assent. If the word prostate be used with reference to its derivation, as standing before the vesiculæ seminales, certainly a woman has not a prostate, because she has no vesiculæ seminales, but if it be used as a substantive word, to express a particular thing, in the same manner as the words arteria innominata are now used as a name for a particular artery, which formerly had no name, then a female has a prostate, for there is a substance of the same shape, form, and nearly of a similar structure, surrounding the commencement of her urethra. It is the size of the prostate in a boy before the age of puberty, and resembles very nearly in external appearance the same part in the male. Here are the prostate and bladder of a boy of twelve years of age; and these two other preparations in spirits show the bladder and prostate in the adult female. One bladder is opened from the fore part, the other from the back part, to show how much of this substance lies before and behind the commencement of the urethra. You will observe, in these two recent dissections of the same parts, that the band, on which the ureters are situated, is less marked, as well as those descending from them, than in the male, but the elastic structure is equally evident. The ejaculatory ducts of the male, opening into the urethra, are of course wanting, and there does not appear either to be any ducts of the prostate, so that, perhaps, this substance may be considered in the female to be partly destitute of the follicular or glandular structure, which gives the additional bulk to the male. The fibres of the bladder have the same arrangement in the female as in the male, and I am therefore induced to believe that the prostate gland in the male has at least three offices, viz. 1, to stand before the orifice of the bladder, and give it and the urethra which it surrounds support, and a point more or less fixed, upon which it may act in expelling urine; 2, to secrete a fluid peculiar to itself; and, 3, to receive the ducts conveying secretions from other parts; which two latter uses I do not attribute to it in the female, and the want of which may account for the difference of size in this part in the two sexes. At all events, it shall, gentlemen, be our will and pleasure, until further orders from the critics, to give the ladies an organ

which they have not of late years been supposed to possess; but, whilst we call it the female prostate, we will hesitate in adding the word gland. Cowper, who was well acquainted with it, calls it corpus globosum." (P. 35.)

We feel scarcely inclined to comment upon this: we might safely leave it to our readers, were it not that our respect for Mr. Guthrie demands a careful examination of his opinions. He sets out by stating that the prostate, though named originally from its situation, must be now considered "to be a substantive word, and to mean a particular thing." He then goes on to inform us that its structure in the female is "nearly similar" to that in the male, (only allowing for difference between erectile and glandular tissue); that it does not secrete a fluid, and that it does not receive ducts conveying secretions from other parts.

Now, without venturing to anticipate the orders which will be received from the various critical synods sitting in this realm, we enter our protest against the new name; for dissimilarity of function overpowers the similarity of situation, and forbids our allowing of the identity of the prostate and the corpus globosum. The author would not term the bladder in the male a uterus, because it is anterior to the rectum: we ask him only to apply the same rule to the prostate.

The third lecture is devoted to the *Demonstration of certain New Muscles* which Mr. Guthrie has discovered. He states that he could never get a clear view of Mr. Wilson's muscle; yet we have seen it many times very satisfactorily dissected. In place of the old one, however, he demonstrates some new muscles; of which he gives the following account.

"The two preparations I place before you now are the most perfect. One shows the membranous part of the urethra surrounded by a well-defined muscle. On the upper part there is a central median line of tendon, which runs backwards to be inserted into the fascia covering the upper surface of the prostate; and again forwards on the urethra through the triangular ligament, to be inserted in front of it near the union of the corpora cavernosa. On the under part a similar tendinous line is to be observed, which is attached backwards to the fascia underneath the apex of the prostate, and forwards to the central tendinous point in the perinæum. The muscle on its upper surface is covered by fascia descending from the pubes which adheres to it, and this I take to be what Mr. Wilson described as the tendinous origin of his muscle, and from which he supposed the fibres descended to surround the urethra, which they really do not. From the median tendinous line in the upper part of the urethra the fibres pass outwards on each side, converging towards the centre, where they form a leg, as I

term it, of muscular fibres. On the under surface the same thing takes place; and a leg on each side being thus formed, from the superior and inferior fibres running from each half of the urethra, they pass outwardly, that is, transversely across the perinæum, to be inserted into the ascending ramus of the ischium a little below its junction with the descending ramus of the pubis on each side. These attachments are cut off in this preparation, but, when I pull on each of these legs, you see that they surround the urethra like a sling.

"In the preparation I now present to you nearly all the parts are in situ. You see the muscle or muscles and their origins one on each side, which are very peculiar. They are inclosed between the two layers of fascia, forming what is commonly called the deep perinæal fascia. The anterior layer is turned down as well as the triangular ligament from the pubes; and you see the muscle on each side with its origin, and lying between the anterior and posterior layers of the fascia. The pudic artery on the right side runs in front of it, and you see here the division of that vessel into the two arteries of the corpus cavernosum and of the dorsum of the penis. Cowper's gland on each side lies under or posterior to the muscle, and seems to be enveloped by it. The inner layer of fascia passing on the inside of the muscle reaches the inner edge of the levator ani, round which it turns to invest the urethra and prostate: so that this fascia separates these two muscles, the fibres of which also run in different directions. This is distinctly shown; and it is manifest that the muscle I have described is inclosed between the layers of fascia, which is, I presume, the reason why it has escaped the observation of the very many minute anatomists who have investigated these parts.

"The preparation I now show you is an internal view of the pubes, with its descending rami, and the ascending rami of the ischium. The deep fascia of the perinæum is preserved: the urethra is seen passing through the triangular ligament, surrounded before it passes by the muscles in question; the internal layer of fascia is turned down, and the two legs of the muscles are seen passing outwardly or transversely to their origin.

"In the two recent dissections I now show you, the same muscle or muscles are seen in the female, proving therefore by their existence that they are not sexual muscles, and that the opinions of Mr. Wilson and Sir Everard Home, who believed them to be so, were erroneous, whilst there can be no doubt of their being intimately and essentially connected with the due retention and transmission of the urine. Taken as a single muscle, it has then two origins and five insertions, or six, if the superior attachment of Mr. Wilson be considered double. When it acts, which it must do from its origins from the rami of the pubes, it can compress the urethra so as to close it, I conceive, completely after the manner of a sphincter; whilst, from the attachments of the muscles, from their origin and being inclosed between the layers of fascia, they must also draw it

towards the pubes. This muscle has a singular resemblance to the accelerator urinæ, situated outside the fascia, and is capable of acting, I am led to conclude, with great energy. The preparations are preserved in the Museum at the Ophthalmic Hospital, Chandos street, Charing cross." (P. 40.)

This description is followed by various woodcuts, all representing this muscle as clearly as possible; so that we wonder at our own and our predecessors' carelessness in suffering them to escape observation. As we have never seen the muscles, we can offer no opinion as to the accuracy of the drawings.

The fourth lecture commences with a very minute *Description of the Acceleratores Urinæ Muscles*, for which, unfortunately, we have not space: we rather prefer presenting our readers with the author's observations on the length of the urethra, as of more practical importance.

"There is one urethra on the table eleven inches long, and another eight, and several of intermediate lengths, depending principally, it is true, on the pendulous portion for the difference, but not entirely; for the age and stature of a person, even after he has become an adult, often makes an essential difference when compared with another in those parts which are more fixed. I place no reliance whatever on the measurement of the urethra made after death, for, although the urethra may be then eleven inches long, as in the preparation before you, I never met with a case, unless there was a diseased prostate, in which a catheter ten inches long was required to draw water: on the contrary, one eight inches long will generally be found sufficient, and I have known one of seven answer well; the additional inches being usually gained by the elongation or stretching of the parts during life or after death; and if a surgeon calculates inches as his instrument proceeds, instead of considering the points of attachment as so many land-marks to guide his progress, he will be frequently in error, and always liable to do mischief. I believe the mistake of most consequence takes place in regard to those two parts which are called membranous and prostatic. In the preparation before you, in which the urethra is eleven inches long, the length of these two portions is near three inches. From the orifice of the bladder to the triangular ligament, the usual length of the prostatic portion is estimated at about fifteen lines, the membranous at about twelve, or something more than an inch for the prostatic portion, and perhaps a little less than an inch for the membranous. In this very urethra, eleven inches long, I have no doubt but a catheter nine inches in length would easily have drawn off the urine during life. I am satisfied that one of eight inches would have done it, and the membranous and prostatic portions, which now appear to be near three inches in length, would have been cleared by an instrument very little more than two; and this would occur from the manner in which these parts

are supported and maintained against the pubes by the fasciæ, which attach and connect them and the surrounding parts to each other. When the prostate is diseased, on the contrary, the urethra at this part is made to undergo a considerable degree of elongation, and a catheter, under such circumstances, should be longer and larger in the curve.

"The length of the spongy portion of the urethra must always be uncertain, and is of no consequence. The orifice of the urethra when in a normal state is always vertical, and closed, the sides being applied to each other." (P. 52.)

There are some other very good observations on the size of the urethra and its orifice. When the latter is small, either from natural formation, or from a bridle passing across a portion of it, Mr. Guthrie generally divides it with the knife. This plan has lately been much preferred by surgeons to the use of the conical dilator, which not only occasions more pain at the time, but is frequently followed by inflammation of the part, which renders the process of dilatation extremely slow. The conclusion of the lecture contains a description of the various solid instruments now in use, and the method of employing them.

In the fifth lecture he dwells at considerable length on the *various Curvatures requisite in particular Cases of Disease of the Prostate.* His observations on this subject are practical and exceedingly good; but, as they occupy too large a space for quotation, and will not admit of abridgment, we must omit them, but not without great regret.

The sixth lecture sets out with a declaration that appears to us rather extraordinary, viz. "that it is a fact acknowledged by almost all surgeons of experience, that the prostatic and membranous parts of the urethra are not usually the seat of stricture." We are unwilling to place our own experience in opposition to Mr. Guthrie's, but we have always heard, and have indeed found, that the majority of strictures are to be met with in the membranous portion. Sir Benjamin Brodie, in his excellent work on the diseases of the urinary organs, states that "the ordinary situation of a permanent stricture is at the anterior part of the membranous portion of the urethra, just behind the corpus spongiosum," page 6. Mr. Wilson also says, "the part where strictures most usually begin is where the bulb unites with the membranous parts of the urethra," page 367.—*(Wilson on the Urinary and Genital Organs.)* Sir E. Home considers the most common situation of stricture to be about seven inches from the orifice. It is true that Sir Astley Cooper believes them to be most frequent just anteriorly to the bulb,

but he places next in order those in the membranous portion. Surely Mr. Guthrie will not refuse to these authors the title of experienced surgeons; and, if he does not, we are at a loss to reconcile his statement with the fact.

This error is not of slight importance, as the author founds upon it his principal argument to prove that the spasmodic contraction of muscular fibre is not the original cause of permanent stricture. As matters stand at present, we are inclined to believe that both sides of the question have some share of truth in them. When stricture occurs in the membranous portion of the urethra, the spasmodic contraction of the compressor urethra muscle gives rise to inflammation, which occasions the thickening of the parietes, and the consequent diminution of the size of the canal. We are borne out in this opinion by the fact, that all strictures in this situation are remarkably liable to spasm, both in the onset and progress of the disease. On the other hand, as there is no compressor urethræ surrounding the anterior part of the canal, we think Mr. Guthrie's solution, which we quote, may be applicable here.

"The whole anterior portion of the urethra, or that part in which stricture is usually situated, is surrounded by the corpus spongiosum; and it is to it that I am disposed to attribute the principal share in the formation of the worst kinds of permanent stricture, and the great difficulty which is experienced in effecting a perfect or radical cure. When the membranous portion of the urethra passes through the triangular ligament it preserves its fibro-cellular exterior, and more particularly at the upper part to which the bulb of the corpus spongiosum is not applied; but, when the corpus spongiosum does surround the urethra, this external fibrous cellular covering leaves the internal mucous membrane, and is attached to, and merges in the elastic structure of the internal layer of the erectile tissue of the spongy body; to which the mucous membrane is so intimately attached as to be separated only by scraping with considerable care; and thus destroying the shreds of attachment between them, which are in some places more strongly marked in the general cellular attachment than at others." (P. 75.)

"The whole corpus spongiosum, including the bulb, seems to be formed originally in two symmetrical halves or parts, and to unite to form one body, much after the manner of the corpora cavernosa penis. * * *

"The elasticity of the urethra when surrounded by the corpus spongiosum, is best shown by introducing a solid sound into it, when, by turning the point downwards, it may be stretched to a considerable extent in every direction. This may be done in the living body without giving pain, with the exception of the orifice of the urethra, which will yield but little. If the person should have

an old narrow permanent stricture at the distance of three inches from the orifice the experiment is made most conclusively, for the urethra stretches at every part anterior to it with great ease; but, when the solid sound reaches that point it can penetrate no further, the elasticity of the part is lost, the hardened obstacle formed by the stricture is distinctly felt from the outside; and, by a little turning downwards of the sound, its point can be felt through the external parts, projecting below the obstacle, and carrying the urethra before it. If a sound just large enough to go through a stricture of this kind is passed, and the part is examined between the finger and thumb, the extent of the stricture may be easily ascertained by the hardness, which is quite peculiar and distinct from the natural structure of the part either before or behind it. If the instrument is withdrawn, and the same spot is again examined, the hardness will be very perceptible, when compared with the soft elastic sensation communicated by the spongy body in its natural state. The hardness is sometimes like a cord, and occasionally, when circumscribed, like a small hazel nut. In the erectile state this hardened part is not augmented in size, although the spongy body is distended before and behind it; whilst it remains a stationary hard line or spot, connecting the two distended parts together, and, when the stricture is in an irritable state, often giving pain. If this hard part be cut into, the corpus spongiosum seems to have lost its spongy appearance, its erectile texture has become consolidated, and resembles rather a solid gristly substance than an elastic structure. This kind of disease is very apt to form when the urethra is ruptured, during the severity of what is termed a chordee. It yields to the distending power of the two erectile bodies, and the inflamed part which has lost its elasticity is torn; the tear extends into the spongy body itself, blood flows freely from the orifice of the urethra, and the cells of the corpus spongiosum around the rupture become loaded with it. Inflammation follows, and without great care be taken in the treatment, a permanent stricture is the result." (P. 77.)

The next passage which we present to our readers, is not intended to teach them any new surgical truths, but it is rather to discharge a debt which we owe to the author. He confesses himself to be at a loss; and, as we have learnt much from him, we think it only fair that he should learn something from us.

"When the mucous membrane is inflamed, and has lost part of its elasticity, it does not always yield as readily under distension as some of the interstitial parts of the corpus spongiosum; which, when they give way, allow the blood to be effused in the strict sense of the word; and a soft swelling takes place, which is a sufficiently remarkable, although not a very common accident. I have just now under my care a young gentleman, who has a soft swelling of this kind, about two inches and a half from the orifice of the urethra,

and which appeared suddenly. The urethra was inflamed at the time, but was not ruptured; a full-sized bougie could and can be readily passed along it. It gradually altered its appearance, became less, and would I think have gone away altogether, had not another gonorrhœa supervened, which, by adding new symptoms, has rather increased than diminished it, and without great care a stricture will possibly be the result. In a case which I treated many years ago, in the York Hospital, the swelling situated in the same place was as hard and as circumscribed as if a Barcelona nut had been inserted into the under part of the urethra. It was quite cartilaginous to the touch, and the man made his water almost by drops. I removed this disease by the repeated but careful application of the argentum nitratum, so that no signs of it remained externally, the hardness having gradually diminished until it went entirely away. The man, a soldier, was to have been discharged, but, on leaning over his bed to fold up the blankets one morning, he fell forward dead. I opened him next day, and found his heart diseased. The urethra appeared quite sound, and, to my great surprise, nearly as much so at the part which had been affected as any other. I had a preparation made of it, and it is or ought to be in the museum at Chatham. Lest you should go away with the impression that a stricture of this kind may always be cured by caustic, I must mention to you the case of a gentleman who consulted me a short time afterwards. He had a similar swelling, situated at the part where the scrotum joins the penis. I was delighted to have the case, and felt assured of a similar termination, but no such thing took place: the swelling and hardness increased rather than diminished, and at last I was obliged to divide the part from without inwards to save his life, by giving free passage to his water. I have since had many other cases of a like nature, all of which have been treated and relieved with various degrees of success, but none so pre-eminently well as the first. You will ask me, perhaps, why? I can only say, it is as difficult to answer you on this point, as it is to tell you why, in some cases of almost impermeable stricture a permanent cure is effected by simple dilatation, whilst in others, as nearly alike as possible, the relief obtained is only temporary. It depends on the various shades of distinction between diseases, and on the particular extent to which each peculiar structure is affected. Experience assisted by careful observation may enable us to select the best and least dangerous mode of treatment, but it has not as yet enabled us to mark all the distinctions and shades of difference between these diseases, which it is necessary we should know, to arrive at more perfect knowledge of their treatment." (P. 79.)

The author has here, without being aware of it, described two perfectly different diseases. In the first two cases there was no stricture, in the ordinary sense of the term; for, in the first, he tells us, that a full-sized bougie would pass, and

he was fortunate enough to have an opportunity of examining the other, and no trace of stricture was to be discovered. In the last case, though the circumstance is not mentioned particularly, we have no doubt that a stricture existed. The former disease may be termed inflammation of a mucous follicle in the urethra, and it generally occurs within three inches of the orifice. The author's description of it is so accurate that it cannot be mistaken, for it feels exactly like a Barcelona nut imbedded in the corpus spongiosum. It generally subsides of itself, but it may always be readily cured by the application of a leech or two, rubbing the under surface of the penis with mercurial ointment combined with camphor, and directing the patient, when he passes water, to press with his finger slightly on the tumour, so as to prevent the accumulation of urine at the part. If in a few cases it be more obstinate than usual, a small gum catheter may be introduced into the bladder, and left there till the cure shall have been completed. We would earnestly caution our readers against the employment of the caustic in these cases, as it is a most efficacious means of exciting suppuration in the tumour. The other disease described by the author is of a much more serious nature. It generally occurs in cases of long standing, and is only to be met with at the part named by our author, viz. where the stricture joins the penis. In its nature it is analogous to the pouches formed in the bladder. The patient has a stricture for a long time, and the water is constantly impeded at this part; the mucous membrane of the urethra is dilated by the pressure, and at last a sinus is formed, with its orifice posterior to the stricture, but, passing in a direction forwards, so that the tumour appears rather in front of the contraction of the canal. Inflammation taking place around the sinus causes a deposit of lymph; hence the induration. A very different prognosis should be given in these cases; the stricture may be dilated, but the sinus is not always cured. The best method of effecting this is to keep a full-sized catheter in the bladder after the stricture is dilated, while tolerably firm pressure is applied to the tumour; the unguent. hydr. c̄ camphorâ may be rubbed in as before. We trust that we have made this subject intelligible, not only to the acute understanding of the author, but to all our readers. It is but justice to Mr. Guthrie to state, that if he was not himself aware of the nature of these diseases, he knew at least the method by which that information was to be acquired, viz. from "experience, assisted by careful observation." In confirmation of

his opinion we have only to state, that for the description of the latter disease we are indebted to Sir Benjamin Brodie.

At the commencement of the seventh lecture, the author enters into the discussion of the muscularity of the urethra, and embraces the negative opinion: we have not, however, sufficient space to follow him, as we must confine our attention to more practical subjects.

The next instance in which Mr. Guthrie differs from established authorities, is in the application of the terms spasmodic stricture, and spasm of the urethra.

"The more common cases which are usually considered spasmodic, are those of young men, who, when suffering from gleet or gonorrhœa, imperfectly or only partially cured, are tempted to commit an excess in wine or punch. After sitting some time, they feel a desire to make water, which they repress, or perhaps indulge with some difficulty, but which increases, and is soon found to be irrelievable without assistance. The greater the effort, the more determined the straining, the greater the agony; and the sufferer, with despair depicted in his countenance, entreats relief." (P. 89.)

"These are called cases of spasm,—I call them cases of inflammation,—and which induces a want of consent, as Sir C. Bell expresses it, between the muscles of the part, so that, when the bladder acts, the muscles surrounding the urethra will not act by yielding and dilating as they ought to do, but remain, or become more permanently contracted: the urine is forced against the inflamed and contracted part of the urethra, and by its irritation increases the mischief." (P. 90.)

The author acknowledges in an adjoining passage the utility of opium in the relief of these cases, and it is therefore clear that his distinction is one of nomenclature, rather than of practice. A want of consent in the action of muscles is the same thing as spasm; for the muscle which refuses to be relaxed with its fellows, is in a state of spasmodic contraction. Mr. Guthrie recommends, in these cases, the immediate use of instruments; and would employ leeches, bleeding, the warm bath, James's powder, and opium, as subsidiaries.

The following account of the effects of over-distending a stricture is extremely good, and is not generally known, or, if known, not attended to sufficiently.

"A gentleman presents himself with a stricture, at two, three, four, or more inches in the canal, which at the orifice is capable of admitting a No. 13 or 14 solid bougie, but the stricture will only allow a No. 6 to pass. You dilate this slowly until a No. 10 or 11 will pass easily, when, anxious to have his case completed, your patient

presses you to increase the size, and, yielding to his solicitations, or tempted by your own desires, you pass over the intermediate number, and take the 13 or 14 at once: you will often be able to succeed, with little uneasiness at the moment; but your patient, on wanting to make water, finds he cannot do it: he strains, but it comes only by drops. The desire increases to misery, and he sends for you. Now, what would you do? Theory teaches, put him in the warm bath, give him an opiate, bleed him if necessary, for the case is one of inflammation; but practical surgery says, do nothing of the kind, but take a small elastic gum bougie without a stilet, and draw off the water. Your patient will be immediately relieved, will wish you good night, if he is a wise man, and go to sleep: when he wakes, he will make his water without your assistance; but, if you try to pass a bougie for him some six or eight days afterwards, you will find yourself very much where you were when you began, that is, able to introduce only a No. 6. The part has contracted as much as ever, although perhaps it may be more readily dilated than it was before. The necessity for great gentleness in all these cases cannot be more forcibly exemplified." (P. 95.)

The eighth lecture contains an excellent account of the symptoms of permanent stricture, and of the best means of conducting an examination of the urethra. But, as our quotations have been already very numerous, and as there still remain several novel opinions to be considered, we must deny ourselves the pleasure of presenting our readers with any portion of it. The author here sustains his high character as a practical surgeon; he supplies us with most minute description of the bougies to be employed in each particular case. We rather suspect that he thinks too highly of the dilator recommended by Mr. Arnott, (to the partial invention of which the author lays some claim,) for, as far as our experience goes, we should say that, when the urethra will permit the passage of the dilator, the cure may be easily completed by the ordinary instruments.

The author regards the nitrate of silver as a useful application in certain cases of stricture, which he does not exactly distinguish, and, on the whole, may be considered more favorable to its use than most modern surgeons. In discussing the subject he introduces the following excellent observations on hemorrhage from the urethra.

"The hemorrhages from the urethra are caused by the sloughs separating, and leaving the cells of the corpus spongiosum exposed, or by the ulcerative process extending to some small vessel, the canal of which is partially opened. These, it is said, cease of themselves, although not until a great loss of blood has been frequently sustained, and it has been recommended to let the parts

alone. I cannot give you any opinion formed from personal experience, as I have never seen one of these bleedings from caustic; but I conceive that they should be met and treated like hemorrhages from the same place from other causes, which appear to me to be of a similar nature.

"The most alarming hemorrhages I have met with have been from common causes; and I will mention to you two of them of the most prominent kind, as they also point out the practice to be pursued in such cases. The first occurred in a gentleman living in Cockspur street, who had had a catheter passed by a surgeon of great reputation and ability in the morning, without either pain or inconvenience. On his return home, he found there was a considerable oozing of blood, which continued during the day, and induced him to send in the evening for his surgeon, who was unluckily out of town: the bleeding increased in the night, and in the morning early I saw him. There were several tubs of ice and water in the room, all apparently containing a considerable quantity of blood: his face was deadly pale, the pulse scarcely perceptible, and he said he had bled a pailful, which was of course an exaggeration. The bleeding was arrested in a few minutes, by pressure applied in the proper place, (on the perineum,) and did not return.

"The second occurred in the case of a tradesman, who had passed a common soft bougie for himself, the point of which had caught on some small opening, and, it is presumed, had penetrated into it: he bled for two days and two nights, when I was desired to see him, in Paddington street. I found him kneeling in bed, and straining violently to pass his water, but which came with great difficulty, as the bladder contained a good deal of coagulated blood, which had passed backwards into it. He was as white as a sheet, and fell back in his bed, nearly insensible, almost as soon as I entered the room, having, as he said afterwards, passed several quarts of what (as it all coagulated) he considered to be pure blood. As urine and blood coagulate together, when out of the body, in equal proportions, it is probable that only half of it was blood. This bleeding was also arrested in a few minutes by pressure, and did not return.

"For the purpose of knowing where to make the pressure, any light, flat, and narrow, but firm substance, should be prepared, such as a piece of cork, which can always be procured. The patient should then force all the coagulated blood out of the urethra; and, as the bleeding usually takes place in these cases from that part which is anterior to the triangular ligament, pressure can readily be made upon it externally; but, as it may be made a little before or behind the exact spot, in either of which cases it would be useless, the selection of that spot must be well made. This is done by beginning as far back as possible, and gradually bringing forward the finger by which the pressure is made. At a certain point the flow or dripping of blood will be arrested, and the pre-

cise spot from which it comes will be in all probability a little behind where the finger rests; a fact which can also be easily ascertained by carrying the finger a little backwards, when the blood will again flow. The bit of cork or pad can now be duly placed, and the patient should be desired to make pressure on it himself, and which he can often more readily do than an assistant.

"When the hemorrhage comes from the prostatic part of the urethra or neck of the bladder, cold water, rest, and an opiate, will suffice to stop it, provided it has been caused by some accidental circumstance, and does not arise from disease of a fungous or malignant nature; in which cases, nothing can prevent its return, or even its continuance." (P. 135.)

The author afterwards separately mentions the occurrence of hemorrhage from fungoid disease, and relates some interesting cases of these affections.

The next lecture, which is upon the treatment of retention of urine, commences with the recommendation to employ the bougie early in every case of what is termed spasmodic stricture, and, when this fails, to have recourse to other instruments. He speaks highly of the use of a very fine catgut bougie, a plan of treatment which he had been for some time in the habit of employing with the greatest success. It appears indeed to us that almost every case may be relieved by the dexterous use of this instrument, and it is attended with this advantage, that, if it fails, it does not (as the larger ones do,) increase the irritation previously existing, and other instruments may afterwards be advantageously employed. When, however, all instruments fail, recourse must be had to general remedies, such as bleeding, opium, &c. But if these also fail, there remains no resource but an operation. Mr. Guthrie prefers that of cutting down upon the urethra; and we think that he certainly chooses the best of the operations. Nevertheless, it must be remembered, that it is attended with great difficulty in the performance, and that, unless the surgeon be well acquainted with the anatomy of the parts, and moreover is in the habit of operating, he will probably not succeed in accomplishing his object. For this reason we believe that the operation of puncturing the bladder by the rectum will continue to be more generally employed, though we should recommend all surgeons to endeavour to master the former, as it is otherwise greatly preferable. We quote the author's description of his mode of performing the operation.

"The improvements which have been made of late years in the practice of surgery render this operation less necessary than formerly: cutting out, or cutting into, portions of the urethra, which

I have seen attempted, are, like cutting out testes, comparatively obsolete operations; but still an opening into the urethra may occasionally be required, and, when the disease is situated at the termination of the bulbous portion of the urethra, or even further back, I recommend the operation to be done in the following manner, as much the most simple and certain. The patient being placed and secured as in the operation for the stone, a catheter or sound is to be passed down to the stricture, and held steadily against it, the concavity being as usual upwards, the point directly applied to it. The rectum having been previously cleared by an enema, the forefinger of the left hand, being duly oiled, is to be introduced into it, and the membranous part of the urethra and the prostate are to be examined, as well as the bladder; the state of which will in all probability have been previously investigated. If the membranous portion of the urethra is dilated by the urine, so much the better; but the object of introducing the forefinger is to ascertain the relative situation of the upper part of the rectum and the urethra, which latter part only touches, or is nearly in direct application to the rectum, at the termination of its membranous part and the commencement of its prostatic portion. There is a certain distance, which is greater or less in different individuals, between the last inch of the rectum and the urethra placed above it. The two parts form two sides of a triangle, the apex of which is the prostate, the base the external skin. It is within the two lines of the triangle that the operation is to be done. The surgeon, taking the catheter in his right hand, whilst the forefinger of the left is applied to the upper surface of the rectum, moves the point upwards and downwards, so as to communicate with the forefinger of the left hand, and to convey to it a knowledge of the situation of the extremity of the instrument, and particularly of the distance between them, which the motions given to the catheter by the right hand will clearly indicate. The thickness of the parts between the obstruction and the rectum can be estimated with sufficient accuracy, both at the point where the left forefinger is applied and at the surface of the skin; for, although the membranous part of the urethra cannot be easily felt from an incision made on the left side of the perineum, it can always be distinguished from the rectum. The next step of the operation is to divide the skin, cellular membrane, fascia, muscular and tendinous fibres, which may intervene between the upper surface of the rectum and the under surface of the anterior and middle portions of the membranous part of the urethra. This is to be done by a straight, blunt-backed, narrow, sharp-pointed bistoury, fixed in its handle; and there are two ways of commencing the operation: the first, when the obstacle is behind the bulb, and the external parts are not diseased, may be done by a straight incision, in a perpendicular direction; in which manner the operation may always be done, if the surgeon is well acquainted with the anatomy of the parts; but, if he is not, or they are very much hardened, and

consequently unyielding, a transverse, curved, or concentric incision, should be made across the perineum. This gives room, and allows the parts to be separated as much as they will admit. If the transverse incision is not adopted, the point of the straight bistoury is to be placed on the skin a little above the verge of the anus, the cutting edge being above, the blunt back towards the rectum, the handle being a little depressed, the point a little inclined upwards. The degree of inclination necessary to carry the knife inwards for the distance of an inch, and clear of the rectum, will be indicated by the finger in that part, and the eye of the operator will correspond with the point of the forefinger, so that the bistoury may be steadily pressed in to that extent, and then carried upwards, and brought out in the exact median line, making an external incision of at least an inch and a quarter to an inch and a half, as regards the external parts; and which may be then extended, as space is wanted for the prosecution of the operation. The part being sponged, the surgeon again introduces the bistoury in the median line, the point being directed upwards and backwards towards the urethra, and he may then deepen the cut. The forefinger in the rectum will always tell him where the back, and consequently where the point, of the bistoury is. The opening now will be sufficiently large to allow the operator to lay aside the knife, and to feel for the urethra with the point of the forefinger of the right hand; an assistant keeping the catheter steadily against the stricture, the end of which will now be readily felt. If the point of the forefinger of the right hand does not go beyond it, and touch the sound part of the urethra, which is dilated by the urine in the generality of cases, the knife is to be resumed, and the forefinger, being withdrawn from the inside of the rectum, is to be placed in the wound, on the outside of the rectum, which is to be depressed as much as possible; the back of the knife is then to be turned to it, whilst the point exposes and opens the urethra, and which it can do very easily near the apex or transverse portion of the prostate, or at the termination of the membranous part of the urethra; but it is not necessary to go so far back, and the membranous portion may be opened at its middle with every advantage, and with perfect safety to the gut. A good anatomist and surgeon will open the urethra in this way sooner than the mode of doing it can be described; the urine will make its escape, and the patient will be at once relieved. Whether the stricture shall be now divided or not, is a question presently to be considered; but the cure can be completed either with or without it." (P. 166.)

Further on the author states that he is an advocate for the division of the stricture. We acknowledge that we think this step unnecessary; but, as we do not see any particular disadvantage attending it, we leave it to the judgment of our readers. When the pressure from the distension of the bladder is taken off, the stricture very readily dilates under

the use of the bougie. Should the urethra give way before assistance arrives, the author agrees with all good surgeons, that free and deep incisions offer the only chance of saving life.

The twelfth lecture treats of impassable stricture, and its treatment. While Dupuytren was putting in force his plan of exhausting the irritability of the urethra by long-continued pressure, the author was conducting a series of experiments upon the same subject in this country. The following is Mr. Guthrie's method of proceeding.

"The best dilating material is a hollow gum elastic bougie, of a medium size, perfectly smooth, and tolerably round at the point, so that it may give as little uneasiness as possible. A very small bougie gives more annoyance than a larger one, is retained with more difficulty, and is more likely to give rise to irritation, in which case it should be removed, and, after a little delay, replaced by a larger one. If this should also give rise to irritation, which rarely occurs, it should also be removed, and the irritation subdued by warm fomentations, by opiates, and perhaps by the application of a few leeches. There are very few cases which require any thing more, provided the patient will be perfectly quiet, live moderately, and preserve the recumbent position, until the irritation has subsided, when he may sit up and walk about his room in his ordinary manner. The bougie is to be fixed in the urethra in the same way as a gum elastic catheter is fixed in the bladder; it should project about one inch beyond the orifice of the urethra, and rather less than more. The point should press against, or rest upon, the stricture with the greatest possible gentleness, so that it may not give rise to inflammation or to ulceration, and yet should press just so much as to cause absorption. It is an admitted point in the animal economy, that new-formed parts, whether laid down in reparation or in disease, do not resist a stimulus in the same manner as parts of original formation. They are in fact removed by the action of the absorbents under the application of a stimulus, which has little or no influence on those parts which have undergone no change, and are coëval with the existence of the individual. The pressure made by the point of the bougie, and which ought always to be an elastic one, should therefore be nicely regulated, so that it may do this, and no more. It is a point which requires attention, and some little experience, although a due knowledge of it is soon acquired. It should never be so great as to give pain, or indeed uneasiness, and yet it should be continual. The patient readily learns what is wanted, and, as he can feel when the surgeon cannot, he soon understands how to manage the bougie himself, and can take it out, wash it, change it, or replace it, as he pleases. If he is a very restless, fretful, or naturally irritable man, it may prevent sleep, or prove inconvenient, in either of which cases it may be removed for two or three hours, at the pleasure of the individual, whose private

affairs may otherwise render this indulgence necessary. It does no harm; it is merely a little delay, which prolongs the time requisite to effect a cure.

"If the pressure is made by a stiff, unyielding instrument, inflammation and ulceration may be the consequence, and many evils may be the result; but then this is the abuse of the practice, not the adoption of it, and forms no part of that which I have recommended. The pressure, according to my views, must be so nicely regulated as to cause absorption, but not to give rise to ulceration; and I firmly believe that it may be graduated in such a manner as to fulfil these intentions most accurately. When the objects stated are duly accomplished, the patient soon perceives that the stream of urine is enlarged, that it comes more freely, and that the general irritation of the bladder and of the neighbouring parts has diminished. The principal and most satisfactory sign of amendment is the more ready flow of the urine; and, although the bougie should not advance, the amendment on this point is often progressive, until at last the bougie is either found to have passed through the stricture, unknown to the patient, or is gently pressed through by his own hand, or by that of the surgeon. The time necessary for the accomplishment of this object must be longer or shorter, according to the extent and nature of the disease, and the state of the constitution of the patient. The object is effected in some cases in from three to six days, in others the progress is slow, although evident, and it may require as many weeks; but in no case that I have met with has the practice failed. When the canal is thus rendered pervious, the cure is only half completed, although the most difficult and dangerous part has been accomplished. The stricture has yielded in its centre, but not in its circumference, and two courses may be pursued: one is, to increase the size of the bougie, so that it may press on the circumference of the anterior part of the stricture, until it causes its removal; the other is effected by passing the bougie through the stricture, and gradually enlarging it: thus pressing on the inner circumference in preference to its anterior surface, which method I prefer.

"When the bougie has passed through the stricture, I always carry it into the bladder, and then replace it by a catheter, the use of which may or may not be continued, at the pleasure of the surgeon. The catheter is not necessary to draw off the urine, as it flows as readily by the side of the bougie; but it proves that the instrument is in the bladder, and it is always a great satisfaction, both to the patient and surgeon, to see the urine flow through it. I have a gentleman now under my care, whose stricture has been overcome in this way, but in whom the point of a small bougie almost always enters into one of the openings of the ejaculatory ducts, and that of a larger one catches on it, and will not often proceed without a little management. If the error be committed of allowing the bougie to lodge in one of these openings, inflammation will in all probability be communicated to the testis,

and there is always a chance of such an accident occurring when the orifices of these ducts are irritated, even by the instrument resting upon them. If a catheter is used, the eye of the instrument should pass fairly into the bladder, for half an inch at least, but it is better to use one made with a hole at the extremity, and, when the instrument is not in the bladder, (and it cannot always be borne there,) it should be withdrawn, so as to lie in the membranous part of the urethra, with the point near to, but not irritating the prostate gland. It will often remain in that situation quietly, when it cannot be advanced without producing the greatest irritation. In some instances where this has taken place, the instrument must be altogether withdrawn until it has been subdued, when it may be cautiously replaced. The greatest evil, however, usually arises from increasing the size of the bougie too rapidly: and this is a point to which the greatest attention must be paid, whilst it is the error into which both surgeon and patient most frequently fall, as I have stated, when treating of the cure by dilatation. It is, then, the point which requires the greatest nicety of management; and this can only be acquired by observation founded on experience. The irritability of the inside of the stricture, and the part adjacent but posterior to it, is sometimes greatly augmented by the urine which passes over them. This is frequently diminished in quantity as well as altered in quality, being loaded with salts and other matters, which render it extremely irritating; and, unless it be brought more to its natural state, little or no progress will be made in completing the cure.

"The diet of the patient must then be an object of particular attention, and the urine should be tested from time to time, in order to ascertain its nature; and the general treatment must be strictly continued until it is found to have lost its irritating qualities, when there will be a fair prospect of completing the cure.

"The presence of the bougie gives rise to a discharge, which is greater or less, according to the state of irritability of the patient; but it is never accompanied by pain, unless inflammation is brought on, either by accidental circumstances, or from the size of the bougie being too rapidly increased, so as to distend the canal beyond what is can readily bear." (P. 190.)

Then follow several cases in which this plan of treatment was attended with success, after others had been tried in vain. We consider this to be one of the greatest improvements of the surgery of the urethra of modern times. Henceforward there will be no excuse for using violence in cases of impassable stricture, for we believe that there are few, if any cases, in which a cure may not be effected by long-continued pressure.

In the thirteenth lecture will be found a very good description of the acute diseases of the prostate and prostatic portion of the urethra; but we must pass over these, in order

to have sufficient space for the following passages, with which we must conclude this long review:

"The enlargement is sometimes but trifling, in which case the prostate retains its natural shape, and merely projects a little into and around the orifice of the bladder; but, when it is considerable, as in very prolonged and neglected cases, it is often as large as a full-sized orange. One lateral half is usually much larger than the other, and protrudes into the bladder, giving rise to one or more projections, which cause great distress to the individual. The left side, I am led to believe, undergoes this change more frequently than the right, although no satisfactory reason can be given why it should be so; and, whilst one projection is directly backwards and inwards, it sometimes is seen to form a second immediately behind the orifice of the bladder, and which is frequently supposed to be an enlargement of that part of the gland behind the entrance of the vasa deferentia, and which has been called by Sir E. Home the third lobe. Without denying that a third or middle lobe exists, and is occasionally diseased and enlarged, constituting a projection of an apparently similar nature, I am of opinion that it is of more infrequent occurrence than has been supposed. That it is, in fact, not always the third lobe alone in a diseased state, but a continuation of the enlargement of the lateral lobe. In the lithograph drawing, p. 230, a disease of this kind is represented: the third lobe appears to be projecting in a very distinct manner into the bladder immediately behind the orifice of the urethra, and the enlarged left lateral lobe is also seen protruding into it, and forming a second projection by the side of the first. Dissection from behind, however, shows that these two projections are formed by the same part, viz. the left lateral lobe, and that the smaller pyriform one is not formed by a distinct third lobe." (P. 226.)

"The local treatment of the bar or stricture of the neck of the bladder is of the greatest importance; and, as the disease has been only of late distinguished, is not thoroughly understood. Experience has not yet enabled us to support our practice by numerous instances of successful management, although the cases which have fallen under my own observation lead, I trust, to just and legitimate conclusions.

"When the disease occurs in persons under or about the middle period of life, the steady use of the solid silver sound, gradually increasing the size to the largest the urethra will admit, will gradually effect a cure; although, to prevent a relapse, it should be passed occasionally. I have seen, within these few days, one of the first cases to which my attention was drawn, now several years ago. The gentleman is himself a medical man, and was treated by me in this manner, after believing his life to have been in danger, from complete retention of urine for several hours. He assures me he is now free from inconvenience, but passes his solid bougie from time to time, lest he should suffer a relapse.

"I have had, within the last twelvemonth, another medical gentleman, of seventy years of age, under my care, in whom this complaint was commencing, and which he believed to depend on disease of the prostate gland, the symptoms being in many respects similar. I could not, however, on examination, detect any enlargement of the prostate, although some might exist, whilst the contraction of the orifice of the bladder was clearly to be felt. The frequency of making water was great, particularly at night, and the general irritation considerable; a small quantity of urine remaining unevacuated, however great the effort made for its discharge. This gentleman has been restored to health and comfort, and his symptoms all relieved, by the use of the large silver catheter, and by washing out the bladder with water as hot as he could comfortably bear it, every other day. It had a marked and rapid effect upon him; and I am so satisfied of the efficacy of the remedy, and of the advantage to be derived from its use, that I strongly recommend it in all cases in which there is any affection of the bladder; sometimes combined with the various preparations of opium, and particularly those of morphia. I believe it is important that the water should be of a higher temperature than that of the urine when discharged. It should, however, be first used at 98°; and the temperature may be gradually increased until it has reached the highest points that feel comfortable and advantageous to the patient, at which it should be retained. I always inject as much as feels agreeable to him, on similar principles: at first the quantity may be small, but after a time it should be gradually increased; and whilst the bladder loses its irritability, it acquires the capability of being dilated in many instances, in which, from long continued irritation, it had become thickened and contracted. The lotura vesicæ is, in fine, a means of cure which should never be neglected in diseases of the bladder, and which should only be abandoned when it is found on trial to be of no advantage." (P. 271.)

It is unnecessary to add any formal recommendation of lectures which will be read in every country where the English language is known, and which, in spite of some errors, will add even to the distinguished reputation of their author.

A Practical Treatise on the Diseases of the Uterus and its Appendages. Translated from the French of Mme Veuve Boivin *and* A. Dugès: *with copious Notes, by* G. O. Heming, f.l.s., Consulting Accoucheur to the St. Pancras Infirmary, &c. —London, 1834. 8vo. pp. 559; and a volume of Plates.

The morbid anatomy of the unimpregnated uterus has of late years attracted much attention, and has consequently received great improvements; but it is to be regretted that our diagnosis of these diseases during life has not made a corresponding progress. This may indeed be partially attributed to the fashion which, since the time of Dr. Baillie, has pervaded the profession, of studying morbid anatomy to the exclusion of other equally important parts of the science of medicine. But, unless we are greatly mistaken, the numerous errors which are daily committed in treating uterine diseases do not arise from causes of such a general nature, but rather from circumstances peculiar to the affections of this organ. We pass over the number of these diseases and their intrinsic complexity, as any observations on these topics would rather tend to paralyse than to stimulate exertion. We pass over the neglect of education on these points in our hospitals and dispensaries, as we do not flatter ourselves with possessing sufficient influence to alter the routine of such institutions, —we pass over these, which all have their influence in obstructing our knowledge of these affections, to dwell upon other circumstances which admit of remedy, and from the consideration of which we may therefore hope to derive some beneficial results.

In the first place, though their pathology has been much studied, yet we are not in possession of any scientific classification of diseases of the uterus; that is to say, one founded on the morbid changes of its structure. We do not wish in any manner to derogate from the utility or excellence of Sir Charles Clarke's work; on the contrary, Mr. Heming has expressed our own sentiments, in his preface, where he says, "The work of Sir Charles Clarke has appeared to me of the greater value the more I have perused its pages. It is, as is well known, chiefly confined to the inflammatory or organic diseases of the uterus and its appendages, and is the best which can be consulted upon this part of the subject." To him we owe the removal of leucorrhœa and menorrhagia from the catalogue of diseases, and their enrolment in that of symptoms, to which they properly belong; yet it seems to us, that he retains some of the old leaven, when he makes these discharges the basis of his classification. In fact, it often

happens that our modern systems are old phantasies under a more seemly mask; just as we are sometimes told that the Church of Rome has retained the worship as well as the gorgeous ceremonies of its pagan predecessors, and that Saint Somebody is merely a modern name for Pan or Vesta. We are willing to confess that there is some advantage in his arrangements, as discharges do admit of a careful examination by the practitioner, and may therefore assist him in guessing at the nature of the complaint; but there are some, even organic diseases, which in their onset are not accompanied by discharge of any kind, and there are others which, in their various stages, are attended by discharges of very dissimilar characters. It may be said that, in attributing an imperfect diagnosis to the want of a scientific classification, we are laying too much stress upon such arrangements, and that nosology is totally distinct from the practice of physic. To this we reply, that a classification founded upon the pathological characters of disease does not stand on the same footing with ordinary nosologies. They are the only firm foundation from which investigations may safely start, while at the same time they assist in giving correct notions of the nature and treatment of disease. Who will deny that surgeons know more of dislocations and their diagnosis since their excellent classification by Sir Astley Cooper? or who will venture to affirm, that our knowledge of diseases of the joints has not been greatly improved by the scientific arrangement of Mr. Brodie. Neither would such a classification be attended with more difficulty in diseases of the uterus than in those of any other organ, excepting inasmuch as the former are modified by the pregnant and puerperal states. These, however, would rather add to the labour than increase the difficulty; the field would not be more stubborn, though it might be more extensive. On the contrary, could we persuade some competent person to undertake the task, we believe that he would not find the labour excessive, as vast quantities of excellent materials have been already prepared by many distinguished pathologists. Let us, however, not be misunderstood: we do not recommend any young physician or surgeon, whose time may hang heavily on his hands, to commence collating and extracting from the works of other writers, according to the established method of book-making. The attempt could only be brought to a successful issue by one who has studied those diseases at the bedside, and, having acquired by experience the power of separating the wheat from the chaff in the writings of others, has also accumulated sufficient materials of his

own to give an original stamp to his productions. Without such a classification some few practitioners, by very extensive experience, may acquire a knack of detecting most of these diseases, and they may conduct an empirical mode of treatment with tolerable success; but their less fortunate brethren, without the same opportunities, and without any scientific basis on which to form their opinions, are and must be continually at sea; hence arise the ignorance and confusion which prevail upon the subject, and hence also the maltreatment of most of these complaints.

There is another circumstance which is adverse to our progress in distinguishing these diseases, but which ought indeed to have a directly opposite tendency; we refer to the power of examination by the touch. "The eye of the practitioner should be situated in the extremity of the forefinger of the right hand," was the pithy expression of a late celebrated lecturer on the diseases of women; and, at the period at which such language was employed, it conveyed excellent advice to practitioners who utterly neglected this means of diagnosis. The knowledge thus acquired has been found so valuable, that the study of the other symptoms not cognizable by manual examination has been nearly abandoned.

A few general terms applicable to all the diseases of this organ are still retained, such as weight about the hypogastrium, pains in the loins, &c.; but these are so vaguely and indiscriminately applied, that no value can be attributed to them in practice; and, should a surgeon, in consultation, presume to throw out a surmise as to the nature of the complaint from an accurate detail of the general symptoms, it would certainly be disregarded, if it did not expose him to the derision of his fellow practitioners. Yet we do not hesitate to affirm that such a surmise may be made with tolerable accuracy: we would even go further, and say that some general opinion as to the nature of the disease should be formed prior to the examination by the finger, not only for the purpose of shortening a procedure so disagreeable to the patient, but also to assist in arriving at a correct conclusion.

It is not the study of these diseases alone that has been injured by this mechanical system of physic, though perhaps it has suffered most from its effects. Since the application of the stethoscope to the diagnosis of diseases of the chest, their general symptoms have been too much overlooked; indeed, we ourselves remember to have seen a physician of eminence in Paris, while making his daily visit to the hospital, perambulate the wards with the stethoscope in his right hand, and a yard measure in his left, as if in these two instruments

he carried all that was necessary for the practice of physic. In England, however, the sound sense of our countrymen (not to speak of the *amour-propre* of those who possess an exquisite tact of diagnosis by other means,) has partially arrested this mania for listening and measuring, and prevented the utter disregard of that knowledge which has been accumulated by the experience of ages. No one would advocate the discarding of the stethoscope in diseases of the chest, or the manual examination in those of the womb; but we would remark, that medicine is a cumulative science, that every fresh means of diagnosis is valuable as an addition to our stock, but that its value is greatly diminished if its adoption is to be followed by the neglect of others formerly in use, and of whose utility we have by long experience been convinced.

Another mechanical aid has of late been much in vogue, viz. the *speculum uteri*, but we believe that its utility has been greatly overrated. We are willing to concede that, where ulceration of the os uteri exists, this instrument, by enabling us to examine the surface, may greatly contribute to prove our diagnosis; but it can be of scarcely any service in distinguishing the various tumours to which these parts are liable before the period of ulceration. Meanwhile it is open to severalo bjections. Very few patients will submit to its employment, and others are frequently put to considerable pain by its use. Besides, we have seen bleeding fissures of the os uteri, which we have been strongly inclined to attribute to the speculum; and we conceive that tumours having a tendency to ulcerate, would not have that tendency diminished by the lancinating powers of this instrument.

Having thus stated what we deem to be the bars to our improvement in these diseases, let us examine how far the work before us is calculated to supply the desiderata.

The preface, by Mr. Heming, contains a slight sketch of the recent improvements in this department of medical science; which is followed by an introduction, from the pens of Madame Boivin and Professor Dugès, in which the structure of the healthy uterus, and its appendages, is considered in the infantile, virgin, pregnant, and puerperal states. The work itself is divided into two parts, and the first is devoted to diseases of the uterus; these are subdivided into, breaches of continuity, changes of situation, deviations in form and volume, distension of the uterus by foreign bodies, excrescences and morbid changes of structure, acute and chronic inflammation of the uterus, irregularity of the catamenia, and uterine neuroses. The second part, which comprises

the diseases of the appendages, treats separately of those of the ovaria, of the Fallopian tubes, the vagina, and the pudenda. This classification is a first step to improvement, as it is partially based upon the changes of structure; nevertheless, it contains many obvious errors. For instance, the inflammation of the womb, with which the work should commence, in order that the reader may be familiar with its symptoms, as it is developed in the course of other diseases, does not find a place till near the end of the volume. But there are others which we deem more important: for instance, prolapsus uteri is but a symptom of primary extension of the ligaments of the womb, or of relaxation of the vagina and neighbouring parts. We would therefore have these affections distinguished, in order that the practitioner may recognize the curable from the incurable cases. We must, however, pass on to our review of the work itself; but as, from its great extent, and the number of its references and quotations, it rather deserves the name of a Cyclopædia of Diseases of the Uterus than that of a practical treatise, we shall not pretend to follow the authors throughout the whole of their work, but, having selected a few passages by which our readers may judge of its style and execution, we shall make a few comments on the doctrines which it puts forth.

At the very outset of the book, in the introduction, we meet with a fault which demands the severest reprehension. In the section on the *Uterus considered externally*, the following passage occurs: "When she is in the supine position, [the womb] does not extend beyond the level of the brim of the pelvis, and cannot be felt through the abdominal parietes, excepting when these are extremely thin and lax; the top of the finger then reaches it, and experiences the resistance, sometimes very obscure, of a body of round form, moveable, and yielding to pressure, and pretty hard, the volume of which it is therefore difficult to determine, yet such as not to admit of being felt by more than two fingers at once." (P. 3.) "The latter part of this description," says the translator, "appears to me a little imaginative." We cannot, however, dismiss the passage with this mitigated censure. The uterus, in its healthy unimpregnated state, cannot be felt through the parietes of the abdomen; and the authors, in this instance, as in several others, have evidently written not from their experience, but from their fancy, and stated what should be, instead of what is. We have said that the above extract is not a solitary instance of this iniquitous practice. At page 46, while detailing the symptoms of *Prolapsus uteri*, the following passage occurs: "The

somewhat empty space left in the pelvis by the prolapsus uteri may at the same time be detected by the application of the hand to the hypogastrium; and this will be the best means of distinguishing prolapsus from elongation of the cervix."* We do not hesitate to say, that there is not one case out of a hundred in which any empty space can be felt through the abdominal parietes, and that the authors have coined the fact in order to make up their tale. This is a fault too common in medical writings, and cannot be too harshly reprobated. It invalidates the author's testimony on other points, and strikes at the very root of inductive philosophy, by diminishing our credence in narrations of facts.

By way of preparation for the study of the diseases, the authors give a good description of their method of examining the uterus, which we quote, with the additional observations of the translator.

"1. *Super-pubic Examination.* The patient being conveniently placed in the supine posture, the head and the shoulders a little raised, and the thighs semi-flexed upon the abdomen, the hypogastrium should be carefully pressed in every direction by the hand. If a hard body be felt, the fingers should be applied so as to ascertain, if possible, its volume, form, consistency, mobility, and connexion with other organs. The iliac fossæ should be first examined, where the Fallopian tubes and ovaria are sometimes found, when diseased: afterwards, the hypogastrium, which frequently contains the fundus uteri. It will be necessary, in some cases, to press the abdominal parietes deeply into the pelvis with the bended fingers, while the palm of the hand is applied to the fore part of the pubes. The bladder and the large intestines should always be previously evacuated.

"2. *Examination per Vaginam.* The erect posture is the most convenient for ascertaining the weight, elevation, and direction of the uterus: in other respects, the supine posture is better, as in the former examination.† The forefinger is generally sufficient for

* It is but justice to Mr. Heming to quote his note upon this passage, as it exemplifies the practical nature of all his observations: "Elongation of the cervix uteri is best ascertained by tracing it with the finger introduced first in vaginam, and then into the rectum; or, if pregnancy does not exist, by passing a probe into the os uteri."

["† It is usual to make the examination per vaginam, as in labour, the patient being on her left side. But I am persuaded that there are, in many cases, great advantages in the position upon the back, the head and shoulders being raised: 1, in this manner the uterus falls a little lower; 2, the sentient part of the finger receives the os uteri and especially its posterior border, and the anterior part of the vagina, whilst it is easily passed to each side; and 3, the hand is easily revolved, so that the finger may touch the anterior part of the cervix and the posterior paries of the vagina. This is peremptory when we want to obtain repercussion, and to examine prolapsus, in which the patient must also be raised almost into the erect position."—TR.]

this examination, whilst the middle finger, bent towards the palm of the hand, rests upon the perinæum and presses it upward. In some cases the whole hand must be introduced into the vagina. The finger is passed along the canal, under the cervix uteri and behind it, pressing the several parts, to ascertain their sensibility; it then raises the whole uterus, to form an estimate of its weight and mobility, and then ascertain its size, the other hand being pressed upon the hypogastrium. On withdrawing the finger, a white napkin is used, in order to ascertain the state of the discharges. The rectum should be previously evacuated; as it otherwise flattens the vagina, forces its posterior paries forward, and renders it difficult to reach the body of the uterus. This will be best done by an abundant enema of warm water.

"3. *Examination per Rectum.* This mode of examination is adopted only when the preceding one furnishes an incomplete diagnosis. Cases will occur in which tumors, formed between the uterus and the intestine, or towards the lateral and posterior parietes of the pelvis, congestions of the body of the uterus, and particular displacements of this organ, cannot be sufficiently examined per vaginam. Cases also of imperforation, and excessive narrowness of the vaginal orifice, may require examination per rectum; and we have already shewn its usefulness in cases in which the uterus was entirely wanting.

"The patient should be placed in the same position as in the preceding examination, with the pelvis raised. The forefinger should be introduced into the rectum." (P. 31.)

A short and homely injunction of the late Dr. J. Clarke to his pupils is worthy of being added to the above directions, as it contains a caution against the most common error of young practitioners. "Never withdraw your finger till you have completed your examination, and satisfied yourself upon every point which you wish to ascertain."

Among the causes of *Procedentia Uteri*, which are extremely well detailed, our authors mention the sudden displacement of the uterus by muscular exertion, violent pressure on the abdomen, the shock in jumping, or a fall upon the nates, &c. This sudden displacement is a fact that has been generally overlooked, but to the truth of which we can give our testimony. It occurred in a young woman after violent straining, but in her case was followed by metritis of the most intense character. The liability to inflammation after accidents of this kind should have been stated in the work.

The subject of displacement of the uterus occupies nearly a fourth of the volume, and has evidently been the product of much labour and attention. We shall abridge the description of *Anteversion of the Uterus*, as it is not only the

best which we possess, but also one of the best parts of the treatise.

The anteversion of the uterus is frequently overlooked by writers and practitioners, on account of their attention being exclusively occupied by the disease with which it is generally complicated. The slight inclination of the uterus forwards when the bladder is empty is neither inconvenient nor morbid, but, when the weight of the fundus and anterior part is increased by congestion, the utero-iliac folds of the peritoneum are gradually extended, and the uterus itself falls forward, its upper part pressing on the bladder, and its cervix on the rectum. It rarely happens in pregnancy, as the womb is early carried above the pubis, and then, if it incline forwards, it constitutes what is commonly termed *obliquity*. One case, however, of anteversion of the pregnant uterus is recorded by Baudelocque; and M. Boivin has met with another in the second month of pregnancy, but the reduction took place naturally by the progress of gestation. After parturition, a condition between obliquity and anteversion occasionally occurs from violent efforts, or premature exercise on foot. Again, anteversion may be produced without any congestion, by repeated straining or vomiting, or by difficult defæcation, or a loaded state of the rectum; or, lastly, by morbid attachments, the consequence of metritis and peritoneal inflammation. The following is the authors' account of the symptoms which it produces:

Pain is "generally felt in the lumbar and epigastric regions, owing to the dragging of the ovarian plexuses, which proceed from the great sympathetic. The patient is conscious of a weight, when walking or sitting, about the rectum and bladder: the os uteri presses on the intestine, the fundus rests upon the bladder, and forces it to evacuate itself more frequently than usual; sometimes it even falls lower, and presses upon the neck of the bladder, inducing retention of urine (*Desgranges*); while the os uteri, forced backward, sometimes arrests the passage of the fæces along the rectum. These inconveniences, which cease, for the most part, when the patient lies upon the back, unless there be adhesions of the uterus, have often masked the nature of the disease. Stone in the bladder has been suspected; and it was not until Levret had performed an unsuccessful operation of lithotomy, that he verified, for the first time, the existence of anteversion: the tumor, formed in the bladder by the fundus uteri, is not, however, so hard as a stone, nor does it give the sensation of a calculus, on passing the sound; and, on examination per vaginam, the finger feels the anterior surface of the uterus, when the patient stands up or sits on the edge of a chair: sometimes the vagina is partly obstructed by the fundus uteri inclining forward, either directly, or a little more

on one side than the other, so as to constitute a sort of latero-version, the only one of that kind, perhaps, which can exist. The os uteri is always very backward, and must be sought in the concavity of the sacrum: though generally fallen with the rest of the uterus, it is sometimes raised so high as to be hardly reached by the finger. If the os uteri be brought forward by the top of the bended forefinger, and the fundus pushed back by it, it is easy to restore the organ to its natural direction, though it immediately falls back into its unnatural position. In one case only, that of adhesions caused by inflammation, this replacement cannot be so quickly effected; but, independently of this, the pelvis presents no obstacle to reduction: the pubes, inclining forward and downward, allow the fundus uteri, even when swollen, to pass easily, an advantage not so favorably afforded by the sacrum in cases of retroversion. In these circumstances, we may generally ascertain that the uterus has more weight, volume, and sensibility than usual. This state of congestion or of chronic inflammation, which we consider, with Levret, a frequent cause of anteversion, may, sometimes, be the actual effect; and this has appeared the more common event to several practitioners, and, among them, to Désormeaux, according to whom, chronic metritis frequently appears only when the disease has been of rather long continuance: it is equally certain that acute metritis, after labour or a fall, may pass into a chronic state and produce anteversion, which will only yield with the original disease." (P. 65.)

This inflammatory action is inimical to the use of the pessary, though it is not so invincible an objection as might have been supposed. The application of leeches to the pudenda, emollient fomentations and baths, narcotics, and rest in the horizontal position, with the pelvis slightly raised, will generally put a stop to the metritis where the pessary is used, and, where it is not, will frequently succeed in curing the disease. The method of employing the pessary in these cases is thus described:

"The pessary generally used, in cases of anteversion, is the cup-and-ball, having a deep cavity to receive the cervix uteri. The proper position of the uterus will be restored by pushing up the fundus and drawing down the cervix, either with the finger or with the *cuiller fenêtrée* (windowed spoon): it is preserved by keeping the patient on her back, and by pressing with one hand upon the hypogastric region, as deeply as possible, whilst the pessary is introduced with the other; the cervix is made to enter into the cup, by repeated movements from before to behind, while the finger ascertains its position: being finally adjusted, the instrument is still further introduced, and placed in the axis of the vagina. The *bung-shaped* pessary, especially the *élytroïdes* of M. J. Cloquet, may suffice for the treatment of less important cases; in others, more rare, a small sponge passed into the vagina, behind the os

uteri, when very prominent, has served to support the uterus when slightly displaced." (P. 67.)

The use of the pessary should be continued till the leucorrhœa occasioned by it ceases, which is generally a year or fifteen months. Pregnancy may sometimes, though it does not always, prove a cure.

Several cases are then related, which establish the truth of the above description; and a very good representation of this displacement is given in the fifth figure of the eleventh plate.

From the section on Changes of Structure in the Uterus, we shall select for examination the chapter on *Tuberous Cancer*, or *Cancerous Tumours.*

The authors complain, with justice as regards continental surgery, that the term cancer is used to express morbid structures of totally different natures; but it must be confessed that they take a most extraordinary method of remedying the evil, viz. to discard altogether, in their employment of the term, any idea of a distinct anatomical texture. The translator, too, imbued (as translators should be) with a double portion of the author's spirit, has taken care that his language, by its obscurity and indistinctness, should be in strict accordance with the vagueness and confusion of the definition. We shall leave to our readers the task of unriddling the meaning of the passage so ingeniously complex.

"G. *Cancer.* This term has been expunged from the vocabulary of pathological anatomy, owing to the want of precision in its use: we shall therefore prefer using it as a means of embodying some purely practical remarks, separate from any anatomical data, which would be vague, incomplete, and very inapplicable to clinical observations. By *cancerous* we shall designate every affection which, by converting, in its progress, the texture of the uterus, has a natural tendency to increase, to propagate itself all around, and ultimately to destroy itself by ulceration beginning at its centre." (P. 176.)

The authors then proceed to divide cancer into the scirrhous, the fungous, the ulcerous, and the hæmatode. We should not object to this nomenclature more than to that now in use, if it were not that, by admitting these as the only forms of malignant disease of the uterus, we are rather receding than progressing in our knowledge. Dr. Baillie has described briefly, but most accurately, a tumour of the uterus which does not terminate in ulceration, to which he has given the name (whether properly or improperly we shall not stay to determine,) of scirrhus. He has marked out its symptoms so clearly, that it might be recognized with

facility during the life of the patient. The authors, however, in treating of tuberous cancer, confound this disease with the earlier stages of the ulcerating cancer of the womb, though their symptoms and subsequent course are totally different. Again, they make no distinction between the ulcerated carcinoma and the corroding ulcer of Clarke: nevertheless, these diseases are essentially distinct in their pathology and symptoms. We shall lay no stress upon the union, under the head of fungous cancer, of the cauliflower excrescence and the fungous hæmatodes, as it is still a mooted point whether these be not one and the same disease, and the authors have a right to adopt whichever side of the question they may think proper; but we deem it our duty to protest against the voluntary resignation of knowledge which has cost so much labour to acquire, because, forsooth, there is yet something which remains unknown. The causes of tuberous cancer are thus detailed.

"The uterus, naturally liable to periodical congestions, to sudden and considerable changes in nutrition and vitality, must, in consequence, be much more exposed than many other organs to these diseases of texture. Of 707 cases of cancer observed in the principal organs of the body, those of the uterus constitute more than half, amounting in fact to 409. The organs of generation are the principal seat, in both sexes, of this alarming disease: in the female it usually happens most frequently in the uterus, then in the ovarium, and then in the mamma.

"The development of cancer in the uterus is found to be analogous, in frequency of occurrence, with the degree of activity of that organ: thus, the disease appears invariably after the period of puberty, and especially towards the term when its functions are about to cease, seldom showing itself when the uterus has become inactive from old age. The periods of its most frequent occurrence are first, from the fortieth to the fiftieth year, then from the twentieth to the thirtieth, and, lastly, from the thirtieth to the fortieth; and it has been less frequently observed in early youth than at the periods quoted, though much more so than after the fortieth year.* Persons who are pale, thin, nervous, and phlegmatic, labouring under tuberculous disease, subject to periodical depression, and of

* "In the 409 cases of cancer of the uterus, we have made the following enumeration:

Under twenty years of age	12
From twenty to thirty	83
From thirty to forty	102
From forty to forty-five	106
From forty-five to fifty	95
From fifty to sixty	7
From sixty to seventy-one	4
Total	409

solitary inactive habits, are more subject than others to cancer of the uterus. Though found to occur in the unmarried, it is of much rarer occurrence in such persons than fibrous diseases, which it resembles in its great induration and slow progress. It is a fact that local violence tends to produce this disease. It has not been observed that repeated labours constitute a particularly frequent cause, though the contrary remark has been made in the case of abortions, irregularity of the catamenia, and repeated menorrhagia, either because these affections are the cause, or the effect, of congestion of the uterus, or of scirrhus of this organ.* It is very evident, in fact, that whatever tends to maintain the uterus in a state of such congestion, or of chronic inflammation, may at length give rise to cancer: syphilis has been known to lead to it indirectly; but we are speaking now rather of the ulcerated than of the tuberous form.

"Cancer very often appears without any assignable cause. MM. Bayle and Cayol observe, "We have known persons of the greatest profligacy to die of cancer of the uterus,—unmarried women, in cases in which the hymen was perfect,—married women who have borne many children, and others who had never been pregnant." This disease is sometimes the result of a diathesis already manifested by scirrhus of the mamma; sometimes, without affording any distinct signs, it appears to proceed from hereditary constitution." (P. 231.)

There is a strange misstatement in this passage. The text informs us that the period from twenty to thirty years of age is more liable to this disease than any, excepting that from forty to fifty: the note, on the other hand, asserts it to be more rare from twenty to thirty than from thirty to forty. As far as our own experience goes, we are inclined to believe the note, which, we think, rather exaggerates than diminishes the proportion of patients affected in early life.

The account of the course and symptoms of tuberous cancer is necessarily very imperfect, as there is no attempt at discriminating each form of the disease. One observation is however very good, and deserves quotation.

"Hæmorrhagy is a most important symptom, when observed in a person who has exceeded the period of the catamenia; and some cases which we have seen prove the necessity of rigorously exa-

"* In all cases where frequent abortion or premature labour takes place, the uterus should be examined: it will very frequently be found to be diseased.

"This may be expected to be the case, more especially if there be frequent, very slight discharges of blood, during the early months of pregnancy. In two cases of this kind, which recently occurred to me, I was induced to examine the uterus, in consequence of the discharge continuing some weeks after the abortion had taken place: in both cases I found disease. In the first, premature labour took place three times with dead children: the other case resembled it in many points, but in this the ovum was expelled four times at the fourth month. The disease was carcinomatous, and ultimately destroyed the patients.—TR.

mining into those pretended renewals of the catamenia spoken of by physiologists. This apparent return of youth is in general only a sign of some important disease in the uterus or its appendages; it has often been observed to be followed by a rapid wasting and sudden death. There are also a great many persons who are continually subject to augmentations and diminutions (sometimes even periodical,) of abundant aqueous discharges, inodorous or of a faint smell; slightly charged with albumen, as is seen by the slight stiffness, the somewhat greyish colour which it imparts to the linen on drying, and of a slight rose colour at the period of the catamenia. This serous and profuse discharge appears to us to announce, if not the existence, at least the commencement or the approach of ulceration, of fungous growths, constituting the third degree or period of this disease." (P. 234.)

There is but little novelty in the palliative treatment recommended by the authors, but their observations on the curative treatment are copious, and so marvellous, as to excite even the translator's admiration. The various methods of procedure are cauterization, and partial and total excision. The first is to be employed only in incipient cases, as otherwise they have an unfortunate tendency to lay the vagina, bladder, and rectum into one cavity, not to mention the liability to peritonitis, or the danger of hemorrhage. The partial excision is fully discussed according to the methods of Dupuytren, Lisfranc, Mayor, &c. This operation is somewhat discountenanced by the authors, as only one case in six survives its performance; nevertheless, they would occasionally permit it "in cases in which the cancer is insupportably painful." We leave our readers to judge how nearly this permission approaches to authorizing practitioners to decide whether the patients' lives are worth preserving, and to put a speedy end to them, provided that the decision is in the negative. But this is not all the humanity of the authors: "*in the hope of affording occasional relief*," they actually proceed to add a few words "on the superpubic and subpubic extirpation of the whole uterus." The only cases on record of the former operation died within a few hours, and the success of the latter appears to be no greater.

Mr. Heming's note, at the conclusion of the chapter, is creditable both to his judgment and feelings. "These difficulties, together with a real blot upon surgery, would be best removed by entirely confining these barbarous operations in future to the dead subject." (P. 253.)

We must now close our notice of the work. Mr. Heming has added many excellent observations, both from his own experience and from the writings of the best authors of this country, and, whenever he has stated his opinions, they ap-

pear to be sensible and to the purpose. We have, however, two small objections to make: first, that we occasionally meet with expressions which partake quite as much of the French as of the English language, having the words of the one and the idiom of the other; and, secondly, that the omission of several passages, on the ground of their want of chastity, looks much like a quiz on the modesty of medical men, while it forms a grievous libel on the purity of the lady-author.

The lithographic plates are of great assistance in understanding the authors' descriptions; they are exceedingly cheap, and very fairly executed.

The Physiology, Pathology, and Treatment of Asphyxia; including suspended Animation in New-born Children, and from Drowning, Hanging, Wounds of the Chest, Mechanical Obstructions of the Air-Passages, Respiration of Gases, Death from Cold, &c. &c. By James Phillips Kay, M.D., formerly President of the Royal Medical Society, Edinburgh.—London, 1834. 8vo. pp. 344.

How often has it been objected to the zealous cultivators of physiological knowledge, that they are in pursuit of a phantom, an ignis fatuus, which ever and anon they fancy they can seize on, but which incessantly eludes their grasp! The notion which we hear so often expressed, namely, that physiology must ever be an imperfect science, is no doubt well calculated to console the indolent, who will not take trouble to inquire even into the results of the labours of contemporaries. It were well if this doctrine had its influence only on such hybernating animals, and still better if it tended to increase the period of their torpidity; but it is unfortunate that even the opinions of such men have weight with a portion of the community, and it sometimes happens that they from whom we might expect better are entangled in their nets. Hence the outcry about the nonadvancement of physiological science is really often in the mouths of those who ought to speak differently. We do not mean to assert, that the advance of physiology has been commensurate with that of some other branches of natural science; but we do assert, (and we do so, fully aware of the opposition which the assertion will receive from many quarters,) that, taking into account the almost insurmountable obstacles which physiology has had to contend with, both as regards the nature of its objects, and also, we must add, the qualifications of the majority of its cultivators, this science has been by no means so tardy in its progress as many would have us to suppose. That which we most lament in connexion with physiology,

is the great dearth of *well-qualified* labourers in her rich fields. We say well qualified; for no science possesses a more abundant supply of unskilful workmen,—mere dabblers, who, for want of something better to do, deem themselves privileged to retail the opinions of their predecessors, which they do often not in the purest and most unadulterated form. Of such physiologists we have enough; but of the zealous yet cautious men of science, who value facts above hypotheses, and know how to assign to both their respective positions,—of such men physiology stands much in need; nor can we expect it to make any very considerable advances from its present position, till a few such workmen are employed about it.

The foregoing reflections have resulted from the consideration that the subject of the work before us, asphyxia, is dependent for its elucidation entirely upon accurate physiology, and upon the precise knowledge of a function which it is not easy to investigate. In examining the function of respiration, there are numerous objects requiring very minute scrutiny before a single conclusion can be formed. Any one at all acquainted with the mass of matter that has been collected relative to this function, must be aware also of the great discrepancy that exists as to the statement of the results of experiments, and the differences in opinions which are consequent upon that: yet we have, in the work of the distinguished Edwards, "sur l'Influence des Agens Physiques, &c." an example of what the truly philosophic mind can effect, even amid such discordant elements: by his reasonings and experiments he has to a very great extent reconciled the conflicting conclusions of his predecessors, and established most of the important points connected with this function on a sure foundation.

Dr. Kay, in the work before us, commences by establishing the exact meaning and import of the term asphyxia, and its difference from syncope; both these states exhibiting phenomena very similar, but the former being, "by modern usage, employed to distinguish that form of pulselessness which is produced by any cause preventing the decarbonization of the blood, accomplished by respiration." According to him, asphyxia is to be regarded as a condition in which, "though the action of many organs has been changed, so as to be incapable of giving evidence of life by its natural phenomena, an action continues which supports a mode of life peculiar in its phenomena, and sometimes so long, that, by the use of means to restore the function of the lungs and circulating system, the natural actions may be revived." (P. 71.)

Our author offers an ingenious distinction between death and asphyxia, but, while we admire its ingenuity, we do not profess to subscribe to its truth.

"The death of the body, as distinguished from the organic death of the tissues, consists in the disunion of the intellectual principle from the corporeal organization.

"This connexion is maintained by various peculiar intestine motions in the various organs, but many facts indicate that the brain is the intimate residence of this mysterious tenant. The intestine actions of the brainular mass may be primarily or secondarily affected, that is, by the previous lesion of other organs, or without their lesion; but, until these organic motions become such as to disunite the immaterial intelligence, life continues, though none of the usual evidence of its existence be given by phenomena of which the senses can be cognizant. But, as we cannot conceive that, when once the union between mind and matter has ceased, the intellectual principle can be recalled to the corporeal organization, all states in which resuscitation is said to take place must be only apparent death, and the revival consists in a change from those morbid actions which suspended the usual phenomena of life, to those natural organic notions by which its usual functions are supported.

"Asphyxia differs from death, therefore, as in it the minute actions of all tissues continue such as to support the connexion with the intellectual principle. Although in death, as after decapitation, (when we cannot conceive the intellectual principle to be connected with the corporeal organization,) contractility and nervimotion long survive, and minute organic movements are continued, yet they have lost that portion of the organization which maintains the union with the intellectual principle. Whilst life yet remains, the minute actions may be so morbid that no means can revive those by which life can be supported for any period, and then death is certain. But the separation of the intellectual principle from the corporeal organization may take place long before all motion has ceased, and then death has ensued; yet, as life may be restored in the early stages of asphyxia, it follows that death has not happened, and that this state must be regarded as life peculiar in its phenomena." (P. 74.)

In speaking of the causes of asphyxia, our author notices that form of it which, in these days of locomotive enterprize, ought to be extensively known: we allude to that from rarefaction of the air at high elevations, and which is analogous to that produced artificially, by gradually exhausting a receiver in which an animal has been placed.

"Some travellers who have ascended very high mountains have suffered much from the rarity of the atmosphere near their summits. They have been unable to walk more than a few yards without stopping to take breath, and feeling extreme fatigue. This

lessness has sometimes been accompanied by hemorrhage from the lungs, sudden exhaustion of the muscular power, and fainting.

"These alarming symptoms are produced by the want of a sufficient supply of oxygen to the lungs, whilst at the same time the pressure of the atmosphere on the capillary vessels is diminished, and a condition of the circulation produced, such as will be described when we treat of the physiological consequences of suspended respiration. Asphyxia from void has this peculiarity, that the capillary vessels of the whole surface of the body are congested from the removal of the atmospheric pressure on them, and particularly that, in the delicate and very vascular structure of the lungs, this congestion becomes so great as frequently to occasion hemorrhage, and always to interfere with the effect of the air on the blood circulating in that organ. We may dismiss this form of asphyxia by observing, that no remedy can relieve it but a proper supply of air. When the danger of its accession is imminent, the best method of preventing its occurrence is to avoid everything which can accelerate the circulation, impede the motion of the chest, or prevent a supply of oxygen to the lungs and skin. Perfect rest, a recumbent posture, and free exposure to the air, together with the application of stimulants to the olfactory and respiratory nerves, are the remedies from which the greatest benefit may be expected." (P. 76.)

We recommend to all our readers, but more especially to those engaged in obstetric practice, the perusal of the remarks on asphyxia in newborn children, which immediately follow the passage last quoted. We think our author shows most satisfactorily that asphyxia in adults, and the same state in newborn children, occur from causes very analogous; namely, from the absence of the influence of that organ which gives to the blood its nutritious and vivifying qualities,—the lung in the adult, the placenta with the fœtus. In children thus asphyxiated, insufflation is the great remedy. Dr. Kay recommends it to be done by the bellows of Leroy, through a properly covered canula introduced into the trachea. Caution must be observed not to inflate the lungs too much, although, as Dr. Kay observes, there is less danger of injury in the fœtal than in the adult lungs. We lately saw the Indian-rubber bag ingeniously adapted to this purpose by Mr. Weiss, which we conceive a valuable addition to the surgical accoutrements of the accoucheur.

The second chapter of this work contains a valuable abstract of Edwards' experiments and conclusions respecting the influence of air and water, and of venous blood, on the nervous and muscular systems; the relative power of animals of various ages to produce heat, and the causes of the loss of temperature with hybernating animals; on the influence of

external temperature on young animals deprived of air; and the comparative necessity for a supply of oxygen which is experienced by different animals. The author then proceeds, in the third chapter, to inquire into the circumstances which cause a cessation of the contractility of the heart and muscles, when respiration is suspended in warm-blooded animals.

Every one knows how much diversity of opinion, and what angry controversy have originated in the attempt to explain the phenomena of death from asphyxia. From the days of the immortal discoverer of the circulation, this subject has justly attracted the attention of physiologists. We find a unity of sentiment between this great man and Haller on the subject; both of them attributing all the phenomena to a stoppage in the pulmonary circulation, consequent on the compression of the vessels of the lungs during expiration. This was an opinion suited to the days of the mechanical physiologists: its fallacy, however, was exposed by our countryman, Goodwyn, who shewed that the lungs did not collapse to such an extent as to compress their capillary vessels; but that the air remaining in them, even after the fullest expiration, distends them sufficiently to permit the blood to circulate freely through them.

Bichat's well-known experiment of adapting a stopcock to the trachea of an animal, so as to command the ingress of air, and then opening the carotid, fully proved the alteration which the blood undergoes in its passage through the lungs, and the necessity for inspiration, in order to affect that change: he remarked, moreover, not only a change in the physical characters of the blood, but also a great diminution in the force of its saltus from the divided artery, which was again increased on the readmission of the air. Dr. Kay repeated his experiment, with a view to ascertain how long the flow of blood continued during the privation of air; and, having varied it so as that the cessation of the flow of blood could not be attributed to the extent of the previous hemorrhage, he found that, although the heart continued to act vigorously, yet the flow of blood ceased in from three to five minutes after the animal was asphyxiated. It is evident that the cessation of the flow of blood was attributable not to any want of energy in the heart, but to the non-arrival of blood to the heart from the lungs; and this retardation in the pulmonary circulation was evidently owing to the want of inspiration, as might be deduced from the celebrated experiment of Hooke, which is similar to that of Bichat.

The question evidently, then, is reduced to this, what is

the obstacle to the pulmonary circulation? Dr. Kay found that asphyxial blood could not be injected into the lung of an animal in asphyxia, with the same facility as arterial blood. The experiment by which he was led to this presumption (for it is not more,) was obviously one very difficult to perform; the injection of the lungs *in situ* in small animals being very difficult at all times, but more particularly so during life: yet the point is one not to be passed over, and which strongly favours the supposition that the vessels resisted the ingress of the noxious asphyxial blood, while they offered no obstacle to the arterial.

Goodwyn's theory of asphyxia rested on the hypothesis that the left auricle became distended with asphyxial blood, which was incapable of stimulating it to contraction; consequently, the blood coagulated in it, and the contents of the pulmonary veins could not find ingress into the auricle. Could this supposition be established, we need seek no further for an obstacle to the pulmonary circulation; but, unfortunately for it, it appears that the cessation of the heart's action is the last of the phenomena; that it takes place subsequently to the cessation of the flow of blood, and therefore cannot be its cause. This is proved not only by Dr. Kay's experiments, but by those of Bichat, who further shewed that dark blood might be injected into the left cavities of the heart, without destroying their contractility; and even that the contractility may be re-established, by injecting dark blood into the heart. It is clear, therefore, that Goodwyn's theory will not account for the stoppage of the pulmonary circulation.

Bichat admitted the continuance of the circulation of dark blood, for it was proved by his own experiments; but, because the voluntary muscles are greatly enfeebled, and almost paralysed, by the injection of asphyxial blood, he inferred that *all* tissues injected with such blood are similarly affected as to their vital properties, and therefore that the heart's functions were destroyed by the noxious qualities of this dark blood. This question has been well met by Dr. Kay, and his experiments satisfactorily shew that the non-contractility of the muscles is the result, not of the noxious influence of venous blood, but of their being deprived of their wonted supply. This view is still further confirmed by the fact, that if the main artery of a limb be tied so as to prevent the ingress, and the principal venous trunk be tied, so as to prevent the egress of the blood, the contractility of the muscles will continue longer than if the artery alone were tied. "The power of contraction," concludes our author, "is therefore

in the direct ratio of the quantity of blood circulating in the muscular tissue, and its capacity is determined by the facility and velocity of that supply. When it is abstracted, contractility ceases. Blood is therefore necessary to contraction."

Further experiments very satisfactorily proved that a muscle, thus deprived of its contractility by the cutting off of its proper supply of blood, could be revived by the transfusion of blood; and that, although arterial blood was more favourable to the resuscitation, yet venous or asphyxial blood had also that effect to a certain extent; or, to state the conclusion in the author's own words, "dark blood is therefore less favourable than arterial to the contractility of muscles, but *its presence in the tissue* supports this power a considerable period after the ligature of the artery." This conclusion appears to us to be so completely established by well planned and judiciously varied experiments, that we cannot hesitate to give our fullest assent to it. How far, however, our author is warranted in stating that his experiments prove that "neither asphyxial or venous blood have *any noxious* influence upon the contractility of the voluntary muscles," we are not prepared to decide. We see no facts to warrant such a conclusion: *a priori*, we should say that any kind of nutritious fluid, different from the usual and healthy, would be more or less noxious; and we do not see that the fact which we admit as proven, viz. that a supply of venous blood supports muscular contractility, at all invalidates that supposition.

The right auricle of the heart has been long known as the *ultimum moriens;* it has also been observed, that the other cavities of the heart are not synchronous as to the cessation of their vital phenomena: to account for this, physiologists deemed it necessary to attribute to the heart peculiar properties, distinct from those of other muscular fibres. Nysten's observations on this subject are pretty generally known, and well deserving of attention; but Dr. Kay has succeeded in explaining the supposed peculiarity of the heart's contractility, by the application of the fact just established, viz. the relation of the supply of blood with the permanence of contractility. By experiment he could vary this permanence, so that the left auricle should become the *ultimum moriens*, if the right were deprived of its wonted supply of blood. Haller found that he could transfer the permanence of contractility from the right auricle to the left, by completely emptying the right side of the heart, leaving the pulmonary veins free, and tying the aorta, so that the

left heart was gorged, while the right was completely empty. He ascribed the permanence of contractility to the presence of the blood, which he regarded as the stimulus in obedience to which the cavities contracted. Dr. Kay's experiments were similar to that of Haller, and he thus reasons upon them.

"The result of these experiments is perfectly consistent with the idea that the contractile power of the parts is supported, through a comparatively longer period, by the repletion of their cavities, and consequent congestion of their fibres with venous blood. This repletion of the right auricle, and of its venous sinus, in death, from the cessation of the functions of the brain or lungs, must be more considerable than that of any other muscle of the body. The blood, which by the last contraction of the ventricle is propelled into the arteries, is by them conveyed to the capillaries in the various tissues of the body. The organic motions of these tissues continue for some time; the blood still moves onwards, and is impelled with a certain force by their actions into the general venous system. The veins are everywhere found distended, because the circulation is obstructed by the lungs, in which respiration has ceased. The pressure of this power must be divided between the terminations of the large veins in venous radiculæ in all the system, and their opposite terminations in the heart. The power, therefore, will be greater in the auricle than in any other portion of the body; and, if congestion support the muscular power, that of the auricle ought to survive longer than that of any other organ, as experiment proves that it does." (P. 165.)

It is hardly necessary to remark how signal has been the overthrow of Bichat's hypothesis: it is clearly proved, by the experiments of our author, that the circulation of asphyxial blood, which, according to Bichat, paralysed the heart, had really an exactly opposite effect.

It appears, then, that the question, whence arises the obstruction to the pulmonary circulation in asphyxia? cannot be satisfactorily answered, either by the hypothesis of Goodwyn, or by that of Bichat; for, in fact, the pulmonary circulation ceases before the heart's action ceases. The obstruction cannot therefore be extraneous to the lung; it is not produced by any mechanical compression of the pulmonary vessels, or indeed by any mechanical cause whatever in the lungs, as both Goodwyn and Williams have established: but there seems no just ground for rejecting Dr. Kay's conclusion, "that the circulation is arrested after respiration ceases, because, from the exclusion of oxygen, and the consequent non-arterialization of the blood, the minute pulmonary vessels, which usually convey arterial blood, are then

incapable of conveying venous blood, which therefore stagnates in the lungs."

It will be recollected that Bichat attributed the phenomena of asphyxia not merely to the circulation of dark blood in the substance of the heart, but to the absence of the usual venous influence occasioned by the circulation of the blood in the brain; but Dr. Kay has shewn that Bichat's experiments were so clumsily executed as to be wholly inconclusive, and, by very well devised experiments of his own, he has proved "that dark blood may circulate through the cerebral mass, without producing, by its contact with the brain, a sudden suspension of the functions of the nervous system." We have not space to follow the author through his experiments and reasonings on this subject, but we conceive that he has fully disproved Bichat's assertion, by shewing not only that the venous blood is not so noxious as that physiologist supposed, but also that, in asphyxia, it is transmitted in very small quantities to the brain: in fact, that the mischief is done before the dark blood can well be said to *circulate* in the cerebral mass.

We have an interesting chapter on the effects of the admission of air into the cavities of the pleural membranes. The novel, and we must say rather absurd, proposal of Carson, to procure rest to a lung by admitting air into the sac of the pleura, so as to compress it, was among the first circumstances to draw attention to this subject; and perhaps the most unreasonable part of Carson's proposition arises from his expectation that the quiescence of the lung would promote the absorption or removal of tubercular deposits. This fanciful notion, however, was soon set aside, when it appeared, from the very important experiments of Dr. Williams, of Liverpool, that it is not quite so easy to produce a collapse of the lung as it might be at first supposed; that, if the wound be moderate, the column of air entering the trachea is sufficient to counteract the pressure of the air entering the chest, and thus to prevent collapse; but if the wound be of considerable size, and so open that the air has very free ingress, then the compression is complete, and the animal so circumstanced will die.

This subject is one of much interest, as regards the mechanism of respiration. The phenomena of expiration are to a considerable extent explained by observing the effects of the admission of air into the thoracic cavity. By freely opening one side of the chest of an animal, so as to produce complete collapse of the lung, the action of the lung of the opposite side may be seen through the mediastinum, pro-

vided that the septum has been uninjured. This action is in no way impeded by separating the attachment of the abdominal muscles from the margin of the ribs, but the diaphragm continues to ascend, following the contraction or diminution of the lungs. That the contractile or elastic power of the pulmonary tissue is a principal agent in this, we can readily believe; but that the pleural membrane possesses a "resilient power," such as Dr. Kay ascribes to it, we think wants proof. A perforation of the mediastinum, so as to admit air into the cavity of the pleura, at once puts a stop to the action of the lung; it collapses, the diaphragm ceases to ascend: what further proof do we need that the lungs themselves are the primary agents in respiration?

Thus far we have endeavoured to give our readers a glimpse of the principal points of physiological, and therefore of pathological import, which Dr. Kay has embodied in his work. It will be observed that he differs from his predecessors in his theory of asphyxia, the phenomena of which he thinks are sufficiently accounted for by the stoppage of the pulmonary circulation. He seeks not for further aid from the nervous influence and other mysterious agents; and, as we are of opinion that he has fully established his views, we conceive him entitled to great merit in having so far simplified the theory of this condition.

The author devotes two chapters to the consideration of the various means which have been adopted for the purpose of recovering the asphyxiated. Of these means, insufflation is deservedly entitled to much consideration, as well from its real value as a resuscitating agent, as from its dangerous tendency when incautiously or injudiciously applied. Leroy's experiments shewed that air, introduced with even moderate force, produced bad consequences in rabbits, foxes, goats, sheep, and other animals: some were even killed by the inflation, and others suffered great dyspnœa for a considerable time afterwards. The most frequent result of insufflation is the escape of air from the ruptured pulmonary vesicles into the sac of the pleura, thus producing a condition favourable to asphyxia: in fact, Leroy and Magendie revived some animals thus treated, by making a puncture in the walls of the chest, and thus permitted the effused air to escape into the cavity of the pleura. Sometimes air was found throughout the sanguiferous system, and the several forms of pulmonary emphysema has been produced.

"Leroy recommends the double-valved bellows of Hunter, to the handles of which he has adapted the graduated arc of a circle, by which the quantity of air injected into the lungs.

and removed by each successive motion of the bellows, may be determined."—"He ingeniously measured with his bellows the quantity of air expired without effort into a bladder at different ages, and marked upon the arc of the circle attached to the apparatus the point to which the elevated handle of the bellows was raised. The quantity of air to be introduced into the chest at successive ages being thus determined, he reduced the opening at the extremity of the curved tube to a size which prevented the air being introduced more rapidly than it is usually inspired. The diameter of the tubes, and of their orifices, were adapted to the ages of the patients, and the quantity of air which ought to traverse them in a given time was thus regulated." We readily agree with Dr. Kay in recommending this apparatus for general adoption, as, from its great simplicity, there can be no difficulty in using it; and it tends to diminish, if not to remove, the dangers attendant on the most important remedy we possess.

We cannot say so much for the simplicity of Leroy's method of applying galvanism, although it certainly is far preferable to that proposed by Dr. Ure, which requires an operation that can only be performed with safety by those who are possessed of a higher rate of anatomical knowledge than belongs to the ordinary race of medical practitioners in these days. Leroy introduced acupuncture needles into the diaphragm, (no easy thing in the human subject,) and connected the piles of a galvanic battery with them, so as to produce contraction of the diaphragm, and consequent enlargement of the abdominal cavity. By this method he succeeded on several occasions in reviving animals that had been under water more than five minutes. But a more simple method of imitating the natural respiratory motions is that effected by applying pressure to the abdomen and walls of the chest, alternated by a relaxation of that pressure. This is done by means of a many-tailed bandage, invented by Leroy; for a delineation and description of which we must refer the reader to Dr. Kay's work.

Dr. Kay strongly deprecates the having recourse to tracheotomy in asphyxia, and we think with great justice. It is unnecessary, as with common dexterity a curved canula can be introduced into the glottis; and Leroy has invented a useful instrument to facilitate this operation, by depressing the root of the tongue, and drawing the epiglottis upwards and forwards.

Much discrepancy of sentiment exists as to whether, in asphyxia from submersion, the water is inspired into the

trachea. This subject is very fully discussed by our author: he seems to incline to the opinion that no water enters the trachea so long as the organic sensibility remains; but, if the body remains submerged after that has ceased, then it is natural to expect that it shall enter at every inlet: hence an argument may be drawn in favour of the extreme importance of an early removal of bodies from the water.

The question as to the efficacy of the transfusion of arterial blood into the veins in asphyxia, led our author to devote his seventh chapter to a very interesting and well-told history of the operation of transfusion. Its particular application to asphyxia is however still in its infancy, and requires further investigation.

The remainder of the work is occupied with the consideration of asphyxia from suspension, and death from cold, as well as the effects of the respiration of the noxious gases. Our limits prevent us from attempting to present the reader with any analysis of the valuable matter contained in the two last chapters. We must content ourselves with recommending most strongly to his perusal, not only these chapters, but also the whole work, as one containing a vast mass of information on the most interesting subjects, and also as an example of a calm and very philosophic discussion of some very difficult physiological points. Such works should be perused by medical men with a twofold object: first, as giving a practical lesson in the art of reasoning; and, secondly, from the increase which they may afford to the existing stock of knowledge.

The letter prefixed to this work, and addressed to the Duke of Northumberland, as president of the Humane Society, contains a useful abstract of all that is connected with the pathology and treatment of the asphyxiated. It ought to be printed in a cheap and separate form, and circulated far and wide throughout the country.

We take leave of Dr. Kay's work not without some regret. We would we could always ensure ourselves so agreeable a task in the business of reviewing as that we have had with this book. We trust this is not the only subject on which the talented author means to make his views and researches public: however that may be, we conceive he has done enough to entitle him to the warmest praise of his contemporaries, and to secure for himself a fame of no short duration.

Principles and Illustrations of Morbid Anatomy; adapted to the Elements of M. ANDRAL, *and to the Cyclopædia of Practical Medicine, &c.* By J. HOPE, M.D., F.R.S., Physician to the St. Marylebone Infirmary, &c.—London, 1834. 8vo. Parts XI. and XII. Pp. 57 and xi. Coloured plates.

MANY intelligent practitioners are of opinion, that morbid anatomy has for some years been cultivated with a zeal quite disproportioned to its practical value. They remark, that post-mortem examinations frequently lead to conclusions as to the treatment of disease which experience proves to be false, but more frequently lead to no conclusion at all; and that the benefit to be derived from these investigations will be reaped (if at all) by a distant posterity; for that, in our time, medicine must remain as it is,—not a logical system, but a refined empiricism. We do not, however, quite agree with these objectors: for, in the first place, we do not see why men of science should not accumulate facts to be profitably employed by their grandchildren, just as the provident husbandman plants oaks as well as cabbages; and moreover, it is to be hoped, if not expected, that the indefatigable industry of our dissectors will ultimately be rewarded with discoveries immediately applicable to the art of healing. It must be admitted, in addition, that great bodies of men, as well as individuals, are sometimes urged on by a spirit of enthusiasm, and pursue some favourite branches of knowledge with an exclusive zeal, which would be pernicious, were it constant; but which, lasting only for a few years, produces results which could never arise from the toils of more cold and calculating students. It is to be desired, however, that every practitioner who devotes himself for a series of years to the minute examination of dead bodies, should afterwards apply the knowledge which he has thus gained to the advantage of living ones. This duty is especially incumbent on those who, like the industrious author before us, have the charge of a hospital or infirmary: it is theirs to show their less fortunate brethren what are the results of the treatment of disease on a large scale, and to dissipate their errors by the irresistible evidence of myriads of successful cases. We trust, therefore, now that Dr. Hope is released from the heavy but useful task which he had assigned himself, he will devote himself to the execution of a practical work, for which the honourable post which he occupies will afford him abundant materials.

The eleventh Number of the Principles and Illustrations of Morbid Anatomy contains the remainder of the diseases of

the Uterus, and the diseases of the Kidney, Bladder, and Spleen; of which, the last three are despatched with great brevity. The twelfth and last Part gives an account of the diseases of the Brain and Spinal Cord. We must content ourselves with a single extract.

"*Cerebritis, or Inflammation of the Substance of the Brain.* Considerable difficulty is experienced in ascertaining the existence of inflammation of the substance of the brain in its early stages, in consequence of the natural standard of vascularity being different at different ages, and in consequence of certain diseases, certain modes of death, and several other circumstances, giving rise to congestion, which may be mistaken for inflammation. It will therefore be desirable to premise the present subject with a brief sketch of the natural appearances of the brain, and of the aspects and causes of congestion.

"*Natural Appearance of the Brain.* In adults, the colour of the cortical substance of the cerebral hemispheres is aptly compared to weak coffee, mixed with much milk, as in Fig. 241, from a female æt. nineteen. In infancy and early youth, the vascularity being greater, the colour is rather more purple, and resembles chocolate with milk. In elderly people, a diminution of vascularity, by withdrawing the pink intermixture, leaves the substance greyer and paler; and, in very advanced age, it acquires a slight yellowish tint, which, however, sometimes appears prematurely at a much earlier period.* When the pia mater is torn off, the surface of the grey substance is speckled over with red dots, arising from the rupture of the meningo-cephalic vessels, the dots being more numerous in proportion as the brain is more vascular: the interior of the grey substance also presents a few dots and streaks, which are less abundant, or at least less apparent, than those of the white substance.

"The grey substance is composed of three distinct layers: the first, or external, of a whitish grey; the second, which is very thin, of a dirty white; and the third, which is the thickest, of a more leaden grey. Dr. Bright states that six layers may occasionally be discerned. The layers are marked by natural or accidental differences of colour.

"The white substance of the cerebral hemispheres is usually called milk-white in young people and adults; but, on repeatedly comparing it with white paper, I have found it to present a delicate pink tinge, which is deeper in proportion as the subject is younger, and also a faint yellow tinge, very much as in Fig. 241, produced by a very faint carmine wash, and, over it, an ochre wash. After the age of fifty the pinkness vanishes, leaving the white more pure than at any other period of life; in old age a yellower tint super-

* "Andral, Path. Anat., vol. ii., p. 712; and Cazauvieill, Recherches Anatomico-Physiologiques sur l'Encéphale, considéré chez l'Adolescent, l'Adulte, et le Vieillard."

venes. On making a section, a few scattered dots of blood ooze out of the cut vessels, and are intermixed with a few short capilliform streaks, as if from vessels cut longitudinally. The blood from a few of the larger vessels diffuses itself, and forms small blotches. The number of these red specks, streaks, and blotches is greater in children than in adults, and in these than in the aged.

"*Congestion.* Acute disease, attended with increased arterial action, augments the injection of the brain, while chronic disease, producing anæmia, diminishes it. Diseases attended with obstruction to the return of the blood from the head, as asthma, organic affections of the heart, &c. augment cerebral congestion; and, on the same principle, it is augmented by death from asphyxia or convulsions. It is likewise increased by hypertrophy of the left ventricle, which causes a preternatural determination to the brain. After death, if the head be placed in a dependent position, very considerable injection and even uniform redness may be occasioned by the gravitation of the blood, and its transudation through the coats of the vessels. The same transudation may occur if the examination be delayed till putrefaction commences, especially when the weather is hot. Cerebral congestion is diminished by opening the chest before the head, and thus allowing the blood to drain off by the jugular veins. The French mode of opening the cranium by the hammer causes redness and ecchymosis along the line of the fracture. It is scarcely necessary to add the familiar fact, that, when the surface of the brain, divested of its membranes, is exposed for some time to air, its redness is greatly increased in consequence of the venous blood becoming oxygenized; and the same change is sustained, though in a less degree, by the interior when sliced and similarly exposed." (P. 282-284.)

The extreme beauty of the plates is kept up to the last; and we cannot part from this work, so creditable to the talents, as well as the industry of Dr. Hope, without again cordially recommending it to our readers.

Some Observations on the Preparation and Medicinal Employment of the Ioduret and Hydriodate of Iron. By ANTHONY TODD THOMSON, M.D. &c.—London, 1834. 8vo. pp. 64.

IN a former Number of our Journal, (vol. ii. p. 82,) we extracted Dr. A. T. Thomson's recommendation of the ioduret of iron, from his paper on *Stimulants*, in the Cyclopædia of Practical Medicine. His further experience has now produced a work which, though small, is interesting, and from which we shall therefore make some large extracts, for the gratification of our readers.

As these new preparations are not yet kept, we believe, in the majority of shops, practitioners (especially those residing in the country,) will find the following directions very useful;

and the more so, as the solution of the hydriodate of iron is one of those delicate medicines whose qualities are as mutable as those of the atmosphere which decomposes them; while this new compound is dangerous when its composition is dubious: so that, to use a trite simile, it must be put away, like Cæsar's wife, unless it is not only pure, but above suspicion.

"*Precautions necessary in the Preparation of the Ioduret and the Hydriodate.* One part of the iron wire should be rubbed in a porcelain or a Wedgwood's mortar, with about three or four parts of iodine, gradually adding distilled water, until fifteen parts of the fluid shall have been used: the whole is then to be introduced into a Florence flask, with an additional portion of iron wire, and of distilled water. This excess of iron is a matter of indifference in the preparation of the hydriodate; and, in that of the ioduret, it is necessary for preserving the combination from decomposition, during the evaporation of the solution. These materials are next to be boiled together, until the fluid acquire a pale greenish colour, when it should be filtered. This solution contains a hydriodate of the protoxide of iron; and, if the exact quantity of the iodine be previously ascertained, so as to enable us to procure the solution of a definite strength, it may be kept in this state for medicinal use. In general, however, the solution is evaporated to dryness; and for this purpose it may be poured into a clean flask, containing a piece of iron wire sufficiently long to reach from the bottom to the surface of the fluid, and the boiling should be continued until the bulk of the solution be reduced to one third. It must then be filtered; after which the evaporation should be continued to dryness. It is necessary to break the flask as soon as the mass is cold, in order to obtain the solid ioduret, which should be immediately transferred to a dry bottle, fitted with an accurately ground stopper. The bottle should not hold more than two ounces of the preparation; for, when it is large and not full, the ioduret deliquesces nearly as rapidly as when it is exposed to the free action of the atmosphere. When the flask is broken and the ioduret bottled before the mass is cold, deliquescence also takes place: a peroxide of the metal is formed, and iodine is evolved.

"3. *Precautions necessary for preserving both Preparations.* The ioduret requires to be well secured from the influence of the atmosphere; both on account of its deliquescent property, the rapid oxidizement which the iron undergoes when deliquescence occurs, and the consequent decomposition which takes place. It is important to prevent this state of things, as the peroxide of iron is inert as a medicinal agent; whilst the free iodine, extricated during its formation, alters altogether the virtues of the medicine. This partial decomposition of the ioduret is rendered immediately apparent, on dissolving it in twenty times its weight of distilled water and filtering: instead of a permanent, clear, very pale

greenish yellow, we obtain an ochre-coloured or brown solution, which soon becomes turbid, and gradually deposits an ochre-coloured completely insoluble precipitate. Much of the iodure usually prepared both by many chemists and druggists, and also general practitioners, is of this description; and to this we may refer some of the disappointment and discrepancy of opinion of different practitioners respecting the operation of the medicine in similar cases. Even when the ioduret has been carefully prepared, and is good of its kind, it often contains a little free iodine: but it is chiefly owing to the carelessness of assistants and apprentices, in compounding prescriptions, by frequently exposing the ioduret to the air, that its properties, and consequently its medicinal powers, are impaired: thence, it is preferable to keep it in solution, or in the state of the hydriodate.

"If the solution be prepared with a definite quantity of iodine, as already described, it will keep without changing its characters: but, as it is usually made by dissolving the ioduret in distilled water, it requires to be rendered neutral by the following means. Introduce into a flask the solution of any given strength, and place in it two or three doubles of clean, soft iron wire, sufficiently long to extend to the surface of the fluid; boil it for a few minutes, and then leave it at rest until the solution become clear, after which it may be either decanted off from the precipitate which forms, or filtered: no further change takes place in a solution thus treated if it be kept in a blackened or a green bottle, however long it may be preserved. In this process, the wire affords iron to saturate any free iodine present in the solution, or that may have been extricated by the formation of the peroxide of iron in the ioduret; and a perfectly neutral solution being thus obtained, by the immediate conversion of the new-formed ioduret into the hydriodate of the protoxide, no subsequent change takes place as long as the solution is kept secluded from the light. It is not easy to explain this influence of light in decomposing the solution of the hydriodate of iron; but several other of the metallic hydriodates are affected in the same manner by light. The best proportions for forming the medicinal solution are three grains of the dry solid ioduret to each fluid drachm of distilled water. If the water be not either distilled, or filtered rain water, perfectly free from foreign ingredients, particularly if it contain any earthy or saline carbonates, decomposition instantly takes place, iodine is extricated, and a carbonate of iron, which rapidly passes into the state of the peroxide of that metal, is precipitated." (P. 7.)

It is impossible to read these minute and scientific precautions, without reflecting on the ordinary coarseness of pharmaceutical manipulation, and the total disregard of accuracy, which prevail not only among private practitioners and in druggists' shops, but even in those institutions where publicity, and the presence of physicians, might seem to

ensure tolerable correctness. Those who have seen the singular makeshifts and odd surrogates of dispensary practice might hesitate before they added the hydriodate of iron to their scanty pharmacopœias: as Goldsmith says,

> " Such dainties to them, it would look like a flirt,
> Like sending 'em ruffles, when wanting a shirt."

Our author thinks that the solution is of a strength best suited to medicinal use, when it contains three grains of the hydriodate in each fluid drachm. When it is of this strength, any shade of brown indicates the presence of free iodine, " which is also demonstrated by the blue colour communicated to thin, cold mucilage of starch; for, when the solution is perfectly neutral, no blue colour is evolved." (P. 12.) The solution of the hydriodate is decomposed by chlorine, the mineral acids, arsenious acid, meconic acid, gallic acid and tannin, the pure alkalies, pure cinchonia or quinia, the carbonates of alkalies, sulphate of copper, nitrate of lead, the proto- and per-nitrate of mercury, nitrate of silver, arsenite of potass, hydrosulphate of potass, hydrosulphate of ammonia, acetate of lead, oxalate of ammonia, and hydrocyanate of potass; by the infusions, decoctions, and tinctures of galls, oak bark, uva ursi, pyrola umbellata, cloves, roses, cinchona, cusparia, and all vegetable substances containing gallic acid or tannin, the infusions of foxglove, belladonna, hyoscyamus, and tobacco; and, lastly, by all vegetable infusions and decoctions containing fecula, for they afford a blue precipitate (the iodide of amidine,) when there is any free iodine in the solution.

" On the other hand, it may be ordered in combination with all the saline sulphates, nitrates, muriates, chlorates, and phosphates: with bitter vegetable infusions and decoctions containing neither tannin nor gallic acid, namely, simple infusion of orange peel (the tannin of the cloves in the compound infusion of the London and Dublin Pharmacopœias causes a black precipitate), buchu, gentian, quassia, senega root, white hellebore, dulcamara, &c." (P. 16.)

We now come to its practical use. Our author gives thirteen cases in which the hydriodate of iron has been employed with success by himself and other physicians. He divides them into four classes; the first illustrates the beneficial effects of the remedy in scrofula, the second in chlorosis, the third in carcinoma, and the fourth in syphilitic cachexia and eruptions. The first case is that of a young lady, æt. fourteen, who was sent home from school on account of swellings of the cervical glands, accompanied by cough and fever.

"I first saw her on the eighth of August, 1833. There was a chain of indurated glands extending from below the middle of the lower jaw to behind the ear on the right side, two of them in a state of active suppuration; whilst one tumour, nearly the size of half of an egg, rose, free from any external redness, directly under the angle of the left jaw. Her general health was greatly disordered; the pulse was small, but sharp and brisk; the tongue was redder than natural, and covered, at the back part, with a slimy fur; the bowels were relaxed; and the catamenia, which had occurred, for the first time, a month after the swellings began, had not again appeared. From the sound of the voice, I suspected that the tonsils were affected; and, on examination, I found that they were inflamed and considerably enlarged. My patient complained of almost continued headachs; great prostration of strength; and, since the cough had supervened, she was still more weakened than before by morning perspirations. Under these circumstances, my first object was to moderate the inflammatory action, to allay the irritability of the digestive organs, and to improve the secretions: for which purpose, I ordered her to be cupped between the shoulders, and to take the following medicines:—℞. Hydrargyri cum Creta, gr. xii.; Pulveris Ipecacuanhæ compositi, gr. x. M. ut fiat Pulvis hora somni quotidie sumendus.—℞. Olivæ Olei, f ʒiss. Acaciæ Gummi pulveris, ʒss.; Hydrocyanici Acidi, m. iii.; Aquæ Distillatæ, f ʒviiiss.; Sacchari albi, gr. x. M. ut fiat haustus ter die sumendus.

"Her diet was ordered to be light, but nutritious; to consist chiefly of preparations of milk, morning and evening, with a moderate allowance of mutton or poultry once a day, and well-boiled vegetables. Wine and all fermented liquors were interdicted. Friction was directed to be applied along the course of the spine, and over the abdomen; and exercise in an open carriage was recommended to be taken daily, except when the wind was from the east or the north.

"August 9th. One of the tumours was opened today, and syringed with a solution of sulphate of zinc. The powder and draughts were ordered to be continued.

"August 17th. The same plan of treatment has been pursued since the 9th instant, with the addition of the application of four leeches two days ago, on account of the tumour on the left side becoming tender; the occasional interposition of a saline purgative has been also necessary. The condition of the digestive organs is much improved; the tongue is nearly natural; and the cough has ceased. The enlarged glands, however, are nearly in the same state as when I first saw the patient, except that the other suppurating tumour has been opened. As the ulcer which succeeded the opening of the first tumour is very irritable and painful, let a hemlock and foxglove poultice be laid over it.—Pergat in usu pulveris, addendo Aloës pulveris, gr. iv.—℞. Ferri Iodureti, gr. iij.; Aquæ distillatæ, f ʒxi.; Aurantii Tincturæ, f ʒi. M. ut fiat haustus

ter die sumendus.—℞. Iodinii, ʒss.; Potassæ Hydriodatis, ʒiss.; Adipis purificati, ℥i. Tere diligenter ut fiat unguentum; pauxillum tumoribus cervicis, ope fricationis, mane et vespertino, quotidie applicandum.

"In ten days the mouth became tender, consequently the powder was discontinued. The bowels were then regulated by the occasional administration of a five-grain aloetic pill; and the other parts of the treatment were pursued, with little variation, for two months, during which time the catamenia returned, and the improvement in health and strength was progressive and striking. The tumour on the left side suppurated, but all the ulcers rapidly cicatrized, while the swellings gradually softened and dispersed; and on the 20th of October my patient returned to school in a much improved state of health." (P. 24.)

There are three cases of chlorosis, (two of them communicated by Dr. C. J. R. Williams,) in which the hydriodate was employed with great advantage. Our author was at first unwilling to give up his previous method of treating this disease, with sulphate of iron in combination with the pill of aloes and myrrh; but the first case, in which the chlorosis was ingrafted upon a scrofulous habit, having resisted these remedies, he tried the hydriodate of iron with a success which induced him to administer it to other chlorotic patients.

"Mary ——, nineteen years of age, a patient in the Dispensary of the University of London, has been gradually declining in health for the last five months. She now complains of great languor; extreme depression of spirits; defect of appetite, a torpid state of the bowels; recurrent headach, coming on generally twice in the twenty-four hours; embarrassed breathing; and a disposition to hysteria, denoted by the globus hystericus, and great nervousness. The whole skin is of a pale sallow hue, the lips nearly white, and the expression of the countenance languid and anxious. The menstrual discharge has not appeared for two months; and was previously extremely scanty and pale coloured. She says that she nevertheless sleeps soundly, but is unrefreshed in the morning; and, long before the day is half spent, her ankles and feet swell to a degree which prevents her from wearing her shoes. The bowels are irregular; most commonly costive, but occasionally they are purged. She is a straw-plaiter; and I am inclined to ascribe her disease to her sedentary habits, a strumous diathesis, and a natural delicacy of constitution. The following medicines were prescribed. —℞. Pilulæ Submuriatis Hydrargyri compositæ, gr. xx.; Aloës Soccotrini Extracti, ʒiv.; Mucilaginis Acaciæ, q. s. ut fiant pilulæ viginti æquales. Sumantur i horâ somni quotidie. ℞. Ferri Iodureti, ʒi.; Aquæ Distillatæ, f℥iv. Solve et cola. Sumatur cochl. med. i ter quotidie.

"The patient was ordered to take as much exercise in the open

air as her strength and circumstances would admit; and to let her diet be mild, but as nutritious as she could procure.

"She pursued this plan for a month, gradually increasing the dose of the solution to two spoonfuls, equal to four grains of the ioduret: no other medicines, with the exception of an occasional purgative of salts and senna, were prescribed. In less than a week both the headachs and languor disappeared; her lips and general complexion rapidly acquired a healthy hue; the catamenia returned in the middle of the fifth week: and, when she left the Dispensary, she was apparently in as good health and spirits as could be desired." (P. 41.)

It does not appear, from Dr. A. T. Thomson's account of this case, at what period the ordinary treatment had been adopted without success, but we conjecture that it must have been resorted to by some other practitioner, during the five months that the patient's health was declining.

There is only one case of carcinoma, but that is a satisfactory one. The patient was a married woman, forty-six years old, who had never borne children, and in whom the catamenia had finally disappeared. One case indeed can prove but little, as our author himself states with laudable candour.

"I am fully aware, in offering this case as an instance of the advantage of the use of the hydriodate of iron in carcinoma, that little reliance can be placed on a solitary case; but I am desirous that it should be tried by others. In none of the numerous diseases to which humanity is liable, is a fatal termination so probable as in cancer: at the same time, whilst the deposition of the carcinomatous matter is going on, and the disease is yet merely local, there is no reason for refraining from trying means that seem to promise a favorable issue." (P. 53.)

The last division contains four cases. In the first, (communicated by Sir David Barry,) the patient, who denied that he had ever suffered from the venereal disease, was affected with chronic ulceration of the posterior fauces. After a variety of treatment had been employed without advantage, the ioduret of iron was tried, and the disease was cured in a month. In this case, however, a relapse soon took place.

"On the 8th of February, 1834, Collins presented himself again, with a slight return of ulceration in the throat. He was again put upon the use of the ioduret of iron, and is now [February 20th] better." The other three were still more satisfactory, as the cure appears to have been permanent. We must content ourselves with one only.

"S— D—, a young gentleman, nineteen years of age, has suffered, during several years, from a leprous affection, which has a very suspicious copper colour, and is attended with sore throat,

and febrile symptoms. I have not been able to trace this eruption to any syphilitic disease, although I strongly suspect that such has been its origin. It is always most severe in summer; abating considerably in violence during winter. The skin in many places is scarred with the cicatrices of sores; but I can get no satisfactory information respecting them.

"This gentleman was recommended to try an alterative course of Plummer's pill and sarsaparilla, which he continued for three months without any decided benefit being obtained: he was therefore put upon a course of the ioduret of iron, which he took in doses of four grains three times a day, and employed a moderately stimulating gargle. He improved rapidly, and in four weeks was perfectly well." (P. 64.)

Our author concludes by observing, that he has used the hydriodate with advantage in many cases of atonic dyspepsia.

The present pamphlet, like Dr. Thomson's other works, is replete with valuable matter, and has all the diagnostic marks by which we distinguish the writings of the genuine practical physician from those of the dreamer or the impostor. The only serious defect we can find in it, is one with which we rarely reproach medical authors—it is too short. We trust that the experience of a few more years will enable Dr. Thomson to amend this fault, and that he will have had the glory of adding to our Pharmacopœia a remedy combining the virtues of two such powerful agents as iron and iodine.

Illustrations of the Effects of Poisons. By GEORGE LEITH ROUPELL, M.D. *The Plates from original Drawings by* ANDREW MELVILLE M'WHINNIE, M.R.C.S. Part II.—London, 1834. 4to.

THIS part, like the former one, contains four cases of poisoning, and four plates representing the post-mortem appearances. The first case is one of poisoning by concentrated sulphuric acid.

"Benjamin Morby, aged two years and a half, drank some fluid which he found in a stone bottle, thinking it to be ginger-beer. It proved, however, to be strong sulphuric acid, left there inadvertently. Immediately after swallowing the poison he fell on the floor; when raised, his tongue was swollen and protruded from his mouth, and he complained of acute pain at the epigastrium. Medical assistance was quickly procured. The carbonate of magnesia was given, which occasioned active effervescence in the mouth. Castile soap in solution was afterwards administered; vomiting then came on, and acid matters, partly composed of food, were rejected from the stomach, followed by a large quantity of black grumous blood. Leeches were applied to the epigastrium. No

reaction followed the depression which resulted from the injury to the stomach and œsophagus. The skin was cold. The pulse scarcely perceptible. The little boy remained perfectly sensible and in a state of comparative tranquillity until his death, which took place within twelve hours after the accident.

"The external marks, resulting from the action of the acid, which were discovered by examination after death, consisted in vesication and discoloration of the lips, and in a hard and brawny patch on the left cheek, about the size of a half-crown, and of the colour of parchment.

"The tongue and inner part of the mouth were of a dirty grey colour."

The appearances on dissection are described by Dr. Roupell as follows:

"Plate V. represents the stomach, part of the œsophagus and duodenum, of the little boy poisoned by concentrated sulphuric acid, laid open anteriorly. The inner lining of the œsophagus was puckered, dry, hardened, and brittle; it was readily detached from the parts beneath, and came off in small scale-like portions.

"The coats of the stomach were thin, and allowed the contents to be seen through them. When opened, the whole of the mucous membrane was of a dark colour, apparently stained by a bloody fluid, four ounces of which were contained in the stomach.

"The large end was in no respect altered in texture, but the whole circumference of the smaller end, about midway between the œsophagus and pylorus, was black, irregular, rough, and thickened. The change which had taken place here was the destruction of the mucous membrane and the effusion of blood from the injured portion, some of which had coagulated and adhered to the part acted on by the acid.

"There was no perforation of the coats of the stomach in this instance, nor was there any inflammation of the peritonæum. Life was apparently destroyed by sympathy of the brain with the injury to the stomach and œsophagus."

The next Plate "represents the stomach, part of the œsophagus and duodenum, of a dog poisoned with oxalic acid, opened in the same manner as in the former instances. The hour-glass contraction was manifest.

"The œsophagus was natural in appearance.

"The stomach contained about four ounces of a dark coloured, thick, tenacious fluid, at the larger end, which had stained the mucous surface. The coats were generally pulpy, softened, and had a white transparent appearance, but no perforation had taken place.

"The duodenum was red, and presented dark coloured lines corresponding with the projecting rugæ, which had the appearance of being charred.

"The black matter contained in the stomach was in all proba-

bility effused blood, altered by the acid; for healthy mucus, as well as a portion of sound intestine, left in a strong solution of the acid, underwent no change of colour; the latter, however, became gelatinous and pulpy."

The dose of oxalic acid had been two scruples, and death ensued in half an hour. Christison remarks, when speaking of its effects on the human subject, that "among the fatal cases the smallest dose has been half an ounce; but there can be no doubt that less would be sufficient to cause death." (*Treatise on Poisons*, p. 146.)

We next come to an

"*Experiment to shew the effect of a large dose of corrosive sublimate.* A drachm of corrosive sublimate was introduced, as in the last experiment, into the stomach of a dog, and the œsophagus tied.

"The animal exhibited little outward sign of pain, was greatly depressed, but remained tranquil. It was alive between four and five hours after the administration of the sublimate, but was found dead when seen afterwards."

The plate annexed to this case represents the appearances on dissection.

"The stomach externally was highly vascular: it contained several ounces of a thin, dark coloured fluid. The œsophagus was natural. The whole of the inner lining of the stomach was of a leaden hue; this was the mucous membrane, which appeared to be universally in a state of slough, but it was in no part detached. The duodenum, at its commencement, presented a mixed appearance, partly red, partly of a lead colour, as if the irritant and corrosive effects of the poison were here blended; the mucous membrane was thickened, and had a roughened aspect."

"The whole of the small intestines were inflamed, a thick white mucus being generally effused upon their mucous membrane.

"The quantity of corrosive sublimate administered in this case was larger than could probably ever be swallowed, from its nauseous taste and irritant action. The appearances produced by this poison in ordinary cases more nearly resemble the effect here produced on the duodenum."

Dr. Roupell, in supposing that a drachm of corrosive sublimate cannot be swallowed, speaks without book, *i. e.* without Christison; for, at p. 297 of his treatise, we find it stated that "in Devergie's case, the patient, a female, swallowed three drachms of corrosive sublimate in solution."

And in another case, which Dr. Christison has taken from our honoured predecessor, the London Medical and Physical Journal, "the patient, a stout young girl, swallowed, soon after supper, a drachm of corrosive sublimate dissolved in beer." (*Treatise on Poisons*, p. 301.)

The last Plate shows the effect of alcohol on the mucous membrane.

An ounce of rectified spirit, mixed with an ounce of water, was introduced into the stomach of a large dog. The animal soon recovered; it was killed the next day by a blow on the head, and on examination intense congestion was found in the stomach; it would seem too, that extravasation had taken place, as "the stomach contained an ounce of a thin bloody fluid mixed with frothy mucus."

This Part is fully equal to the preceding one; the drawings are admirable, and the colouring, though rich and gorgeous, does not "o'erstep the modesty of nature."

An Inquiry into the Nature of Sleep and Death, with a View to ascertain the more immediate Causes of Death, and the better Regulation of the Means of obviating them. Republished from the *Philosophical Transactions;* being the concluding Part of the Author's *Experimental Inquiry into the Laws of the Vital Functions.* By A. P. W. PHILIP, M.D., F.R.S. L. & E.—London, 1834. 8vo. pp. 254.

THE work before us affords several useful lessons to the student of physiology, who will find in it striking examples both of what he ought to imitate, and what he ought to avoid. The papers it contains form the concluding part of Dr. Philip's researches into the laws of the vital functions; researches which have enriched science with many valuable facts, and conferred on their author a deservedly high rank among the physiologists of the day.

The perseverance which Dr. Philip has evinced in these important inquiries, his ingenuity in devising experiments, and his sagacity and caution in conducting them so as to ensure accurate results, are all deserving of the highest praise; but it must nevertheless be acknowledged, that his conclusions are often hasty, his reasoning inconsecutive, and, what is worse than all, that he frequently deserts the true path of experiment and observation, and loses himself in speculating on the merest assumptions. Several parts of the present work possess in full measure the characteristic excellencies of the author; but we are sorry to add, that others are in the highest degree obnoxious to the censure from which none of his productions can be entirely exempted: there are indeed some passages so idly theoretical, so utterly devoid of the genuine spirit of scientific research, that, if the name of Wilson Philip had not been attached to them, we should have been inclined to pass them by as altogether unworthy of attention.

We proceed to notice the papers in the order of their succession.

1. *On the Functions of the Nervous System, and the Relation which they bear to the other Vital Functions.* [From the *Philosophical Transactions* for 1829.]

This paper is intended as introductory to the rest, and consists of inferences from the facts which the author has at different times laid before the Royal Society.

Since we shall have occasion to differ materially from many of Dr. Philip's views,—nay, further, since some of his assertions are so unfounded, that it is difficult to believe that any physiologist could have soberly advanced them,—the reader will, we trust, excuse the copiousness of our extracts, and ascribe it to our desire to preclude misrepresentation, by giving the author's sentiments in his own words.

"The nerves," says Dr. Philip, "may be divided into two classes, those which proceed directly from the brain and spinal marrow to the parts to which they convey the influence of these organs; and those which enter such ganglions as receive nerves proceeding from different parts of the brain and spinal marrow, whether these nerves have or have not protuberances belonging to themselves, which have also been termed ganglions, but which receive only the different fibres that belong to the particular nerve to which they are attached, and from the circumstances in which they are placed, must have a different, or at least a more confined relation to other parts of the nervous system. To the former, therefore, I shall, for the sake of distinction, and to avoid circumlocution, confine the term ganglion.

"I beg leave to lay before the Society the following extract from lectures delivered by Mr. Brodie before the College of Surgeons, and which have not yet been published, in which this accurate anatomist and physiologist has given the sum of our knowledge respecting the structure of the ganglions.

"'Those bodies which are found in certain nerves which appear to be formed by an enlargement of the nervous substance, and which are denominated ganglia, are of a complicated structure. Into ganglia the nervous fibres may be traced, and from these ganglia the nervous fibres again emerge. Scarpa has paid much attention to the fabric of the ganglia, and he gives the following history of it. He says that the fasciculi of nervous filaments which enter a ganglion are separated and divided from each other, and that they are combined anew. A nervous fasciculus entering a ganglion divides into smaller fasciculi. These divide again, and cross and intersect each other at various angles. Then the divided fasciculi become again united, and as at first they divided into smaller and smaller fibres, so, when they begin to unite, they form gradually larger and larger bundles. At last the nerve which en-

tered a ganglion emerges from it with its fibres collected into one or more fasciculi. Sometimes several nerves enter a ganglion, in which case they are all blended together, forming a complicated net-work, in which it is impossible to determine what belongs to one nerve and what belongs to another nerve. Every fasciculus or filament which enters a ganglion passes through it. There is no appearance of any one terminating in it.'

"'If we unravel the texture of a ganglion, we find that each nervous fibre retains its own peculiar neurilema; but, besides this, the spaces left between the intersection of the fibres are filled up with a peculiar soft substance of a greyish or yellowish colour. With the nature of this substance we are unacquainted. Some have considered it as corresponding to the cineritious substance of the brain and spinal marrow; but Scarpa is disposed to regard it as a soft cellular substance, filled with a greyish and mucilaginous matter in emaciated subjects, and with a yellowish oily matter in those that are fat.'" (P. 3.)

So far all is good; but, if the following passage does not startle the reader, we congratulate him on his equanimity:

"It is evident, from what has been said, that the ganglions and nervous plexuses which accompany them, resemble each other in their nature; and, as the nerves which terminate in then come from all, even the most distant parts of the nervous system, some from the brain, and some from the lower extremity, and all intermediate parts of the spinal marrow, we cannot help supposing that there is some design in thus uniting nerves from so many sources. One of the most striking differences between the ganglionic nerves and those proceeding directly from the brain and spinal marrow, is that, even independently of the ganglions and plexuses, the former every where freely anastomose, if I may borrow a term from the sanguiferous system; while the latter proceed in a more direct course, being less connected with each other in their progress, to the parts on which they bestow sensation and voluntary power, still further demonstrating the care with which Nature blends the ganglionic nerves. There is even reason to believe that the protuberances resembling ganglions belonging to individual nerves, serve the purpose of intimately combining the influence of the different fibres of the nerves they belong to, and that all the nerves having such protuberances contribute to the ganglionic system.

"What purpose is served by the perpetual intertwining of these nerves? It is impossible for a moment to conceive that it is without an object.

"This question is most likely to be answered by inquiring into the nature and functions of the parts supplied by them; those parts are the vital organs—namely, the thoracic and abdominal viscera, and the vessels even, as we shall find by experiment, where the parts are too minute to be made the subject of dissection, to their minutest ramifications.

"If the nerves proceeding from ganglions convey the influence of all the nerves which terminate in them, it would seem that, although to other parts the influence of only certain parts of the brain or spinal marrow is conveyed, the vital organs receive that of every part of them. This question can only be determined by experiment. That it must be answered in the affirmative appears from numerous experiments too simple to admit of our being deceived, which I made many years ago, and the details of which were laid before the Royal Society, and published in the Philosophical Transactions for 1815, and a few years afterwards, in my treatise on the Vital Functions. From them it appears that although the muscles of voluntary motion obey an agent affecting no part of the brain and spinal marrow but that from which their nerves take their origin, the heart is influenced by agents applied to every part of these organs, from the very uppermost surface of the brain and cerebellum to the lowest portion of the spinal marrow. The same was found to be the case with the blood-vessels to their minutest ramifications. Even the extremities of the arteries and veins, where they unite to complete the circulation, it was found, by the aid of the microscope, could be influenced, their action being either increased or impaired according to the nature of the means employed, nay, even finally deprived of power, by agents whose operation was confined either to the brain or spinal marrow; for on the power of the capillary vessels we shall find the circulation in a great degree depends.

"In some animals even of warm blood, as appears from experiments related in my treatise on the Vital Functions, the motion of the blood in the capillaries may be observed for two hours, or even more, after death, provided neither great and sudden injury to the nervous system, nor great loss of blood be occasioned, by the mode of death; that is, long after the heart has ceased to beat. The continued action of the capillaries appears from what is there said to be the cause of the large arteries being found empty some hours after death.

"It has also been shown, by experiments detailed in the same treatise, an account of some of which has appeared in the Philosophical Transactions, that the stomach and lungs are in like manner under the influence of both the brain and spinal marrow, their functions finally ceasing when they are deprived of any considerable portion of the influence they receive from either of these organs.

"The partial connexion with the nervous system of the organs supplied by the cerebral and spinal nerves, and the universal connexion with that system of those supplied by the ganglionic nerves, explain many of the phenomena, both of health and disease. Why are affections of the stomach and other vital organs instantly felt through every part of the frame, while the effects of those of a muscle of voluntary motion, or even an organ of sense, although often a part of greater sensibility, is confined to the injured part? If the eye or ear, or the muscle of a limb, be so deranged by a

sudden blow, for example, as instantly to destroy its power, sight, hearing, or the voluntary power of the part is lost, and there the evil ends unless inflammation ensues; but a blow on the stomach, which instantly destroys its power, at the same moment destroys that of every other part. It is not difficult to answer the question, since the state of the stomach, from the cause just pointed out, may influence every part of the nervous system; and it appears from experiments, an account of which the Society did me the honour to publish in 1815, some of which were repeated by Mr. Cliff, that a powerful and sudden impression, made on any considerable part of this system, is capable of destroying the circulation by instantly depriving both the heart and blood-vessels of their power.

"Here the question naturally arises—For what purpose are the vital organs thus connected with every part of the brain and spinal marrow?

"This question is answered by experiments detailed in my treatise on the Vital Functions, an account of some of which appeared in the Philosophical Transactions for 1815 and 1822. From them it was found that the power of secreting surfaces is deranged by abstracting from them any considerable part of the influence either of the brain or spinal marrow; and, as the function of secretion is effected by the action of the nerves on the blood, as appears from experiments detailed in the papers just referred to, in another paper which I had the honour to lay before the Society, a few weeks ago, and from a greater variety of experiments detailed in my inquiry into the laws of the Vital Functions, it is evident that the presence of nervous power in a secreting organ would be useless, were not the blood on which it operates also supplied, and disordered if it were not supplied in due proportion; and, consequently, its supply varied as the supply of nervous power varies.

"We thus see not only why secreting surfaces are placed under the influence of every part of the nervous system, but also why it is necessary that the sanguiferous system should be under the control of the same laws which regulate the supply of the nervous power.

"It appears then that, by means of the system of ganglionic nerves, the influence of every part of the brain and spinal marrow is bestowed on secreting surfaces, and on those organs by which the supply of their fluids is regulated, and that the influence of every part of the brain and spinal marrow is necessary to their functions. But it is not the secreting power alone that is thus placed under the influence of every part of these organs; for it is a necessary inference, from experiments related in a paper which the Society did me the honour to publish, in their Transactions for 1827, (the next paper in this volume,) that the whole of those processes on which the healthy structure of the part depends are under the same influence.

"The influence, therefore, of the whole brain and spinal marrow is thus united by nerves from every part of these organs entering

ganglions and plexuses, from which are sent to every part of the body nerves, proved by direct experiment to convey the influence of every part of them; and this combined influence of the brain and spinal marrow is employed in forming the various secreted fluids, and supporting the other processes on which the due structure of every part depends; and I have in more than one treatise pointed out how extensively the phenomena and cure of diseases are influenced by this cause." (P. 7.)

As soon as we had somewhat recovered from our astonishment at the affirmation that nerves from all parts of the brain and spinal marrow enter ganglions and plexuses, we had recourse to the list of errata, but without finding any relief; then we conned over the catalogues set forth by the chief bibliopolists of the day, to see if we could discover any work entitled "A New Anatomy of the Brain and Nerves, by Dr. Wilson Philip,"—no such thing; and since, on a further perusal of the volume before us, we find this novel announcement several times repeated in good set terms, we are reluctantly compelled to conclude that the author actually means what he says: we have therefore only to answer, in the words of Lactantius, (if it be admissible to quote one of the fathers of the church on such an occasion,) "Turpe est hominem ingeniosum dicere id, quod si neges, probare non possit." (*De Vera Sapientia*, c. 29.)

With respect to the theory involved in the passage we have quoted,—taking it exactly as it stands,—all that can be said is, that it rests on a most outrageous assumption, and is therefore not worth talking about. Without however asserting that nerves from every part of the brain and spinal marrow enter ganglions and plexuses, it may be supposed, and has been supposed by good physiologists, that the use of the ganglionic system is to combine the influence of the great nervous centres for the maintenance of the functions of organic life: but there is, we conceive, the following strong objection to this view of the subject. We have no proof that the greater part of the brain and spinal marrow are the seat of any other powers than those which preside over sensation and voluntary motion. It is true, indeed, as asserted by Dr. Philip, that the organic functions may be influenced through the medium of the nervous centres; but this proves nothing but that an intimate sympathy exists among the different parts of the nervous system, by which a cause operating on one part may influence any other part, or the whole. Now there is no reason to believe that the organic functions are sustained by the sensatory and voluntary powers, because the exercise of these functions is generally unaccompa-

nied with sensation, and independent of the will. In supposing, therefore, that the ganglionic system associates the powers of the brain and spinal marrow, for the production of the phenomena of organic life, we should be adopting an hypothesis which, even if admitted to be true, would leave the functions in question entirely unaccounted for. Our author, indeed, in various parts of this treatise, speaks of the *vital* parts of the brain and spinal marrow, as contradistinguished from those which minister to sensation and voluntary motion; but he nowhere condescends to inform us where these parts are to be found.

There are, we think, better theories of the action of the ganglionic system than that under consideration; but, in the present imperfect state of our knowledge, the best way is to confess the truth—that we do not at all understand its functions, and to wait till the accumulation of more facts shall have placed us in better condition to reason on the matter.

Another important point treated of in this paper, is the relation of the sensorial power to respiration. The muscles by which the act of breathing is accomplished have generally been considered by physiologists as of the semivoluntary kind,—that is, as muscles which, though under the control of the will, are nevertheless capable of acting independently of it; and it has been regarded as a wise provision of nature, that a function so necessary to life should be continued automatically when the attention of the individual is entirely abstracted from it, or the influence of the sensorium suspended during sleep. Dr. Philip, however, takes a different view of the subject, and maintains that respiration is at all times a voluntary act.

"It has been customary to speak of the muscles of respiration as at least in part muscles of involuntary motion. What is meant by a muscle of voluntary motion? It is a muscle whose action, under all ordinary circumstances, we can excite, interrupt, retard, and accelerate at pleasure; but it is not a muscle whose action we can at all times control. There is no such muscle, because the impression on the sensorium tending to call any particular set of muscles into action may be so powerful, that we are unable to control it. Who can prevent the action of the muscles of the arm when fire is suddenly applied to the fingers? Neither do we mean by the term muscle of voluntary motion, one which we cannot call into action during sleep. If our posture during sleep becomes uncomfortable, we call the muscles both of the trunk and limbs into action for the purpose of changing it. The uneasiness caused by the continuance of the same posture sufficiently rouses the sleeper to make him will a change of posture, without rendering

him at all more sensible to other impressions of a slighter nature, and his sleep continues.

"What muscles, then, are more under command than those of respiration? We can, on all usual occasions, interrupt, renew, retard, or accelerate their action at pleasure; and, if we cannot interrupt it for as long a time as that of the muscles of a limb, this depends on no peculiarity in the action of these muscles, but on the nature of the office they perform; and, if we excite them in sleep for the removal of an uneasy sensation, and cannot control them under a sense of suffocation,—that is, in a state of greater suffering than can be voluntarily borne, all this is no more than applies to every other muscle of voluntary motion: but, from the nature of our constitution, we must breathe many times every minute, and we need not turn ourselves more than once in many hours; a difference depending on circumstances which have nothing to do with the nature of the muscles we employ in either of these acts.

"If we find the breathing going on in apoplexy after all voluntary motion of the limbs has ceased, it is because the sensation exists which excites the patient to inflate his lungs, while there is none which excites him to move his limbs. In the slighter states of apoplexy, if the limbs be much irritated, the muscles which move them will also be called into action; and, in the severer states, if the patient breathes, when no irritation of the limbs can excite him to move them, it is because the want of wholesome air in the lungs, after a certain interval, produces a more powerful impression than any other means we can employ. People have voluntarily held the hand in the fire, but no man ever voluntarily abstained from breathing till the lungs were injured. When at length no irritation, however violent, can impress the sensorium, the breathing ceases, and death ensues. The mode of death in apoplexy sufficiently illustrates what is here said. We find the intervals of breathing becoming longer before it ceases. As the insensibility increases, a greater want of fresh air is necessary to excite the patient to inspire, till at length, the total privation of fresh air no longer producing any sensation, can no longer excite this effort.

"The muscles of respiration, then, it would appear, are as perfectly muscles of voluntary motion as those of the limbs, and are never excited but by an act of the sensorium. When there is no feeling to induce us to breathe, the breathing ceases." (P. 26.)

Now we are by no means prepared to assert, that all which is here advanced by our author may not be perfectly true; but, unfortunately, it is quite impossible to determine whether it be so or not. The only sure evidence we can have of any mental operation is *consciousness:* nay, this constitutes so essential a part of every such operation, that no act of the mind can be conceived to exist without it. In most instances the act of which the mind is conscious is sufficiently vivid, and

of sufficient duration, to leave a permanent trace in the memory, and in these instances we are certain that such act of the mind has really taken place; but it is also conceivable that acts of the mind may sometimes occur, which are so slight and transitory, that, although the mind may have been conscious of them at the moment of their occurrence, no trace of such consciousness remains in the memory: they cannot, consequently, be recorded by the only person whose evidence is available, the individual in whose mind they took place; and hence we cannot have any actual proof of their existence, however probably it may be inferred from a process of abstract reasoning. The objection, then, we conceive, to Dr. Philip's hypothesis, is not that there is anything in it repugnant to reason, or at variance with any known fact, but that it is based on a doubtful point in metaphysics, which we have no means of resolving; and that, consequently, the hypothesis cannot be either proved or disproved.

We should always be extremely careful to avoid founding any physiological views on metaphysical reasoning. Some of the ablest physiologists of the last century have expended much learning and ingenuity in vain, from want of caution in this particular: we have a remarkable example in the writings of Whytt, a man of most extensive information and singular acuteness, but who, by continually referring vital phenomena to the intervention of the mind, where it was impossible, for the reasons above stated, to determine whether it intervened or not, has so embarrassed his reasoning, that his works are more apt to mislead than to instruct the student.

Dr. Milligan, the intelligent translator of Magendie, gives the following excellent precept on this subject: "Let the metaphysician always avail himself of the experiments of physiology as far as he is able, but let not the physiologist imagine that he can ever derive a reciprocal assistance from metaphysics."

We have noticed more particularly this opinion of Dr. Philip's, because, though it may be harmless enough as an hypothesis, he makes, as we shall presently find, a highly objectionable use of it, in reasoning on the causes of death.

2. *On the Effects of dividing the Nerves of the Lungs, and subjecting them to the Influence of Voltaic Electricity.* [From the *Philosophical Transactions* for 1827.]

The original and interesting experiments of Dr. Philip on the influence of galvanism in restoring the function of the

stomach after the division of the pneumogastric nerves, are already familiar to the profession: his further inquiries have demonstrated analogous facts with regard to the lungs, and also brought to light another fact, having very important relations both to physiology and pathology.

"The Royal Society," says Dr. Philip, "did me the honour, in 1822, to publish the results of some experiments, from which it appeared that the secreted fluids of animals are so deranged by dividing the nerves of the secreting organs, and separating the divided ends, that those formed for the purposes of the animal economy are no longer capable of their functions; and that, after these functions are by such means destroyed, they may be restored by transmitting voltaic electricity through the secreting organs, by the portions of the divided nerves attached to them, the due properties of their fluids being thus restored.

"In the statement of these results, the attention was chiefly directed to the function of the stomach. In the present communication I shall make a few additional observations respecting the lungs.

"However much the secreting surface of the stomach may be deranged by the means just mentioned, its appearance, owing, we have reason to believe, to the extreme minuteness of its structure, is the same, or nearly so, as when the nerves have been left undisturbed; and, with the exception of occasional efforts to vomit, no symptom shows itself after the division of the nerves indicating the derangement of function which has taken place. Both in the symptoms and appearances after death, the derangement, occasioned in the lungs by the division of their nerves and the separation of the divided ends, is much more evident; the function as well as the structure of the lungs being, from their nature, more readily made the subjects of observation.

"Soon after the operation the animal begins to breathe with difficulty, and this symptom gradually increases, and is at length evidently the cause of death. On inspecting the lungs after death, the air tubes and cells, as far as they can still be traced, are found to contain a viscid fluid; and in considerable portions of the lungs, generally more or less according to the time the animal has survived the operation, every trace of both tubes and cells appears to be obliterated, the lungs both in colour and consistence assuming much of the appearance of the liver, and these portions of lungs sink in water; and, although examined with the greatest care, and the aid of a powerful magnifying-glass, both by Mr. Cutler, who was so kind as to give me his assistance, and myself, we could not perceive in them the least remains of the structure peculiar to this viscus.

"I wished, however, to ascertain, by means less fallacious than the sight, whether the change of structure in the parts most affected be such as to cause the total obliteration of their cavities,

and Mr. Cutler, at my request, was so obliging as to make the following experiments, the account of which I shall give in his own words.

"'If you cut out a portion of each of the eighth pair of nerves in the neck of a rabbit, it seldom dies within eight hours, and rarely survives more than twenty-four hours.

"'On examination after death, the lungs are found, in many parts, covered with dark red patches.

"'To ascertain the mischief done to the substance of the lungs, I endeavoured to fill them with mercury by the trachea, but, from the delicate structure of the air cells, a rupture took place, and the mercury escaped.

"'I then endeavoured to inject the air cells through the trachea with the finest vermilion injection. In the healthy lungs the attempt was invariably successful, making the whole of a bright scarlet colour, and, on cutting into them, every part was found to be uniformly filled with the injection.

"'After injecting the diseased lungs, the dark red patches remained on their surface: other parts of the lungs were of a bright red colour: some parts were partially injected, and other parts retained their natural appearance.

"'This was explained on dissection. Those parts of the lungs which were completely injected had not suffered from disease, other parts had suffered sufficiently partially to obstruct the injection, while some parts were so completely hepatized that not a particle of injection could enter them, or the parts beyond them, which were not equally diseased.

"'Those portions of the lungs which were completely injected sunk in water, from the weight of the injection.

"'The hepatised portions, from their diseased state, sunk also, whilst the portions beyond them, having their natural appearance, floated.'

"If, as I have repeatedly ascertained, and various members of our profession have witnessed, after the nerves are divided, and the divided ends separated, the due degree of voltaic electricity be transmitted through the lungs, by those portions of the nerves which remain attached to them, no affection of the breathing supervenes; and the lungs, after death, are found quite healthy, unless the electricity has been applied of such power, or continues for such a length of time, as to excite inflammation, and then the appearances on dissection are those of inflammation, not those produced by the division of the nerves of the lungs.

"It appears, from these facts, that the effect of dividing the nerves of a vital organ, and separating the divided ends, is not merely that of deranging its secreting power, but all those powers on which its healthy structure depends; and that the effect of voltaic electricity is that of restoring all these powers. It is particularly to be observed, that the voltaic apparatus should be so arranged that its influence may be transmitted through the lungs as soon as the

nerves are divided, the delay of even a short time appearing to give rise to more or less morbid appearance in the lungs." (P. 43.)

The disordered vascular action, and consequent change of structure in the lungs, from the interception of their communication with the encephalon, throws light on those cases in which disease of the brain induces secondary affections of the respiratory organs. It is by no means uncommon, for example, in cases of acute hydrocephalus, to find, on dissection, extensive disorganization of the lungs, where nothing in the early part of the case indicated the presence of disease in these organs. The analogy extends also to other organs at a distance from the brain, which may in like manner undergo rapid changes of structure, in consequence of disease of certain parts of the brain, which prevents their receiving a due share of nervous energy.

Such considerations as these ought to make us extremely cautious in our conclusions as to the degree of importance to be attached to those structural changes in the viscera frequently observed in fever, and other affections in which the centres of the nervous system have their functions manifestly disturbed. We should be careful lest we set down, as primary and essential, circumstances which may in truth be only consecutive, and which may have had no existence till towards the close of the disease, and no necessary connexion with it. But we are digressing. This paper, though short, is a model of physiological investigation: it contains nothing but facts accurately recorded, and conclusions legitimately derived.

3. *Some Observations relating to the Function of Digestion.* [From the *Philosophical Transactions* for 1829.]

The subject of digestion is one on which physiology is largely indebted to our author. It may be affirmed with truth, that nearly all that is known of the *mechanism* of this process is derived from his researches. His discovery of the possibility of substituting the galvanic power for the ordinary nervous influence in the production of the gastric fluid, is also one of the most original and important in modern physiology. The conclusion deduced by Dr. Philip from his experiments on this subject, namely, that galvanism is the agent actually employed in the living system for the accomplishment of the functions of the stomach, appears to us to be altogether invalid: this, however, does not at all derogate from the interesting nature of the fact, or the merit of the author in first bringing it to light.

Some experiments have been adduced by MM. Breschet and Milne Edwards, to prove that the same results may be produced by mechanical means, and that, consequently, the galvanic influence may act merely as a stimulant, by exciting a power of action still remaining in the nerves themselves, after their communication with the encephalon is cut off. Dr. Philip makes the following plausible objections to the inferences of these gentlemen.

"But it is maintained by some physiologists that the same effect may be produced by a mechanical agent.* They have related several experiments which appeared to them to prove, that when after a part of the eighth pair of nerves is removed, and thus the due secretion of gastric juice prevented, it may be restored by mechanically irritating the cut ends of the lower portions of the divided nerves. If such be the fact, it must materially influence our views, both with respect to the function of digestion, and the other secreting processes of the animal body.

"In judging of the result of such experiments, several things must be taken into the account, which appear to have escaped the attention of those gentlemen.

"At the time the animal is fed, in preparation for the experiment, there may be some food in the stomach, from previous meals, more or less digested, and there is always some gastric juice ready to act on any new food which may be presented to it. It is evident therefore, that, although the secretion of gastric juice cease at the moment of the excision of part of the eighth pair of nerves, some digested food must be found in the stomach for some hours after the operation; for, as I have ascertained, by numerous trials, many hours are required in such experiments for the stomach to propel into the intestine the remains of food previously digested, or that digested by the gastric juice previously formed.

"When therefore the contents of the stomach are examined in five or six hours, and generally even in ten or twelve, after the operation, more or less digested food is found lying next the surface of the stomach. But, when the animal survives the operation eighteen, twenty, or more hours, undigested food alone is found in it. The cause of so long a time being required wholly to expel the food which has undergone any degree of the digestive process, appears to be, that as digested food alone excites that action of the stomach which propels it into the intestine, and the more perfectly it is digested it excites this action the more readily, those parts of the digested food which have but imperfectly undergone the digestive process are expelled very slowly, so that it is very long before food wholly undigested alone is left.

* "See a paper entitled Mémoire sur le Mode d'Action des Nerfs Pneumogastriques dans la Production des Phenomènes de la Digestion. Par MM. Breschet et Milne Edwards (lu à la Société Philomatique, le 19 Fevrier, 1825.) —Extrait des *Archives Générales de Médecine*.

"That the longer the animal lives after the excision of part of the eighth pair of nerves, the less digested food is left in the stomach, is a fact now admitted by all who assisted at the experiments. Among the great number who have witnessed and been satisfied with their result, are Sir Humphry Davy, Mr. Thomas Andrew Knight, and Mr. Brodie, gentlemen whose experimental accuracy, in the opinion of the public, has never been surpassed.

"Of this fact the gentlemen to whose paper I have referred are not aware. They maintain, indeed, that the only effect on the digestive process produced by the excision of part of the eighth pair of nerves, is, that it becomes more tedious, being as perfect as when the nerves are entire, if a sufficient length of time be afforded. In speaking of the animals in which part of the eighth pair of nerves had been cut out, and comparing them with the healthy animal, they say: 'Enfin, si on laisse écouler un espace de temps plus grand encore entre l'operation et la mort des animaux, on pourra trouver que la digestion est complétement achevée dans l'un comme dans l'autre cas.'

"It will easily be perceived to what errors, respecting the effect on digestion, of depriving the stomach of the office of the eighth pair of nerves, this misconception, which probably arose from the animals employed in their experiments not having survived long enough to allow of the whole of the digested food being expelled from the stomach, must lead. Its effect was increased in the experiments referred to, by the different animals in each experiment having been confined to the same quantity of food. The most hungry would of course digest it fastest and most perfectly, because in them there would be the greatest quantity of gastric juice collected in the stomach before the excision of part of the nerves. To judge fairly of the result of the experiment the different animals must be allowed equally to satisfy their appetite, to eat till, from their manner of eating, it is found that the appetite has equally abated in all. It will be found, I think, that several other experimentalists have allowed themselves to be deceived by the circumstances here enumerated. We thus readily account for the discrepancies of writers. MM. Leuret and Lassaigne state that, in horses, eight hours after five or six inches of the eighth pair of nerves were cut out, the digestion was going on as usual,* while Mr. Field, whose experimental accuracy is generally acknowledged, and in whose experiments the same animals (horses) survived many times eight hours, found nothing in the stomach but undigested food covered with what appeared to be a layer of mucus, which I have often seen under the same circumstances in other animals.

"Such are the circumstances which I conceive misled those gentlemen who maintain that they can produce a sensible effect on the contents of the stomach by mechanical irritation of its nerves." (P. 53.)

* "Outlines of Human Physiology, by Herbert Mayo, F.R.S., second edition, pages 184 and 185."

Dr. Philip has repeated similar experiments, but with a different result.

"The mechanical irritation employed by MM. Breschet and Milne Edwards, in endeavouring to excite the digestive process after a portion of the eighth pair of nerves had been removed, was that of a thread attached to the cut extremities of the lower portions of the eighth pair of nerves and fastened to the neighbouring muscles, by which the motions of respiration kept the part in a state of constant irritation.

"In the third edition of my Inquiry into the Laws of the Vital Functions a similar experiment is related, in which the cut extremity of the lower portions of the nerves was fastened to a thread tied round the neck of the animal, by which it was in like manner kept in a state of constant mechanical irritation; yet in the stomachs of the animals after they had lived more than twenty hours, for the experiment was made more than once, nothing but undigested food was found. This experiment, with some others connected with it, was made publicly in the rooms of the Royal Institution, and all who felt an interest in the subject admitted to see the results, nor was there one who expressed a doubt respecting them.

"As, however, in these experiments the position of the nerves was more disturbed, and the thread was not applied, as in the experiments performed at Paris, Mr. Cutler, at my request, was so good as to make the following experiment. Three rabbits, after a fast of the same duration, were fed in the same way. In two of them a portion of each of the eighth pair of nerves was removed. The third rabbit was left undisturbed. In one of those in which the portions of nerve were removed, the cut end of the lower part of the nerves was, by means of a bit of thread, fastened to the neighbouring muscles, as in the experiments referred to. This rabbit died in ten hours, at which time the others were killed in the usual way.

"Mr. Cutler then took out the stomachs of all of them, slit them open, and laid them on the same plate; and Mr. Brodie was requested to examine and give his opinion respecting their contents, without having been told which was which. He at once pointed out the healthy stomach, the whole contents of which had undergone the action of the gastric juice. After carefully examining, and with an instrument moving about the contents of the other stomachs, he declared he could discover no difference in them. Both stomachs were chiefly filled with undigested food, the animals not having lived long enough after the operation for the expulsion of some imperfectly digested food that still remained in both.

"The foregoing experiments convinced those who witnessed their results, that the irritation caused by the attachment of the cut end of the nerves to the muscles, had no effect whatever in promoting the digestion of the food." (P. 59.)

"Since," observes our author, "as far as I know, no reply

to the foregoing paper has, in the lapse of more than four years, been made, I infer that the gentlemen in question admit the accuracy of its conclusions."

Dr. Philip resumes at greater length the defence of his hypothesis, of the identity of the nervous influence with voltaic electricity, in the fifth paper contained in the present volume. We do not think that the discussion of this question would form a profitable occupation of the reader's time or our own: we shall therefore only remark, that the general opinion of physiologists is adverse to our author's conclusion, and that, where the facts of a case are equally accessible to all, the more prevalent opinion is usually the more correct one. We are the less inclined to argue the matter, because it has been already so amply and candidly considered by Dr. Bostock, that we cannot do better than refer the reader to the remarks of that excellent writer.*

4. *On the Sources and Nature of the Powers of Circulation.* [From the *Philosophical Transactions* for 1831.]

This paper contains some interesting and conclusive experiments on several points connected with the action of the blood-vessels. The first demonstrate the futility of the hypothesis which makes the resilience of the lungs an important agent in the circulation of the blood.

"It has been supposed," says Dr. Philip, "that what has been called the resilience of the lungs, that is, their tendency to collapse, by relieving the external surface of the heart from some part of the pressure of the atmosphere, is a principal means of causing it to be distended with blood, the whole weight of the atmosphere acting on its internal surface through the medium of the blood which is thus propelled from the veins into its cavities; and in this way it has by some been supposed that the motion of the blood through the whole of the venous part of the circulation is maintained. A similar effect has been ascribed to the act of inspiration, which, it is evident, must operate on the same principle; and this opinion has even been sanctioned by the Report of a Committee of the Royal Academy of Sciences of Paris, and in this country by men whose authority is deservedly high; and the effect of these causes, it is asserted, is increased by the elastic power of the heart itself." (P. 64.)

The following experiments are much to be preferred to any *à priori* reasoning on the subject, there being no science on which the logicians are more at fault than medicine, in all its branches: indeed, we scarcely know of a single instance in

* Elementary System of Physiology, vol. ii. chap. ix.

which the process facetiously called reasoning among doctors has led to anything but the conflation of big books, and the establishment of uncharitable relations between "dispassionate inquirers after truth."

"EXP. 1.—A rabbit was killed in the usual way for the table by a blow on the occiput, and the chest opened on both sides so as freely to admit the air. The lungs were then inflated eight or ten times in the minute by means of a pipe introduced into the trachea; the circulation was found to be vigorous. On laying bare one of the femoral arteries, it was observed to pulsate strongly; and on wounding it, the blood, of a florid colour, indicating that its colour had undergone the proper change in its circulation through the lungs, gushed out with great force; and, on introducing the hand into the thorax, the heart was found to be alternately distended and contracted, as in the healthy circulation.

"EXP. 2.—All the vessels attached to the heart in the newly dead rabbit being divided, and the heart removed, it was allowed to empty itself. Its contractions continued to recur, and in their intervals it assumed a perfectly flat shape, proving that the elasticity of the heart in this animal is so small, that it cannot even maintain the least cavity after the blood is discharged.

"It appears, from these experiments, that the circulation was vigorous when none of the causes to which the motion of the blood in the veins have been ascribed existed. In the first experiment, the chest being freely opened on both sides, so that the play of the lungs, on inflating them, could be seen, all effect on the heart, as far as related to the motion of the blood in the veins, either of the resilience of the lungs or the act of inspiration, was evidently prevented; and in the second, it was proved that no sensible elasticity of the heart existed; yet, while artificial respiration was performed, we could perceive no abatement in the vigour of the circulation." (P. 65.)

Having shown that the contractile power of the heart is one of the chief agents in the propulsion of the blood, our author successfully confutes the opinion of those who maintain that it is the sole agent; an opinion so irreconcilable with the most familiar observations, that it is only wonderful it should ever have been gravely supported. Did it ever happen to any of its abettors to see a young lady blush?—the interesting phenomenon is alone sufficient to decide the question against them.

"Not a few have ascribed, and even still do ascribe, the motion of the blood throughout the whole course of circulation to the contractile power of the heart alone, although it would not be difficult to prove, that to drive the blood through one set of capillary vessels, (for in man himself, in one important part of the circulation, it is carried through two, and in some animals through three, sets of

capillaries before it returns to the heart,) I say it would not be difficult to prove that to drive it through one set of capillaries, at the rate at which the blood is known to move, would require a force capable of bursting any of the vessels. But here, as in the former instance, it is better to appeal to the evidence of direct facts than to any train of reasoning; and there is no want of such facts to determine the point before us, some of which I formerly had the honour to lay before the Society, and others are stated in my Treatise on the Vital Functions. The most decisive is, that the motion of the blood in the capillaries continues long after the heart has ceased to beat, and the animal in the common acceptation of the term is dead, and even in the warm-blooded animal, if it be favorably circumstanced, for several hours, and it is not for some time sensibly affected by the heart ceasing to beat; nor does this arise from some imperceptible impulse still given by the heart, because, when all the vessels attached to this organ are secured by a ligature, and the heart cut out, the result is the same." (P. 70.)

"If the circulation in the capillaries be thus independent of the heart, it is evident that the influence of that organ cannot extend to the veins. On comparing the whole of the foregoing circumstances, is it not a necessary inference, that the motion of the blood in the veins, like that in the capillaries, depends on the power of these vessels themselves? But, that we may not trust to any train of reasoning, where it is possible to have recourse to direct proof, I made the following experiment, with the assistance of Mr. Cutler.

"Exp. 3. In the newly dead rabbit, in which the circulation was maintained by artificial respiration, the jugular vein was laid bare for about an inch and a half; a ligature was then passed behind the part of the vessel nearest to the head, and the animal was so placed that the vein was brought into the perpendicular position, the head of the animal being undermost, so that it was necessary for the vein, in conveying its blood to the heart, to convey it perpendicularly against its gravity. The ligature, which was placed at what was now the lowest part of the exposed portion of the vein, was suddenly tightened, while Mr. Cutler and myself observed the vessel. The blood in the part of the vein between the ligature and the heart was instantly and completely expelled, as the transparency of the vessel enabled us to perceive. The vessel itself wholly collapsed, proving that all its blood had entered the heart, so that to a superficial view there seemed to be no vessel in the part where a large dark-coloured vein had just before appeared. In the mean time, on the other side of the ligature, the vein had become gorged with blood.

"In the foregoing experiment we see the blood rising rapidly against its gravity, where all causes external to the vessel on which the venous part of the circulation has been supposed to depend, had ceased to exist, and the vis à tergo was wholly destroyed by the ligature.

"By a similar experiment the power of the arteries in propelling the blood may also be demonstrated.

"EXP. 4. In a newly dead rabbit, the circulation being supported by artificial breathing, the carotid artery was laid bare for about an inch and a half. The animal was so placed as to keep the vessel in the perpendicular position, the head being now uppermost. A ligature was passed behind that part of the vessel which was next the heart, and Mr. Cutler and myself observed the vessel at the moment the ligature was tightened. The artery of course did not collapse, as the vein had done in the preceding experiment: but the blood was propelled along the vessel, so that it no longer appeared distended with it. It was at once evident, from the change of appearance in the vessel, that the greater part of the blood had passed on in a direction perpendicularly opposed to its gravity. It is worthy of remark, that the blood of the artery was propelled neither so rapidly nor so completely as that of the vein, the cause of which will be evident in the observations I am about to make on the nature of the function and powers of these vessels." (P. 72.)

Having proved very satisfactorily that both the arteries and veins possess an active power of propulsion, Dr. Philip concludes the paper by inquiring whether that power be of the muscular kind? and he concludes it to be so, because the blood-vessels appear to bear the same relation to the nervous system as the heart, which is on all hands acknowledged to be muscular. Having alluded to some of the ordinary arguments adduced by physiologists on each side of the question, our author proceeds as follows:

"I endeavoured, in papers which I had the honour to present to the Society, and which appeared in the Philosophical Transactions for 1815, to ascertain the relation which the heart bears to the nervous system, which is different from that of the muscles of voluntary motion. It appears from the facts there adduced, that this organ is not only, like the muscles of voluntary motion, independent of that system, although capable of being influenced through it either by means of stimulants or sedatives, and that even to the instantaneous destruction of its power; but that it equally obeys either set of agents, whether applied to the brain or spinal marrow, and to whatever part of these organs it is applied, provided it be to a part of considerable extent; while the muscles of voluntary motion obey no stimulus acting through the nervous system, unless it be applied to their nerves themselves, or to the particular parts of that system from which their nerves originate. I found, from repeated experiments, that the vessels bear the same relation to the nervous system as the heart does, their power being independent of this system, but equally with the heart capable of being influenced by either stimulants or sedatives applied to any considerable part either of the brain or spinal marrow, and that

even to the instantaneous destruction of their power. They in all respects bear the same relation to the nervous system with the heart; the strongest presumption that their power is of the same nature.

"From the various facts stated or referred to in the foregoing paper, the following inferences appear to be unavoidable: that the circulation is maintained by the combined power of the heart and blood-vessels, and that the power of both is a muscular power." (P. 74.)

This is on the whole a very able paper, in all respects worthy of its author. If Dr. Wilson Philip would always write thus, he should be unto us a "magnus Apollo," and we should never fall out with any of his conclusions.

5. *On the Relation which subsists between the Nervous and Muscular Systems in the more perfect Animals, and the Nature of the Influence by which it is maintained.* [From the *Philosophical Transactions* for 1833.]

The first object of the author, in this paper, is to prove "that the brain and spinal marrow are the only active parts of the nervous system; the nerves, whether cerebral or ganglionic, with their ganglions and plexuses, being only the means of conveying, and, where the organs the functions of which require the influence of every part of the brain and spinal marrow, are concerned, combining the influence of the various parts of these organs." Our author states more at length his opinions as to the functions of the sympathetic nerve: on this subject, however, we have already stated our sentiments, which we need not here repeat. The following experiment, made by Mr. Field, at the request of Dr. Philip, is worthy of attention.

"Mr. Field partially divided the spinal marrow near the head in an ass in such a manner as to destroy the sensibility, as far as the experiment was concerned, but not to interrupt the respiration, thus bringing the animal into the best possible state for the experiment. It lay as still, and suffered as little, during it, as an animal quite dead in the usual sense of the word, while the circulation was more perfect than it could be under any artificial inflation of the lungs. In another respect, the state of the animal was particularly favorable, for he succeeded in exposing the semilunar ganglion and its plexuses with a very trifling loss of blood, not I believe four ounces. The heart was found to pulsate sixteen times in ten seconds, as ascertained by the pulsation of the arteries in the neighbourhood of the ganglion. The ganglion and its plexuses were then irritated by the point of the scalpel, and at length cut across in various directions; but, although the beats of the heart were repeatedly counted

during these operations, they continued uniformly of the same frequency. Spirit of wine was then applied to the wounded ganglion and plexuses, but without the least change in the beats of the heart. A strong infusion of tobacco in water was now applied, but with the same result, the beatings of the heart being still sixteen in ten seconds; nor could any variation in the force of the beats be observed in any part of the experiment.

"It appears, from this experiment, that we cannot influence the organs supplied by the ganglionic nerves by causes affecting the ganglions and plexuses, independently of the brain and spinal marrow; and the inferences from this and the preceding facts are unavoidable, that the former organs make only a part of the channel through which the influence of the latter is conveyed, and that the peculiar office of the ganglions and plexuses is to combine the influence of the nerves which terminate and are blended in them, and send off nerves endowed with their combined influence, in consequence of which the parts which receive the nerves proceeding from them become subject to every part of the brain and spinal marrow." (P. 92.)

It may be useful to compare this experiment with those of M. Magendie, showing the apparent inactivity of the great sympathetic in relation to sensation and voluntary motion.

"A ganglion," says M. Magendie, "may be pricked, cut, or torn, without the animal appearing conscious of it, and without any contractions taking place in the muscles. I have often tried these experiments on the cervical ganglia of dogs and horses; similar operations, if performed on the sensible nerves of the brain, would have produced horrible torture; if on the insensible, or those of motion, powerful muscular contractions. Let all the cervical and the first thoracic ganglia be removed, we do not perceive any sensible and immediate derangement in the functions even of those parts to which their nerves are distributed." (*Précis Elémentaire de Physiologie*, tome i. p. 214.)

It is curious enough to observe the very different conclusions at which these two physiologists arrive, from experiments whose rationale is similar, though their object be not the same.

From the apparent inactivity of the sympathetic with respect to certain functions dependent on the nervous system, Dr. Philip concludes that this nerve has no distinct function of its own, but conveys and combines the influence of the brain and spinal marrow. From a like inactivity with respect to certain other functions, also dependent on the nervous system, M. Magendie concludes that we know nothing about the functions of the sympathetic, and that we are even pre-

mature in designating it as a nerve at all. In matters so uncertain, the more cautious opinion is the one to be preferred.

In alluding to the sympathy of the nerves, Dr. Philip introduces an observation which would be highly important, if true.

"I take this opportunity of directing the reader's attention to a law of sympathy, which, as far as I know, has been overlooked, but which has an extensive influence in determining its effects, and, consequently, the phenomena and progress of disease. It appears, from what is said in the first paper in the present volume, that the functions of the animal body may be divided into two classes,—those of the sensitive, and those of the vital system. Now the individual organs do not sympathise equally with the organs of both these sets of functions. Some sympathise most powerfully with those of the sentient, and some with those of the vital functions. If we except the brain, whose extensive sympathies are necessary consequences of its functions, the stomach and liver are the organs of most extensive sympathies. Of these organs the former sympathises most with the sentient, the latter with the vital organs. Hence it is that affections of the stomach are more immediately felt in every part of the frame, while those of the liver have a greater influence on the course of disease. The liver being an organ of dull sensation, the share it has in influencing the course of many diseases has often been overlooked, few sensations being referred to the region of this organ, and thus the success of our plans of treatment greatly abridged. I beg to refer the reader to what is said of the sympathies of the liver, and the manner in which the course of various diseases is influenced by them, in my Treatise 'On the Influence of minute Doses of Mercury, combined with the appropriate treatment of various Diseases, and the Principles on which it depends." (P. 97.)

The reader will no doubt be surprised, on referring to our author's Treatise on Minute Doses of Mercury, to find a copious application of the hypothesis above advanced, but no further proof of it than the bare assertion! In answer to which, we beg to quote the words used by Dr. Philip himself, on another occasion: "It is to be recollected that here, as in other cases, the onus probandi rests with the asserter." We shall therefore leave the Doctor for the present to labour under the aforesaid *onus*, and content ourselves with simply denying that the liver sympathizes more with the vital organs than the stomach.

The remainder of this paper is occupied with a discussion on the opinion of Dr. C. W. Henry, respecting the relation of the nervous to the muscular fibre, and with Dr. Philip's favourite subject of the identity of the nervous and galvanic powers. The former question, under a somewhat different form, has already been argued *ad nauseam* by the physiolo-

gists of the last century, who might as well have saved themselves the trouble, because, till some anatomist shall have the dexterity to separate the two kinds of fibres in a muscle, without destroying or injuring either of them, all the physiologists on earth may dispute till the end of time, without being any the wiser.

With regard to the galvanic hypothesis, we have already given our reasons for not wishing to enter into the discussion of it.

6. *On the Nature of Sleep.*

[From the *Philosophical Transactions* for 1833.]

Dr. Philip remarks, that, "to understand the nature of sleep, we must determine the laws peculiar to each of those systems which have relation to that state, and the manner in which each is capable of influencing the other;" and again the Doctor says, "it is necessary therefore to a clear view of the state of the functions of the animal body in sleep, to determine the bonds of union between the sensitive and vital systems, at first view so distinct, which render their existence, except for a very limited time, inseparable." In these sentiments we entirely concur; but, as a knowledge of the above-mentioned laws, influences, and bonds of union, appears to us to involve nothing more nor less than an intimate acquaintance with the whole microcosm to its inmost recesses, we think that our author's statement of the preliminaries to the right understanding of sleep amounts simply to a declaration that the inquiry is, in the present state of our knowledge, a hopeless one.

Dr. Philip's general view of sleep may be illustrated by the following passage.

"It appears, from all that has been said, that in the sensitive system alone we find organs capable of exhaustion from all degrees of excitement, and the exhaustion of which is consistent with a state of health, namely, the nerves of this system and those parts of the brain and spinal marrow with which they are associated; but it is a necessary inference, from the facts stated in the last paper I had the honour to lay before the Society, that the former of these only obey the latter. To the latter alone therefore we must look for the exhaustion which is the immediate cause of sleep.

"The parts of the brain and spinal marrow which are associated with the nerves and muscles of the sensitive system, gradually, from the effect of the usual stimulants of life, suffer such a degree of exhaustion that those stimulants can no longer excite them; and their functions, unless stronger stimulants be applied, necessarily cease. Impressions from external objects, consequently, are no

longer perceived, and therefore cannot produce their usual effects either on mind or body. Thus the expenditure of excitability in those parts of the brain and spinal marrow, and consequently in the nerves and muscles whose functions depend on them, being arrested, the vital functions still continuing, such an accumulation of it takes place in all these organs as again renders them sensible to the usual stimulants of life, and the activity of the sensitive system is restored.

"On the parts of the brain, and, in some animals, of the spinal marrow, as I have already had occasion to observe, which are associated with the nerves and muscles of the sensitive system, the mental functions depend. Hence the phenomena of dreaming, on which I shall make a few observations, immediately connected with the other parts of this paper, after considering the manner in which the vital, is influenced by the state of the sensitive, system in sleep.

"We are now to consider the effects of sleep on those organs which have no share in its production.

"One of the most important circumstances relating to the state of the sensitive system in sleep is that its exhaustion is never so complete as, under all circumstances, to prevent its excitement. On this alone it depends, we shall find, that sleep has no fatal tendency. The degree of sensibility which remains in sleep is the distinguishing mark between it and the torpor of disease. That sleep alone is healthy from which we are easily roused. If our fatigue has been such as to render it more profound, it partakes of disease, that is, as will appear more clearly from what I shall have occasion to say of the different species of apoplexy, the vital system partakes of the debility, or some cause is operating which prevents the restoration of the sensitive system.

"Distinct as the vital and sensitive systems are, we know that neither can long survive the other. In a paper which appeared in the Philosophical Transactions for 1829, I stated or referred to the facts which prove that in all modes of death, except the most sudden, arising from causes which so impress the nervous system as almost instantly to destroy all the functions, those of the sensitive cease several hours before those of the vital system. The animal only dies when his means of enjoyment and intercourse with the world which surrounds him, no longer exist. This consequence is constant, and never long delayed. It is necessary, therefore, to a clear view of the state of the functions of the animal body in sleep, to determine the bonds of union between the sensitive and vital systems, at first view so distinct, which render their existence, except for a very limited time, inseparable.

"That the sensitive cannot exist independently of the vital system, is evident, on the slightest consideration; but the dependence of the latter on the former is much less so. The facts stated in the paper just referred to prove, that in the more perfect animals, the function of respiration, being the only vital function which requires the co-operation of the sensitive system, is here the bond of union. It appears, from those facts, that the muscles of respiration

are, in the strictest sense, muscles of voluntary motion, the excitement of which consequently depends on the powers of that system. When the power of sensation wholly ceases, we cease to breathe.

"So confused have been the ideas of physiologists on this part of the subject, that, to account for the continued action of the muscles of respiration, and their intimate connexion with the vital system, they have supposed a third class of muscles, partaking of the nature of both the others,—those of voluntary and involuntary motion, to which it has been alleged the muscles of respiration belong. If this be the case, these muscles must change their nature every instant, because they are the same muscles which are employed in a thousand other acts universally acknowledged to be mere acts of volition; and, on the other hand, when powerful causes impede the breathing, all the muscles of the trunk are employed in this function. Besides, the facts which have been laid before the Society prove not only that there is no such class of muscles as that here supposed, but that the laws of excitability are the same in all muscles; the difference between the muscles of voluntary and involuntary motion depending wholly on the nature of their functions, and the circumstances in which they are placed. The nervous influence, although equally capable of influencing both, is supplied to them in different ways, and for different purposes; the usual functions of the muscles of voluntary wholly, of involuntary motion in no degree, depending on that system. The action of the muscles of respiration continues during sleep, because the exhaustion of the sensitive system is not complete, and the causes which influence this system in their excitement continues in our sleeping as well as waking hours; and the same is true of all other muscles of voluntary motion, as far as the causes which induce us to excite them are applied. In the soundest sleep we move our limbs, if their posture be rendered uneasy. We are not obliged to guard against these causes in sleep, else the motions they would excite would quickly rouse us. Those of respiration are too gentle to produce this effect.

"The only change which takes place in the action of the muscles of respiration during sleep is, that, in proportion as the sensibility is impaired, they are necessarily excited less readily, and the act of respiration is thus rendered less frequent, a more powerful application of the cause being required; the consequence of which is, that when they are excited, the air is drawn in with greater force; hence, and from the relaxation which is apt to take place during sleep in the parts about the fauces, particularly in those advanced in life and those of relaxed habits, the cause of snoring. Thus, we generally observe that the snoring is the louder the slower the breathing, that is, the relaxation of the fauces being the same, the more profound the sleep. The loudest snoring I ever heard, so loud as to startle the attendants, was in the last ten minutes of the life of a person who died of a disease of the brain impairing the sensibility, and who only breathed three or four times during that space.

"The other changes observed in the vital system in sleep are evidently the consequence of the diminished frequency of respiration. This necessarily produces a proportional diminution in the frequency of the pulse; the properties of the blood being less frequently renovated in the lungs, it less readily excites the heart and vessels, and the diminished force of circulation is as necessarily attended with a diminished formation of the secreted fluids. The state of the vital organs, in its turn, influences the sensitive system, and thus the sleep is rendered more profound. While health continues, however, no change takes place in the vital powers to prevent the perfect restoration of those functions by which the animal is again fitted for intercourse with the external world, for, as appears from what has been said, these powers are never impaired in sleep, but only less readily excited." (P. 135.)

To this, as an explanation, we have only to object, that it explains nothing. That sleep is a state which occurs when the powers of animal life are partially impaired by exercise, and that, during such state, the vigour of these powers is restored by the continued activity of the organic functions, is a view of the subject so very obvious, that it is probable no physiologist could be found who entertained any other. But all this is a statement of what occurs, not an explanation of it. If, indeed, the brain were known to be capable of generating the nervous energy only up to a definite point, at which it ceased to act, from simple incapacity of further action, we should then have a tolerably good explanation of sleep, in saying that this state commences when the brain is so exhausted as to be no longer capable of maintaining the animal functions, and continues till the undisturbed actions of organic life have restored it to that degree of energy at which it becomes capable of resuming them. But, although sleep be evidently intended to repair the wasted energy of the nervous system, and, in a healthy frame, supervenes when necessary for this purpose, still it is clear, from observation, that there is no definite point at which the brain ceases to act from exhaustion, so as to induce sleep. This state frequently occurs when there is no considerable degree of cerebral exhaustion: thus, there are many individuals, in perfectly good health, who seldom assume the horizontal position for five minutes without falling asleep. Again, when it is necessary to rouse the attention to any subject, we can easily shake off the disposition to sleep, and remain in a state of activity for several hours, without any detriment to health. A man also may be awakened in the midst of a sound sleep, and suddenly resume the full activity of all his powers of body and mind. It is therefore, we apprehend, much

more probable, on the whole, that the state of sleep causes the cessation of the brain's action, than that sleep itself occurs in consequence of such cessation. What may be the proximate cause of sleep, we, for our own part, have not the smallest idea; nor do we think it likely that physiologists will ever be able to attain any precise knowledge on this subject: it seems too deeply involved in the arcana of life, of which no more is known now than at the beginning of the world.

We ought, however, to pursue the subject as far as we can, and we should commence by a patient and careful examination of the *effects* of sleep on every function of the mind and body which can be made the subject of distinct observation: in short, there is only one true way of investigating any subject, which is, first to observe, and to try, and afterwards to draw conclusions when the data are sufficient—not till then.

6. *On the Nature of Death.*

[From the *Philosophical Transactions* for 1834.]

We shall not detain the reader long with Dr. Philip's theory of death; for, to say sooth, we do not think it worthy of any particular attention. Natural death—that is, death from old age, differs from sleep, according to our author, only in degree. In sleep, sufficient sensorial power is retained to keep up respiration: in death, the sensorial power is so much diminished, that the uneasy sensation which causes the voluntary act of respiration during life no longer produces its wonted effect, and accordingly the man dies,—not, as the old adage has it, for want of breath, but for the want of the will to breathe. This is a very short way of disposing of the subject, and the theory has the advantage of simplicity, whatever else it may lack. We have, however, before endeavoured to show that Dr. Philip's view of the voluntary character of respiration is, from its very nature, insusceptible of proof; and his theory of death being mainly based upon it, both must fall to the ground together.

On viewing our author's general position, that sleep and death differ only in degree, the casuists might be apt to object, that where two things stand in the relation of cause and effect, the degree of effect produced is, *cæteris paribus*, precisely commensurate with the intensity of the cause, and that, consequently, since the effect of sleep is known to consist in an increased activity of all the powers of life, the effect of death, which is merely a greater degree of sleep, ought to consist in a more than usually exuberant vitality. But the fact is, the author is obliged to recede from his position, and,

after having asserted that sleep and death are one and the same in kind, and different only in degree, he proceeds to explain a circumstance in which they differ very widely in their nature.

In natural sleep, it will be remembered, according to Dr. Philip's view of the subject, the continued activity of the organic functions has the effect of rekindling those of the animal life: hence, to account for the final extinction of the latter in death, we must presuppose a failure in the former. This our author admits, thereby also in reality admitting a fundamental difference between the two states.

"The state which immediately precedes the last act of dying, then, according to the common acceptation of the term, and sleep, depend on a failure of function in the same organs. In what, then, consists the difference of these states? The most evident is, that the one is a temporary, the other a final failure; and it will appear, that in the only death which can strictly be called natural, the state of the sensitive system which immediately precedes death differs from its state in sleep in no respect but in degree.

"The cause of sleep, as appears from the paper above referred to, is uniformly the same, a diminished excitability of the sensitive parts of the brain and spinal marrow, in consequence of the action of the ordinary stimulants of life; but a loss of excitability in those parts, we shall find, is never the sole cause of death, and often makes no part of its cause. In sleep, we have seen that the sensitive parts of the brain and spinal marrow regain their functions in consequence of the continued vigour of the vital system, by which their excitability is restored. To render the exhaustion which constitutes sleep permanent, therefore, the powers of this system also must fail; and, if any cause of failure in these powers occur, it is evident, that whatever be the state of the sensitive system, its powers must fail with them.

"The natural death of the animal is the death of old age; and as this is the simplest form of death, it is that which I shall first consider. We shall find that the state which immediately precedes this death, and must consequently be considered as its cause, must, in the nature of things, differ from sleep in no other respect than the less vigorous state of the functions of both systems, and consequently that these states are identical; the greater or less general vigour making no difference in their nature.

"We are not necessarily born to suffering. All natural states, with the exception of child-bearing, (and in its most natural state even this is hardly an exception,) are more or less pleasurable. It will appear, from the nature of our constitutions, that the last feelings in natural death are necessarily of the same nature as those which precede sleep. It is only where the course of our decay is disturbed, that suffering of any kind attends it.

"From a knowledge of the animal economy, we might, indepen-

dently of experience, have foretold that a state of sleep would be that which immediately precedes the last act of dying from old age.

"It appears, from what was said of the nature of sleep, in the paper above referred to, that although the vital organs do not, in it, partake of the peculiar state which constitutes sleep, their functions are all, for the time, impaired by the exhaustion of the sensitive system. The respiration, we have seen, is rendered less frequent, in consequence of which the activity both of the circulation and the other assimilating functions which depend on it, is, for the time, lessened.

"Now, as the death of old age arises from the gradual failure of those functions, it must necessarily take place at the time at which their vigour is most impaired. If the vital powers are still capable of restoring the sensitive system under the disadvantage of a diminished frequency of respiration, it is evident that, if their decay be gradual, nothing occurring suddenly to accelerate it, they cannot fail to maintain the functions of that system during the short time which intervenes before the recurrence of sleep again exposes them to the same difficulty. Their failure necessarily takes place at the time when their functions are most difficult. The death of old age, therefore, is literally the last sleep, uncharacterised by any peculiarity. The general languor of the functions in the last waking interval is attended with no peculiar suffering, and the last sleep commences with the usual grateful feelings of repose, the last feelings experienced; for, with what takes place after them, the feelings, being suspended, have no concern.

"The only difference between the last, and the sleep of former times, is, that the exhaustion of the sensitive system, which is at first, as in the latter case, only partial, (for in the beginning of that sleep the sleeper may be roused by more powerful stimulants than those which preceded it,) becomes in its continuance, in consequence of the failure of those powers which formerly restored the sensitive system, complete." (P. 163.)

But the impaired state of the organic powers, which Dr. Philip admits to be essential to death, remains unaccounted for. On recurring to the paper on Sleep, we find it distinctly maintained that the muscles engaged in the organic functions are not liable to have their power exhausted in *any degree* by natural and healthy stimuli.

"But the muscles employed in the vital functions obey a better regulated stimulant, which never, except in disease, produces any degree of excitement that impairs their power. In many diseases, we see the effect of such excitement. If it does not abate soon, and we cannot by artificial means in a short time reduce it, death is always the consequence: and even a short continuance of it produces a degree of debility that so impairs the powers of life as to render their restoration both slow and difficult. *Thus it is evident, that on the capability of the muscular fibre to be moderately excited,*

without suffering any degree of exhaustion, life immediately depends." (P. 132.)

Whence then the exhaustion of the organic powers which incapacitates them for the renewal of the animal functions, when the term of natural life is concluded? The truth is, that the organic powers *are* susceptible of exhaustion from the ordinary stimuli of life, though more gradually and less perceptibly. All that we know about death from old age is, that, when the entire organism is worn out, the man dies; and Dr. Philip's theory of death amounts to little more than a circumlocutory, and somewhat contradictory, statement of this familiar fact.

We have already severely taxed the patience of the reader, and must hasten to conclude. In saying that Dr. Philip has, in many parts of this volume, indulged in speculations so idle, that they would be barely excusable in the thesis of a nascent doctor; in saying, moreover, that he is very frequently at variance with himself, we do not, in effect, derogate anything from his knowledge or ingenuity as a physiologist, though perhaps somewhat from his sound judgment as a philosopher; because, in asserting that he has most signally failed, in his attempts to elucidate several subjects, we merely assert that he cannot do what is impossible,—that he cannot reason to the purpose without sufficient data.

"Magnis tamen excidit ausis!"

The besetting sin of Dr. Philip is presumption, which, in some parts of this work, is carried to a height absolutely ludicrous. It is impossible to read without a smile the passage above quoted, in which he describes what *must* be the agreeable sensations of a man dying by the extinction of his sensorial powers. Persons in this comfortable condition are usually particularly incommunicative; there is very little oral tradition to assist us; and hence, the only qualification for describing such a state would consist in having passed through it,

"Visendus ater flumine languido
Cocytus errans:"

and, accordingly, if this paper, instead of being "Observations on the Nature of Death, by Dr. Wilson Philip," had been "Practical Illustrations of the Process of Dying, by a Disembodied Spirit," we should have listened with much awe and deference to the ghostly instructor: as it is, we conclude that Dr. Wilson Philip knows precisely as much about the matter—as we do ourselves.

In parting with Dr. Philip, we would, in sincere goodwill,

remind him that the highest reputation may be trifled away. His own has been well earned, and long may it last; but, if he has nothing in store better than these treatises on Sleep and Death, we advise him by all means to slumber on his laurels.

Vindication of the pre-eminent Efficacy of Manual Operations in the Cure of Rheumatic and Nervous Diseases, against the malignant and unprincipled Attempts of certain Members of the Medical Profession to decry and obstruct the Practice. By WILLIAM BALFOUR, M.D., L.R.C.S.—Edinburgh, 1834. 8vo. pp. 24.

DR. BALFOUR is certainly the most ill-used doctor that we have met with for an age. Here has he been twenty years knocking rheumatism out of the world with an assiduity beyond all praise; and yet a number of persons, in the garb of men, but who take very little pains to conceal their cloven feet, go about, and endeavour to obstruct his practice: aye, *obstruct*, for that is the word. The devilries of the anti-percussors are six in number.

"*In the first place.* Some time ago, I made a perfect cure of lameness in a lady, of twenty-four years' duration, eighteen of which she was on crutches. Conceiving it would be for the benefit of many a distressed person to make the case generally known, I had it printed, and advertised it to be had gratis at my house, and at two separate booksellers' shops. One of these booksellers distributed all the copies I sent him, the other gave out very few. When I asked the reason, he said that '*several* medical men in the city (naming some of them,) had called on him, and stated that, if he gave out a single copy of my pamphlet, they would withdraw their custom and patronage from him!'

"Now, in conduct so nefarious, illegal, and unjust, whether did malignity or meanness predominate? They stand, I think, in this relation to each other: the malice of the ignoble individuals in question was of such virulence, as to make them lose sight of all self-respect, in their endeavours to crush me; for no man, not transported with the most outrageous jealousy and envy, could ever lower himself so far as to attempt, in so mean, wicked, dastardly, and covert a manner, to mar the success and obstruct the usefulness of another, who never crossed his path, and never was likely to do so.

"There was no allusion to these wretched imbeciles in the pamphlet they thus endeavoured to suppress: they never received provocation at my hands, of any kind or degree; I never spoke to a single individual of them in all my life, except one, who has seen my practice, and declared it, in a letter of his which I hold, to be 'efficient, scientific, and a blessing to suffering humanity.' This

person is a prominent advocate for *the liberty of the press:* nevertheless, I detected him in secretly attempting to suppress the pamphlet referred to, which pamphlet had no other object, and could have no other object, than the good of mankind. Whence, then, could such gratuitous malice proceed? The answer is obvious: it arose from envy at my daily curing cases which had been given up for many years as hopeless, and my thereby obtaining the patronage of the public, while my unprincipled opponents and persecutors are consuming their days in idleness and obscurity. That is 'the head and front of my offending,' the gall and wormwood which turn their stomach." (P. 4.)

Yet some would alledge that these pamphlet-swampers, or, as our author calls them, "wretched imbeciles,"—these lovers of rheumatism, who instantly ossified one of his channels of circulation, and deprived half Edinburgh of its book, were really blessings in disguise. The sturdiest physician, sound in wind and limb, can scarcely get through a practice of fourteen hours a day. What then would have been our author's fate, with all the Old and all the New Town knocking at his portals, had the obstructors not happily come in the way, and reduced the eagerness of the Edinburgh rheumatics within bearable limits? One of the "wretched imbeciles" we hold to have been a bungler. We mean the one who, after declaring Dr. Balfour's practice to be "efficient, scientific, and a blessing to suffering humanity," was detected "in secretly attempting to suppress the pamphlet referred to." He ought to have known that libricide is a capital crime in authors' eyes, and should have been careful to smother the pamphlet in twilight only, by winks, nods, and oracular insinuations. Yet he was most probably detected with large bundles of the *perfect cure of lameness* in his pocket, with a string around their necks, and about to consign them to some of those murky repositories, whence pamphlets rarely emerge—save to wrap up tooth-brushes, light cigars, or be eternally shaved upon! We perfectly agree, too, with our author, that this knavish obstructor must be a most hypocritical champion of "the liberty of the press;" unless indeed he means by this phrase the liberty of pressing the struggling pamphlets into the lowest abysses of his pockets. As no one, however, unites every fault in his own person, it must be allowed that the knave just mentioned, who was so fond forsooth of the liberty of the press, was not one of those that Milton talks of,

> "Who bawl for freedom in their senseless mood,
> And licence mean, when they cry liberty:"

no, indeed; such liberty of the press as he allowed might satisfy the autocrat of all the Russias: print what you please, only don't publish; if you even give away a copy, not a stiver shall you ever pouch again to the end of time. Nevertheless, we are surprised at Dr. Balfour's declaring that the wretched imbeciles had received no provocation at his hands. Now, we think they had received a most mortal one. Dr. B. had omitted all mention of them in his pamphlet; and these idle doctors, these men without patients and without patience, possessing no talent but that of book-stifling, were excluded from their sole hope of immortality; for what chance have flies of preservation, but by being included in amber?

But we ask pardon of our readers for these comparatively trifling remarks, by which we have detained them so long from the instructive pages of our author. Hear his second dirge.

"*In the second place.* It is no uncommon occurrence for me to receive patients from afar, who have for many months, and some of them for many years, been subjected to great pain and lameness, and consequent impaired health, without having obtained the least alleviation of their complaints from medicine. When I ask such patients, why they did not apply to me sooner? the uniform reply is, 'We were prevented by our doctors, who assured us there was nothing in your practice, that it would never cure any body, and that, at any rate, it was not applicable in our cases; but, hearing of other patients whom you had cured, in circumstances similar to our own, we came off at last, without our doctors' leave.' I shall here give two or three cases, in illustration.

"1st. A young lady, in a northern county, came to complain of pain and weakness in her back, right thigh, and leg, without any known cause. In defiance of all her medical advisers could do, she continued to grow worse for eighteen months. A consultation was then held, when her case was decided to be hopeless. On it being suggested that I should be called in, her doctors deprecated the idea, assuring the patient and her friends that my practice was inapplicable in her case, and that it would certainly kill her. She came to me, notwithstanding; and returned home, in three weeks, perfectly well, and has continued so for upwards of ten years.

"Now it irresistibly follows, either that this young lady's doctors were wicked, unprincipled men, or that they were profoundly ignorant of the efficacy and safety of my practice. In charity, I shall assume the latter as the true alternative; and I then ask, how came they to pronounce a practice inapplicable, nay killing, about which they knew absolutely nothing? The lady never once complained under my hands." (P. 5.)

We deeply regret being compelled to abridge the marrowy sentences of our author, but we must make short work with the rest. The young lady just mentioned got home, and fostered a rheumatic insurrection among her townsfolk. She says, in a letter to our author, "The medical men here all wish you as high as Haman. You have put their rheumatic patients in a state of rebellion, and I shall do everything in my power to increase it." (P. 6.) This letter is dated in 1823, but our author does not state how the rebellion turned out; whether a detachment of patients fairly gave their doctors the slip, and hobbled off to Edinburgh, or whether they still groan (uncompressed) under the tyrannic sway of their professional tormentors.

We now come to our author's *in the third place*. It seems that some of the malignants keep a kind of cads, or liers-in-wait, whose business it is to fib against Dr. Balfour. "Not a person of consideration, lady or gentleman, comes to me from a distance, (and many such come,) but my professional opponents, and their infamous go-betweens, are immediately at work, to prejudice them against my practice; and there is no misrepresentation too gross, no falsehood too atrocious, for them to employ, to compass their end. This is no fancy; my information is from my patients themselves, most of whom soon penetrate the motives of their false and officious friends, and consequently treat them with merited contempt." (P. 8.)

The reasons of this hostility are two in number, being the number of the offences which our author confesses to have committed against science and society. "I have been guilty of no offence, that I am aware of, either against science or society, but two,—that of ascertaining a law of the animal economy, whereby a part, entirely separated from the living body for a length of time, can be reunited, and again become part of the system; and the method, which I am now vindicating, of curing rheumatic, nervous, and some other diseases, which prove incurable by any other means: delinquencies these, which, all the world knows, cannot be tolerated in any contemporary, by gentlemen in that grade of the profession who honour me with all the paltry hostility they can muster." (P. 8.) This frank avowal of his faults, on our author's part, is worthy of the highest praise, and can be paralleled only by the candour of those professors of humility who, as Lord Chesterfield informs us, were wont, in his time, to confess themselves guilty of all the cardinal virtues.

Again we say, Dr. Balfour is the most ill-used man in the world: let him cure nineteen patients, and no one breathes a word on the subject; the half-uttered praise expires on the

lips of the few and frightened Balfourians. But let him fail only once, and all Edinburgh rings with it: the long-winded prosing of the pursy baillie, and the withering smile of the epigrammatic physician, find a common object in the unfortunate case. "If, out of twenty desperate, inveterate cases, which have long resisted every other mode of treatment, I cure nineteen, and fail in the twentieth, that single failure meets me at every corner, is bandied about in all directions, as conclusive evidence *against* my practice; but the nineteen are kept in the background,—are never once mentioned,—they form no evidence *in favour* of the same practice!"

Here we must conclude, and break off our review abruptly; for, though we could be well content to go on with this delicious little pamphlet for ever, we fear lest our sterner readers should complain of our devoting so large a space to so small a work. We therefore take leave of our author, assuring him that we envy him his power of curing nineteen desperate cases of rheumatism out of twenty; and though we, who are unambitious reviewers, if we possessed the power, might be content with a moderate practice of some 10,000*l.* per annum, we see no reason why Dr. Balfour should not take a loftier flight;—why he should not realize a fortune beyond the dreams of avarice, and, turning the tables on the "wretched imbeciles," become in turn their obstructor.

A Practical Treatise on Medical Jurisprudence, with so much of Anatomy, Physiology, Pathology, and the Practice of Medicine and Surgery, as are essential to be known by Members of Parliament, Lawyers, Coroners, Magistrates, Officers in the Army and Navy, and Private Gentlemen; and all the Laws relating to Medical Practitioners. With Explanatory Plates. By J. CHITTY, Esq., Barrister at Law.—London, 1834. 8vo. pp. 466.

THE general object of works on legal medicine is to illustrate those points on which law and medicine become so blended, that knowledge derived from the studies peculiar to each faculty is requisite for their elucidation. Several excellent works of this kind already exist, to which Mr. Chitty has it in view to add another, whose plan is in a great measure new. Our author, justly considering that much of the difficulty in which medical jurisprudence has been involved arises from jurists being for the most part very ignorant of medicine, and medical practitioners equally ignorant of law, proposes to remedy this evil by supplying the two professions with such a summary of each other's science as may put them

respectively in a condition to meet on terms of better understanding. The idea is a good one, but we fear Mr. Chitty is performing his task on far too large a scale.

This first volume, devoted entirely to anatomy and physiology, contains a huge, though not very well compacted, mass of information on the subjects of which it treats: it embraces, however, more knowledge than is either necessary or attainable for one who does not make medicine his profession. If the lawyers can digest it all, we wish them joy; but we sincerely hope that, when Mr. Chitty prepares his law-feast for the doctors, his hospitality may be less profuse, or we are apprehensive that our feeble powers of assimilation will not enable us to do it justice. It appears to us that our author proceeds too much on march-of-intellect principles with reference to the diffusion of medical and legal knowledge. "A general knowledge of these subjects," he says, "is essential to the perfect education of all officers in the army and navy, and of every gentleman, and especially so to legislators, judges, coroners, magistrates, barristers, and indeed to every member of the legal profession, and to all persons who may become jurors or witnesses; so as to enable legislators more scientifically and practically to determine upon the expediency of improving the existing laws relating to public health, and the protection of the persons of individuals, and also to give due effect to existing regulations."

And again,

"With respect to every private gentleman, we shall only repeat the just observation of a powerful advocate for extended education, that in the present day a knowledge of physics, or natural philosophy in general, and in particular of physiology and pathology, is indispensable not merely to all persons engaged in scientific pursuits, but to all who pretend to a moderately good education. To all country gentlemen in particular, many of whom reside at a considerable distance from any medical practitioner, it will be highly important to be able, on emergencies, either to direct or assist in recovering a person in suspended animation, or in reducing a dislocation, or in stopping hemorrhage, or performing numerous other acts, as hereafter pointed out; or at least to assist a medical practitioner in many of his endeavours. In the country, some at least of the medicines and apparatus usually required on emergencies should be kept in each gentleman's house, and from time to time renovated, so as to be ready for immediate application by the medical adviser, in case of accident or sudden illness, as the saving even of life may frequently depend on the promptness of the remedy: a general knowledge of the outline of these subjects would enable heads of families to afford, in many cases, immediate and effectual relief, and at all events would enable them more

distinctly to explain to the medical adviser antecedent symptoms and appearances, and to understand and apply his directions, and thereby greatly to contribute to the cure and comfort of every member of his family. So, independently of accidents and sudden occasion for assistance, the instances are innumerable in which unprofessional but well-informed individuals may greatly alleviate the sufferings of their fellow-creatures; as, by suggesting various instruments or means of cure, or at least of mitigating pain or annoyance, wholly independent of medicine,—as the use of the hydrostatic bed for an invalid, or the use of various other discoveries, at present wholly unknown to the bulk of society: and surely no one who can anticipate the gratification incident to relieving a fellow-creature in danger or pain should refrain from cultivating such useful and important knowledge." (*Preface*, p. xiii.)

Now we decidedly hold all knowledge to be excellent, and think that every man should know everything, *if he could;* but the misfortune is, that one individual can only have a certain quantity of knowledge; and if any man is master of one difficult branch, to which he particularly addicts himself, and has sufficient acquaintance with others to enable him to think and converse rationally on them in a very general way, we conceive him to be an exceedingly well-informed person, and much superior to the majority of his species.

We leave it to the jurists to determine what would be the effect of every client's having "some knowledge" of the practice of law; but, for our own parts, we are always bored to death with those patients who "have studied medicine a little," and find that such patients are longer in getting cured than anybody else.

To return to our subject—the relation of law and medicine to each other. It appears to us that the professors of these two sciences do not require anything like an extensive acquaintance with each other's departments: and it is fortunate they do not, for the acquisition would be impossible to men of ordinary capabilities. There are, nevertheless, certain points on which it is highly necessary that they should be mutually informed; and here, as in all other cases, knowledge, to be available, must be *perfectly accurate* as far as it goes.

The medical information essential to the jurist relates only to certain facts, which are neither very numerous nor very difficult to be learned or remembered; with the theoretical part of the science he need have nothing to do. We even think that an acquaintance with medical opinions and reasonings, so far from assisting a counsel in putting questions to a witness, would generally be a disadvantage to him, as it would render him liable to bewilder both the witness and

himself, by getting entangled in theories, which, if they have once taken possession of his mind, he will not always find it easy to separate from the facts. The medical practitioner is in no danger of confounding the two, because the facts consist of what he *sees* and *does*, the theories merely of what he thinks about: but it is otherwise with the jurist, since nothing with him is matter of experience. We should say, therefore, that an accurate acquaintance with a certain number of medical facts, and such an idea of the general scope of the science as may prevent these from being absolutely bald and insulated, is all that is needful for the practitioner of law. In like manner, the legal knowledge of a medical man should, we conceive, be characterised rather by accuracy than extent: there are comparatively few judicial points which demand the aid of medicine for their illustration, but on these the practitioner should be perfectly well informed, in order that he may perceive the precise bearing of the evidence he is to give; since an answer, though truly and correctly given, may afford little useful information, from the respondent's not rightly understanding the view with which the question was asked. It is, of course, also incumbent on medical practitioners to know thoroughly the laws relative to their own profession,—its privileges, immunities, and liabilities.

In giving an opinion on Mr. Chitty's book, we may affirm that, although its object appears to us not altogether attainable, from its too great extent, it is nevertheless likely to prove of great utility to both the professions for whose use it is intended. The Part before us, as we have already mentioned, contains a vast deal of anatomical and physiological information; and although, if it proceeded from the pen of one of our own brethren, we might pronounce it somewhat ill assorted, and chaotic withal, we have much pleasure in bearing testimony to its general accuracy, which the author has endeavoured to ensure by a laborious reference to the best authorities.

This volume is a curiosity of its kind: from the peculiar circumstances in which the author is placed, in compiling from such various sources an extensive treatise on subjects with which he is not himself practically familiar, the work presents the aspect of a literary mosaic, in which the numerous pieces of which it is composed, though carefully placed in juxta-position, may easily be perceived not to form a continuous whole: *e. g.*

"In the extremities the veins consist of two sets, one running immediately under the skin, termed subcutaneous, and the other

deep-seated, accompanying the arteries. The anastomoses or inosculations of the veins are greater and more frequent than in the arteries; those of the veins are by large branches, whilst the arteries inosculate generally by small.*

"The veins rarely, if ever, ossify like the arteries,† but they are subject to several diseases, as inflammation, relaxation, tumours, ruptures, &c.‡ Veins also are subject to varix, and, when affected by it, are called varicose. The term varix is to veins a disease, what the true or encysted aneurism is to arteries. It is applied by surgeons to the permanently dilated state of a vein attended with an accumulation of dark-coloured blood, the circulation of which is materially retarded in the affected vessels. When veins are varicose, they are not only dilated, but they are also evidently elongated; for, besides being irregular, and in several places studded with knots, they make a variety of windings, and, coiling themselves, form actual tumours. Varices are most commonly observed in the lower extremities, reaching sometimes even as far up as the abdomen. They have, however, been noticed in the upper extremities, and it is probable that the whole venous system is susceptible of the affection. As a well-informed writer observes, the great venous trunks sometimes become varicose. When the disease is situated near the heart, it is attended with pulsation, which renders it liable to be mistaken for aneurism.§

"Veins are liable to ruptures, wounds, and laceration. Hemorrhage from veins, though not so dangerous as from arteries, is yet attended with danger.‖

"The enumeration of each of the three thousand veins, even if practicable, would occupy more space than can here be afforded, and therefore we can only refer to the particular authors who have written upon them distinctly.¶ We have seen that they have been estimated at even three thousand, but the most intelligent anatomists do not distinguish by name even two hundred."** (P. 147.)

The work, however, is a meritorious one, and we wish the author all success in its prosecution.

* "Coop. Dict. tit. Anastomosis, 110, and tit. Inosculation, id. 761; Tuson's Comp. 126; Quain's El.

† "2 Good, 14; 5 Good, 360.

‡ "See in general Hodgson on Diseases of Arteries and Veins; Arnott's Med. Chir. Trans. vol. xv. 47; Coop. Dict. tit. Veins, diseases of, 1206.

§ "See further Coop. Dict. tit. Varicose Veins, 1202; 3 Good, 476.

‖ "Coop. Dict. tit. Hemorrhage, 625; 3 Good, 183, as to hemorrhage.

¶ "See enumeration, Tuson's Comp. 126 to 136; 2 Bell, 307 to 321; Lizars, parts ii. iii.; Quain's El. 274 to 279, 366, 411 to 413, 485, 486, 588, 589; see plate and enumerations, 3 Gregory's El. Nature, 255 to 261.

** "See the names of the principal veins, and their situations, 3 Gregory's El. Nature, 261."

A New View of the Nature of Inflammation, with Cases of Croup and Bronchitis, illustrating a simple and successful Mode of Treatment, and of the Use of the Thymus Gland, &c. By WILLIAM FORRESTER BOW, M.D.—Edinburgh, 1834. 8vo. pp. 94.

SEVERAL of the cases given by Dr. Bow, in this little work, appeared a few years since in the pages of the London Medical and Physical Journal: they must have startled some medical theorists, and many of the so-called practical men, or followers of routine. Dr. Bow, dissatisfied with the usual methods of treating croup and bronchitis in children, tried the use of an opiated liniment, instead of leeches or other modes of depletion; and this new plan succeeded so well, that he has continued it to the present time, and it has been employed by several other practitioners with equal advantage. Dr. Bow prefaces the account of his cases with the physiological theory on which his practice is based; but we must hasten on to the purely practical part, as most interesting to the majority of our readers, and refer those who are discontented with our omissions to Dr. Bow's very ingenious speculations, as detailed in the treatise itself. Some of the more vigorous professors of leechcraft will certainly be astounded at the following cases.

"CASE I. 14th February, 1831. —— Darling, aged nine months, was reported at noon, by Mr. Fender, to be labouring under bronchitis. I immediately proceeded with him to the patient; found the breathing difficult, the inspirations being short and frequent, accompanied with wheezing; the face very pale, the lips having a purple tinge; skin exceedingly hot; hoarseness of the voice when the child cried; pulse rapid. The child had been ill for some days, but the mother, thinking that nothing ailed it, except a common cold, did not become alarmed until this morning. Nothing had been prescribed before I saw it. Two grains of calomel were given, and the breast and back rubbed with rather more than a drachm of opiate liniment.*

"The calomel was rejected from the stomach almost as soon as taken. After the application of the liniment, the child fell into a sound sleep; at two o'clock he awoke, and sucked greedily; and at our visit, a little after two, we found him in a profuse perspiration, the voice perfectly free from hoarseness, and the breathing comparatively easy. At four o'clock the breathing had again become difficult, but in degree nothing equal to what it had been in the morning. At six o'clock the child seemed calm and con-

"* The liniment I used was as follows; I have since added a little soap: R. Opii, ℥j.; Linim. Camph. c. ℥viij. Digere per dies aliquot et effunde linimentum."

tented; the eyes were sprightly, and some colour had returned to the cheeks. A portion of liniment was left with the mother, with orders to apply it, should the breathing again become hurried.

"15th February. About three o'clock this morning the liniment was applied, as the mother thought the state of the breathing required it. At our visit, at ten A.M., we found that the bowels had been twice moved, the effect of the calomel. The child seemed quite well, and therefore nothing was prescribed. At seven P.M. the child continued well. At the request of the mother, some of the liniment was left, to be applied, if necessary.

"16th. The liniment was not applied. Cured." (P. 31.)

"CASE V. 24th February, 1833. John Robson, aged ten months, was seen by me this morning at six A.M. He had been colded and fretful for some days, but not until last night did his mother deem him seriously ill. I found the breathing laboured, with wheezing; great heat of skin; pulse rapid; face pale, colour of the lips inclining to purple. He had slept little or none during the night, and was so restless that his mother was forced to pace the room with him in her arms all that time. He frequently took the breast, but it almost always produced coughing.

"I had a vial of liniment in my pocket, and saw applied rather more, I think, than three drachms of it.

"Ten o'clock A.M. About half an hour after the liniment was applied he fell asleep; he was then put to bed, and is still sleeping. Pulse 130; inspirations, as denoted by the movement of the bedclothes, 72; no wheezing. Some colour has returned to the cheek; skin moist.

"Two drachms of liniment to be applied when the child awakens, and two grains of calomel to be given.

"Four o'clock P.M. About an hour after my last visit the liniment was applied, and the calomel given; after which, the child sucked greedily, and, as the mother said, seemed quite well. He again slept from twelve o'clock until three, and is now in his mother's arms, apparently well. Neither pulse nor inspirations can be numbered with certainty.

"Ten o'clock P.M. The bowels have been three times moved since last visit; the skin is cool and moist; respiration perfectly free; has coughed occasionally since last visit.

"A teaspoonful of liniment to be applied to the back.

"25th February. He has slept almost the whole night, and appears quite well.

"CASE VI. 29th March, 1833. Ann Short, aged two months. I was summoned to this infant this morning, but, as it was in the country, and as I could not leave the town, I did not see it. From the description of the symptoms, however, I suspected bronchitis, and prescribed two powders, each containing a grain of calomel; one to be given as soon as possible, the other two hours afterwards. A teaspoonful of the liniment to be applied every two hours.

"At ten o'clock P. M. I was again sent for; the child, I was told, was not expected to live. I hastened to the house, and, arriving there at eleven o'clock, found the cause of alarm to be that two or three times she had been seized with violent coughing, during which, as the parents expressed it, she got black in the face, her eyes becoming fixed. The pulse I could not count, it was rapid; the inspirations were irregular, but seemed to average seventy in the minute; the skin was hot; the face pale; lividity around the mouth and eyes; great restlessness. The calomel had acted on the bowels.

"I caused the child to be stripped, and saw applied to her breast, bowels, and back, about half an ounce of the liniment.

"The clergyman, who had been sent for to baptize the child, then performed his office; and, after waiting half an hour, we took our leave, the child being then asleep.

"30th March. The child passed a good night, and is now apparently quite well; nothing prescribed.

"I happened to see this child about a month afterwards, and was astonished at its fatness; it was the fattest child I ever saw at its age, although before the attack she was considered puny." (P. 35.)

The following case is one of several successfully treated on this plan by Mr. Burn, of Belford.

"Case x. 20th June, 1831. Mary Clarke, aged three years, has been ill twenty-four hours of a supposed cold: the case, however, is decidedly one of croup, characterized by difficult and sonorous breathing, cough, &c. Three drachms of liniment.

"Nine P. M. The child was immediately relieved by the liniment; indeed, as the mother said, before it was all applied. The breathing is again somewhat heavy, and the cough still croupy. Repeat the liniment, with a dose of calomel.

"21st June. Has slept well all night; breathing relieved; cough easier. Repeat the liniment.

"22d. Quite well." (P. 41.)

After giving his cases, our author proceeds to criticise the observations on croup to be met with in other medical writers; for instance:

"'It is true,' says Dr. Hastings, 'that, for the most part, children do not bear the loss of blood well; but in an attack which is menacing life there is no alternative: we must adopt powerful measures, for without them the disease (bronchitis) will almost certainly prove fatal; but such is its dangerous character, that even by them its progress is often not arrested.' Dr. Hastings is not blind to the injurious effects of exhausting remedies, but it would appear that we have no alternative. We must have recourse, he says, to general bloodletting to diminish the excitement of the heart and larger arteries, and to local bloodletting to relieve the weakened

and dilated capillaries. Fortunately for the patients whose cases I have detailed, and for many more, I was not reduced to the sad necessity of taking blood to diminish the excitement of the heart and larger arteries, because I conceived such excitement did not exist. Their pathological condition I considered as arising from weakness, a state similar to that which the smaller arteries of an inflamed part acquire. I had not recourse to local bloodletting to relieve the weakened and dilated capillaries, for, as I conceived, they became dilated in consequence of weakness, I considered it better to enable them to relieve themselves." (P. 48.)

The physiology of inflammation is perhaps not yet in a sufficiently advanced state to allow rules of practice to be deduced from it; yet it is satisfactory when they can be made to coincide with ingenious conjectures and probable analogies, and this is certainly the case with our author's mode of treating croup. He supposes that the liniment is not absorbed, but that, by acting on the cutaneous nerves, "it allays the excitement of the sentient system of nerves, to support which excitement the arterial system had been robbed of its contractility." (P. 60.)

We do not advise those practitioners who are content with the orthodox manner of treating bronchitis and croup, and have taken calomel and leeches for better and for worse, to try Dr. Bow's liniment; but those who have the candour to confess the remarkable fatality of these infantile diseases may safely venture to imitate our author's practice, especially as he tells us that the first half hour will show the power of the narcotic liniment. If it should not succeed, other methods may be tried; and, though delays are proverbially dangerous, so short an interval should be called a pause rather than a delay.

Dr. Bow's conjectures on the physiology of the thymus gland are also very ingenious. He supposes that this organ is a reservoir for the nervous energy suddenly required by the respiratory apparatus at the moment of birth; and he also says that it supplies the thoracic duct with a milky fluid like chyle, and thus contributes to the nourishment of the fœtus. This latter conjecture is also to be found in the work of Sir Astley Cooper, who does not appear to have been aware that it had been previously put forth by Dr. Bow.

The supposition that the thymus is a reservoir for nervous energy, is curiously confirmed by the fact that this gland generally increases in size in hybernating animals, during their period of inaction. Dr. Kopp attributes this to the greater compression of the lungs affording more room for the thymus, (*Medico-Chirurg. Review, July* 1834, p. 197;) but the fact

squares singularly well with Dr. Bow's theory, as the lungs, after the torpor of hybernation, have to be refitted, as it were, for a new existence.

This little work is very creditable to Dr. Bow's ingenuity as a physiologist, and practical skill as a physician.

The Dublin Practice of Midwifery. By HENRY MAUNSELL, M.D., Member of the Royal College of Surgeons in Ireland, Superintending Accoucheur to the Wellesley Female Institution, &c.—London, 1834. 18mo. pp. 244.

THIS is, upon the whole, a useful little work, containing a summary of the principal practical points connected with the art of midwifery; and, although it may reasonably be doubted whether such a book was really wanted, yet, as it is usual for every teacher, or nearly so, to have his own Manual, we see no reason why this privilege should be denied to Dr. Maunsell. Much novelty ought not to be expected in such productions, their chief use being that of a text-book, or syllabus of the lectures, which is of great service to the pupil during his attendance on the course, as, by a careful and attentive perusal, he is enabled to recall to his memory the topics discussed by the lecturer. We do not apprehend that the "Dublin Practice of Midwifery" will be of more service than the other numerous Outlines, Elements, and Manuals, which the press has of late brought forth; and, as a work of reference, it will never be looked at, while the invaluable works of Denman and Burns are in existence: it will be read chiefly by Dr. M.'s pupils; and, for the reasons stated, we would strongly recommend it to them all. We cannot, however, refrain from expressing our surprise that any one with a moderate share of brains,—any one, indeed, belonging to the favoured Caucasian variety of the human species,—should ever ask a question which our author tells us is commonly put to obstetric teachers by students. It is this, "What book do you recommend me to take to the lying-in room?" (*Preface*, p. iii.) The student might as well ask, "What book do you recommend me to take to the rheumatic room, or the dyspeptic house?" We fear that a harsh accoucheur would suspect his diffident pupil to belong to the steno-bregmate or platy-bregmate races, and would recommend him to practise some less difficult art than that of medicine. What would the anxious lady in the straw think of her attendant when she found him conning his obstetrical hornbook?

Our author is necessarily very brief in his description of the anatomy of the parts concerned in the process of parturition, and we think rather more so than he ought to have been in some of his practical remarks: for instance, in his directions for the introduction of the catheter, he has not mentioned the alterations in the position of the bladder, produced by a variety of circumstances, which must, of course, produce a corresponding variation in the situation of the urethra and its orifice. This simple operation may be rendered a very difficult one, if we do not previously acquaint ourselves with these altered situations of the parts. In common cases, however, the following plan will be found a very good one:

"If the operation is to be performed while the woman is in bed, she may lie upon her back, or, what is better, upon her left side, with the hips projecting over the edge of the bed. The left forefinger of the operator is then to be introduced to a short distance (about the length of the first joint) into the vagina, and carried forward to the symphysis pubis. By this measure the urethra will be easily discovered lying between the finger and the pubis. It resembles in feel the corpus spongiosum of the male urethra, but is usually rather thicker. The finger is then to be drawn lightly forward along the urethra, until its tip sinks into the pit marking the orifice, in contact with which it is to be held. The catheter, held loosely between the right thumb and forefinger, is next to be passed along the front of the left forefinger, in a direction somewhat backwards, when it at once slips into the orifice of the urethra. The handle should then be slightly depressed, and the instrument passed on into the bladder; during its introduction the point may catch in some of the mucous lacunæ, upon which it should of course be withdrawn a little, and passed forward with a slight variation of its direction. The urethra is from an inch to two inches long, so that in an ordinary case, where there is no disease, we should expect the urine to flow when the catheter has passed in to the distance of two inches. If it should be necessary, the operation may be performed while the patient sits upon the edge of a chair, the operator kneeling before her, and passing his hand between her thighs. In either case, exposure of the woman's person should be carefully avoided. By adopting the plan just mentioned, instead of that usually directed in books, we shall get rid of the necessity for irritating the clitoris, which, for obvious reasons, is a very considerable improvement." (P. 30.)

We believe many of the difficulties frequently met with by some practitioners would be obviated by bearing in mind the usual position of the gravid uterus. Dr. M. observes,

"The situation of the full-sized womb is oblique, with the os directed backwards towards the sacrum, and the fundus forwards

so that its axis is nearly identical with that of the brim, being described by an imaginary right line passing from the scrobiculus cordis to the point of the sacrum, a circumstance that requires to be understood, when it is necessary to pass the hand into the uterus." (P. 47.)

With regard to the arrangement of the muscular fibres of the uterus, it is stated that

"The structures of the uterus continue essentially the same as in the unimpregnated condition, but undergo a remarkable development. The muscular fibres, which appeared so irregular in the virgin womb, now exhibit a definite arrangement into layers. The outermost of these fibres arise from the round ligaments, and, regularly diverging, spread over the fundus until they unite. According to Sir C. Bell, the round ligaments are the tendons of this muscle, and serve as fixed points from which it acts in bringing the womb down into the pelvis at the commencement of labour, and giving its mouth the proper direction. In the substance of the organ, internal to this layer, the muscular fibres have a circular direction near the fundus, and a longitudinal near the cervix: they are, however, interwoven together in a very intricate manner; and when they act fully, must have a very powerful effect in constringing the blood-vessels, which pass betweeen them, and so preventing hemorrhage. Their action, during labour, is to open the os tincæ, and draw it, as it were, over the child's head. The most internal stratum of muscle is arranged with the fibres in two sets of concentric circles, each having the orifice of one of the tubes as its centre. These two muscles, if we may so call them, interweave together at their circumferences, and have proceeding from them, on each side, broad longitudinal bands of fibres, which assist the external muscles in bringing the fundus towards the os, and in drawing the latter over the child's head. The circular portions are supposed to corrugate and diminish in size the internal surface of the uterus, after the child has been expelled, and so draw it off, as it were, from the placenta, which, having no power of diminishing its own area, must, of course, separate from the surface to which it is attached when the latter is diminished in the way mentioned.

"The thickness of the uterine parietes is nearly the same as in the unimpregnated state: in the part to which the placenta is attached, it is perhaps a little thicker. Its substance throughout is more spongy and vascular, and has the sinuses much more developed than before conception." (P. 48.)

We do not agree with the author in his statement that "the thickness of the uterine parietes is nearly the same as in the unimpregnated state." We believe there to be a greatly increased degree of thickness, which remains for many days after delivery, and which we have had frequent opportunities

of witnessing. In cases of ruptured uterus, this circumstance may be very satisfactorily demonstrated.

Dr. M. adheres, and we think very properly, to the old and generally received opinion regarding the formation of the *decidua reflexa*.

The utility of pressure over the uterine region, in order to secure permanent contraction after the birth of the child, is justly appreciated by Dr. M., and therefore we would ask him, why defer the application of "the binder" until after delivery? It is a much better plan to place this around the abdomen as soon as the second stage has commenced, and to keep up a gradual and uniform degree of compression, by repeatedly tightening it as it slackens, so that the uterus shall at no time be without this support. We believe the bandage, properly applied and attended to, is useful in the prevention of hemorrhage; and we are quite sure that, where there have been large losses of blood, or even a disposition to them, that it would be unsafe to shift the position of the patient, even in that trifling degree required for the application of the binder. The following recommendation cannot be too strongly pressed upon the attention of the young accoucheur.

"After the delivery has been entirely accomplished, it is always advisable to wait near the patient for at least half an hour; and we should, on no account, leave her then if there be any disposition to hemorrhage, or even an unusual vascular excitement. Before taking our departure, we should always carefully ascertain, first, that the uterus is properly contracted, and the binder well adjusted; secondly, that the pulse is regular; and, thirdly, that there is no danger of hemorrhage from the child's funis." (P. 106.)

We are glad to find the author discountenancing that unwise (might we not almost say unwarrantable?) interference insisted upon by some as requisite for the rectification of irregular positions of the head. We entirely concur in opinion with him, that such a course of proceeding is to be deprecated: these cases are almost invariably brought to a satisfactory conclusion by the efforts of nature alone, although there will necessarily, or at least generally, be a protracted labour.

The remarks on the use of the *Ergot of Rye* are evidently the result of sound practical observation: we would wish some of our senior practitioners to follow the advice given, where it is observed,

"The mode in which I have been in the habit of administering ergot is, to infuse ʒss. of the powder in a tea-cupful of boiling water for fifteen minutes, and then give the whole of the infusion

with a third of the infused powder, adding a little milk. If this has no effect, it may be repeated in fifteen minutes; but I think it unadvisable and useless to give a third dose: if the two first produce no pains, another will not have a beneficial action.

"The circumstances which contra-indicate the use of this drug should be accurately understood. It never should be given until the os uteri is completely dilated, nor when there is malformation of the pelvis, or rigidity of the soft parts. If used when the os uteri is undilated, its effect would be similar to, and equally injurious with, too early rupture of the membranes: under the latter circumstances, it might cause lacerations of the uterus, or of the other soft parts. It never should be given when there is any preternatural presentation that may require to be rectified, nor in convulsions, nor when there is any tendency to head symptoms. In the first case, by increasing the uterine action, it would of course increase the difficulties; and in the two last it would be unsafe, for reasons presently to be mentioned.

"On the other hand, if the passages be well prepared and dilated, the os uteri fully open, and the head low down in the pelvis, with plenty of room; in fact, nothing but the want of pains preventing its expulsion, we may safely use ergot in the manner above mentioned.

"It may be supposed that greater success would attend the employment of larger quantities of the medicine; but I am fully persuaded that these cannot be employed without exposing the patient to considerable risk. In several instances, I have observed delirium to follow the exhibition of large doses of ergot: it almost invariably depresses the pulse; and I have known it to produce coma and stertorous breathing, without at all affecting the uterus. If it produce these effects, it is manifestly improper when any head symptoms or tendency to them exist." (P. 118.)

We thought that the use of the crotchet after perforation of the head had become nearly obsolete, and we were therefore rather surprised at the author's statement, that he had always found "it answer his purpose, without ever doing mischief." We are not disposed to question the *possibility* of its being used by an experienced hand with tolerable safety; but Dr. Maunsell should recollect he is writing for his juniors, and surely he would not place a crotchet in the hands of his pupils, in preference to that powerful, yet safe instrument, invented by Mr. Holmes. We know not why, but there seems to be a great disinclination on the part of the profession to do justice to this gentleman: we candidly confess ourselves under great obligations to him for the invention of his craniotomy forceps. An author, who well knew human nature, has declared that,

> "Convince a man against his will,
> He's of the same opinion still."

Such, however, is not our case: we acknowledge we *were* convinced somewhat against our will, having been unwisely prejudiced against the instrument; but bedside experience (the best in such cases,) has taught us that, in cases of great disproportion, there is nothing, by whatever name it may be known, that will so effectually answer the purpose.

Some very practical though concise directions are given for the management of *flooding*, but we see nothing novel in them. The author, in speaking of *turning*, in placental presentations, well observes,

"In performing the operation, we introduce the hand, as slowly as we please, in the manner and with the precautions already laid down, until it reaches the os uteri; it must then either be passed through the placenta, or by the side of it, into the cavity. During this step, the operator has need of all his coolness and resolution. There is usually a frightful increase of hemorrhage, the blood gushing in torrents along his arm; if, panic-stricken, he withdraws for a moment, the woman is inevitably lost; but by pushing on boldly and steadily, he soon brings his wrist and arm, as an effectual plug, into the mouth of the womb, and the discharge immediately ceases. There is then time for consideration, and the feet must be deliberately sought for and brought down in the usual way into the vagina. There will seldom be any more hemorrhage, and the rest of the delivery is to be accomplished as in a footling case. The placenta will generally be found loose in the vagina: I have sometimes found it to come along with my hand and the child's feet out of the vulva. Great attention is necessary to secure subsequent contraction of the uterus, and if the woman require it she should be supported with stimulants during the operation." (P. 169.)

Our author is perfectly right in avoiding the use of opium in flooding cases: he says,

"In the treatment of all forms of hemorrhage, large doses of opium have been very much recommended. Excepting in small quantities, as a stimulant, when collapse was to be dreaded, I have not been in the habit of using it. It may no doubt be useful in spasmodic contraction, but I apprehend it is rather too much to expect from any drug that it will obey our pleasure, in relaxing the uterus when we wish to turn a child, and in causing it to contract when we desire the expulsion of the placenta." (P. 177.)

No notice is taken of *transfusion*, as a remedy in the worst forms of hemorrhage. This we look upon as a very great omission; for, although there can be no doubt that, where a labour is properly conducted, and the principles of treatment in these cases are early put in practice, the operation is very seldom required, yet we must acknowledge, unless we wilfully shut our eyes to facts, that cases may occur, nay *have*

occurred, in which the patient's life could not have been saved by the ordinary means.

The author has followed the old, and we think not the best plan, by making several species of *puerperal fever,* although he acknowledges that the first variety "differs but little from ordinary peritonitis." We have perused his description, and cannot find even the "little" difference alluded to: it is, in good truth, common inflammation of the peritoneum, and requires the same treatment as at other times. It is almost certainly recovered from, and is not contagious. The second variety differs in its symptoms, in its result, (the patient being generally destroyed by it,) and is capable of being conveyed from one patient to another; and on this account we decidedly object to their being called by the same name.

Dr. Maunsell makes some very sensible remarks on *phlegmasia dolens.* The post-mortem appearances clearly show that this disease consists in a very extended inflammation of the cellular structure.

"The pathology of phlegmasia dolens is still extremely obscure. By the older writers it was supposed to be an irregular deposit of the milk (*depôt du lait*); by others, an extravasation of lymph, in consequence of rupture of the lymphatics; and, by some, a general inflammatory state of the same class of vessels. None of these hypotheses account for the symptoms, nor are they supported by post mortem observations. I cannot avoid expressing the same opinion with respect to Dr. Davis's idea, that the disease is phlebitis of the crural veins. Phlegmasia dolens is well known not to be in general a fatal disease, and it is equally notorious, that phlebitis in any part of the body is particularly mortal. Besides this objection, I cannot see that the phenomena of the disease are at all explainable upon the idea of its being venous inflammation. In the generality of cases of the latter malady, there is nothing corresponding to the peculiar firm swelling of phlegmasia dolens, and an attentive examination of Dr. Lee's cases of actual phlebitis will show that they were very distinguishable from the other disease. I do not mean to deny, however, that inflammation and suppuration of the veins is often to be found upon examination of the bodies of those who have died of phlegmasia dolens, but it appears to me that the evidence already in existence does not prove that this inflammation is the cause of the swelled leg, but merely that it supervenes, in certain cases, upon that disease. The disease appears to me to consist in an inflammation of the cellular tissue, occasioning an effusion of coagulating lymph; but how the inflammation is excited, or why it produces those peculiar effects, has not yet been discovered.

"The prognosis, when the disease is uncomplicated, is favorable, but recovery is always slow and very protracted." (P. 230.)

Traité, Théorique et Pratique, des Blessures par Armes de Guerre; rédigé d'après les Leçons Cliniques de M. le Baron Dupuytren, Chirurgien en Chef de l'Hôtel-Dieu; *et publié sous sa direction par* MM. les Docteurs A. Paillard et Marx. Tome 1er.—Paris, 1834. 8vo. pp. 522.

A Theoretical and Practical Treatise on Wounds by Military Weapons; composed from the Clinical Lectures of M. le Baron Dupuytren, *and published, under his inspection,* by Doctors Paillard and Marx.

However politicians may differ as to the French revolution of 1830, there is perhaps one point of view, from which it may be contemplated as a source of advantage to mankind. The three days of July afforded to Baron Dupuytren, whose skill as a surgeon is perhaps unequalled throughout Europe, a field of experience in wounds from weapons, at once most extensive and most favourably disposed for observation. "Let history," says the Baron, "relate the causes that led to this solemn catastrophe, and what have been its effects upon the country; let us, as surgeons, devoted no less by duty than by inclination to the relief of human suffering, confine ourselves to the study of that which was done, in the midst of the combat, to alleviate the tortures of its victims." This celebrated surgeon, suddenly called, as the head of the medical staff of Paris, to assume a most responsible situation in the military department of our art, though attached to a civil hospital, did not come to the task wholly unprepared by previous experience. Under the tuition of Boyer, at that time the first surgeon in France, he studied at La Charité during the contest of the 13 Vendémiaire; and again, in the years 1814 and 1815, the engagements with the allies, under the walls of Paris, gave occasion to the exercise of his skill on the field of battle. So great indeed was his zeal on the former of these occasions, that, having laboured incessantly from five o'clock in the morning till half-past five in the evening, he did not commence his retreat till a cannon-ball had carried away the legs of one of his attendants, and till the closure of the gates of the capital had nearly left him to the mercy of the enemy. At this period, five hundred cases came under his personal observation; and the skirmish of General Excelmans with the Prussians, near Versailles, in the year 1815, afforded him still further opportunities. The riots at St. Denis, in 1827, served to refresh his memory on the subject, prior to the grand struggle of 1830, when upwards of four hundred severe cases, besides an immense number of slighter injuries, were committed to

his charge. Thus prepared by previous experience, no less than by a very superior knowledge of general surgery, acquired by a superintendence of one of the largest civil hospitals in Europe, Baron Dupuytren was extraordinarily fitted for improving the opportunities afforded to him. Neither were these opportunities a whit inferior to his capacity: his patients were numerous, some under the excitation of victory, others under the depression of defeat; some, military men, in high and vigorous health, others artizans, with constitutions weakened by residence in a metropolitan city. The wounds were produced by all kinds of weapons, and not confined to those ordinarily employed in regular warfare. To all these advantages may be added, that of his appointment as surgeon to the convalescent hospital of St. Cloud, by which he was enabled to keep the cases under his eye until their cures were completed. The record of this experience is now before us, published, under his superintendence, by his pupils, Drs. Paillard and Marx, and, when concluded, will pay the debt which he had contracted to science, and will form a most admirable digest of military surgery.

At the outset of the work is a condensed account of the various kinds of weapons by which wounds may be produced, from the needle to the cannon-ball; but, though this may render the work more complete, it is evidently unfitted for comment in a Medical Review: suffice it to say, that they are arranged according to the nature of the wounds which they inflict, being divided into puncturing, cutting, puncturing and cutting, tearing, dragging, bruising, and crushing arms; air and steam guns, portable firearms, cannons, mines, rockets; bullets, balls, and other projectiles, and the different species of exploding powders.

In the section on *Punctured Wounds through soft Parts*, a case is related, of a man who attempted to commit suicide by puncturing the heart with a pointed bodkin. He was admitted into the Hôtel-Dieu, where it was observed that the wounds were long and collapsed, though made with a rounded instrument. This led the Baron to institute a series of experiments on the dead body, as to the nature and form of punctured wounds. The experiments were performed with a conical needle, about three inches long, and three and a quarter lines in diameter at its largest part, and the following were the results which he obtained:

"1st. The wounds produced by this instrument were never round, but long, with the edges even and collapsed.

"2d. The length of the wounds in the skin corresponded with the depth to which the instrument was introduced.

"3d. If, at any part of the body, the edges of the wound remained open, stretching the skin would readily make them collapse.

"4th. This exact fitting of the two edges to one another could only be effected in one direction; and, if any attempt were made to pull them in the opposite direction, the sides would not collapse, but remained open; from which it appeared, that the action of the needle was confined to separating the fibres of the skin. The knowledge of this fact may perhaps be serviceable in investigating the structure of the skin.

"5th. In any given region of the body, the punctures always affected the same direction.

"6th. In the neck and anterior part of the axilla, they were directed from above downwards.

"7th. On the chest they were parallel to the direction of the ribs, or intercostal spaces.

"8th. In the anterior region of the abdomen they were oblique from above downwards, and seemed to follow the course of the muscular fibres. In the middle, over the linea alba, their direction was from above downwards.

"9th. In the limbs they were always parallel to their axes.

"These facts are not only important with reference to the structure of the skin, but might be exceedingly useful in legal medicine; for instance, in recognizing the possibility of a flat wound having been inflicted by a rounded instrument." (P. 62.)

The conclusions of the Baron, on the effects of punctured wounds of soft parts, are, that they are, generally speaking, without danger, and readily cured, unless the instrument be rusty, (in which case it will act like a file,) or unless it be dipped in some kind of poison, when its ill effects are to be attributed rather to the poison than to the puncture.

Punctures through the harder substances are not, however, so free from ill consequences; witness, wounds of the tendon of the biceps in bleeding, which are frequently followed by inflammation, abscess, sloughing of the tendon, and permanent contraction of the limb. The following is a good account of the symptoms produced by such wounds.

"These accidents do not usually occasion any inconvenience till the fourth or fifth day. The patients then complained of deep-seated pains, which are soon accompanied by swelling about the wounded tendon or aponeurosis; then follows a contraction of the limb in the direction of the wound, and incapability of stretching it, at least, without severe pain. Sometimes there is great disturbance of the constitution; fever, attended by disorder of the nervous system, spasms, convulsions, &c. The symptoms may last for weeks, and even for whole months; at the end of which time, the pain and swelling gradually subside, the capability of motion

returns, the skin is detached from the fibrous parts beneath, and the parts recover their natural suppleness. These affections, however, do not always terminate in the same fortunate manner: sometimes a chronic abscess forms about the tendon or aponeurosis, which, after it has been opened, spontaneously or by the lancet, remains fistulous, until a slough comes away from the part originally injured. In these cases the adhesions between the fibrous parts and the neighbouring tissues become firmer, and consequently more difficult to destroy; sometimes they last during life, and the cicatrix may be seen to partake in every motion of the tendon to which it is attached." (Pp. 67-68.)

The treatment recommended by the Baron, in these cases, consists in general and local bleeding, emollient cataplasms, and other antiphlogistic remedies. We are indeed surprised that he has omitted to notice the most powerful remedy in our possession, viz. a free division of the aponeurosis. It would be waste of time, were we to endeavour to prove to English surgeons, by the citation of cases, the utility of this proceeding: they have but to enter the walls of any of our hospitals, or turn over the leaves of any periodical, to witness its good effects.

Wounds of bones of this order are generally followed by inflammation, abscess between the periosteum and the bone, and necrosis. Baron Dupuytren advocates strongly the early opening of the parts, in order to prevent the spreading of the suppuration.

In the section on *Punctured Wounds of Cavities, and their Contents*, a great difference is shown to exist between such as have, and such as have not muscular, parietes. In the former it requires a very large wound to occasion any effusion of their contents; in the latter, the most trifling puncture is followed by the escape of fluid: the gallbladder will form a good instance of the one, and the intestinal canal of the other. For a further account of the circumstances which influence the effusion or non-effusion of the contents of the latter, we may refer the reader to Mr. Travers' excellent work upon Wounds of the Intestines, where he will find the subject treated at a much greater length than in the work before us. The Baron contents himself with stating, that the distension of the cavity will, of course, render the extravasation of its contents more probable; from whence he derives a caution, which may be perhaps useful in the chapter of accidents, viz. that, should a surgeon be called to a case in which the bladder be wounded, and the instrument remains in the wound, before any attempt be made to extract it, care should be taken to draw off the urine; or, if the heart be

wounded, that blood should be previously taken away. Wounds of articular cavities are more liable to be followed by inflammation than those of other parts, and this inflammation rapidly runs down into suppuration, occasioning the necessity for early amputation.

The sum of the Baron's directions, with regard to punctured wounds complicated by the presence of the instruments which inflicted them, is, that the surgeon should extract them as speedily as possible, using force, or even the trepan, if they are fixed in bone, and enlarging the opening, if imbedded in the soft parts. He makes mention, however, of the fact, that foreign bodies may remain enclosed in the flesh without any ill consequences, and relates a most extraordinary case, of an officer who, attempting to commit suicide, pushed a hair-pin into the substance of the heart itself: it did not occasion the slightest derangement of his health, and was only discovered in the post-mortem examination some time afterwards, when he killed himself by a more effectual method. Nevertheless, they are not always so harmless, as is testified by a case of a woman, from whom he extracted above one hundred needles, in different abscesses, and who at last died from exhaustion. Thus we must coincide with the simple yet philosophic opinion of Ambroise Paré, at the termination of the celebrated case of the Duke of Guise, who fought for a considerable time, having the end of a lance buried in his skull, but ultimately recovered: "Donc concluons qu'aucuns meurent de bien petites playes, les autres réchapent de très-grandes, voire qui sont entièrement désespérées, tant aux médecins qu'aux chirurgiens; mais telles choses se doivent quelquefois référer aux températures, et principalement à Dieu qui tient la vie des hommes en sa main." (*Œuvres d'Ambroise Paré*, p. 266, ninth edition, 1633.)

When inflammation and suppuration take place around these foreign bodies, after they have remained tranquil for some time, the wound will be found to become fistulous, and long remain so, unless the cyst which has formed around the extraneous substance be removed.

The section on *Punctured Wounds complicated by the insertion of a Poison* enters at length into the subject, from the sting of the bee to the bite of the viper, the poisoned arrow of the savage, and the virus of rabid animals; but, as it contains nothing remarkably novel, we must pass on to that upon *Punctured Wounds complicated by Disorders of the Nervous System*, such as subsultus, convulsions, pain, and tetanus. After stating that they generally follow injuries of

some nerve, and that they are more liable to occur in irritable and plethoric constitutions, he adds this valuable advice: "The influence of moral causes on the production of spasms and convulsions is such, that they are frequently moderated, or even totally prevented, by an affectionate voice or friendly sympathy; hence they should be freely bestowed upon the wounded." (P. 93.) Violent pain not unfrequently follows wounds of the nerves, and lasts for a considerable period, occasioning great distress to the patient, and sometimes disturbance of the health.

Among the means of cure, our author entirely omits the use of blisters, which are sometimes extremely serviceable. Should, however, the pain remain obstinate, excision of a portion of the nerve is commonly practised: this, however, sometimes fails in affording permanent relief, and our author believes the failure to depend on a communication being kept up with the brain by means of the anastomosis of the lateral branches. To obviate this, he recommends the division of the nerve both above and below the injured part, and this he has always found to be attended with success.

On the subject of *Tetanus* he has little to add to the aphorism of Hippocrates: *Ὁκοσοι ὑπο τετανου ἁλισκονται, ἐν τεσσαρσιν ἡμερῃσιν ἀπολλυνται. ἐαν δε ταυτας διαφυγωσιν, ὑγιεες γινονται.* (Sect. 5. Aph. 6;) or, as it is rendered in the terms of the present day, chronic tetanus may occasionally do well, but the acute is always fatal. Dupuytren, however, lays down the only sensible plan of practice to be pursued, viz. that an endeavour should be made to discover which nerve may have been injured, and that it should be freely divided, prior to the exhibition of any other remedies. We know that, in horses, this plan is constantly successful, and we have been informed, from excellent authority, that the majority of horses affected with traumatic tetanus recover after the division of the injured nerve, and the action of a strong purgative and sweat. The practice has fallen into disuse in this country, because no success worth mentioning has yet attended it: yet surely we should endeavour to remove the cause of the disease before we can expect our remedies to be efficacious.

The last section on punctured wounds, is devoted to the various kinds of inflammation which may be produced by them, and its effects. These, however, are hastily treated, as scarcely forming part of the subject. When speaking of erysipelas, Dupuytren does not fail to advocate the practice of applying a blister in the midst of the affected part, a practice which we have seen eminently successful in his hands, though rejected in this country, under a fear (which

we believe to be groundless,) of its producing ill-conditioned ulceration. In circumscribed inflammation and abscess, he advises that they should be left to open spontaneously, unless the process be particularly slow. We must confess that this does not accord with our own experience: the skin becomes diseased before it ulcerates, and is afterwards extremely slow in recovering itself, so as to permit the cicatrization of the sore. In diffuse inflammation he employs free incisions, as the best remedy to prevent suppuration, and as the best plan after it has taken place.

Prior to entering on the details of the various kinds of *Incised Wounds*, our author describes their general characteristics. His observations here, as everywhere else, are excellent, but for the most part too elementary for quotation.

Unwilling as French surgeons in general are to adopt what they term the English method of union by the first intention, Dupuytren is not so bigotted as to deny the excellence of the plan in a cleanly incised wound, (though he sacredly makes the reservation of amputations,) and he dwells at considerable length on the various means of keeping the parts in contact. His directions on this subject are so clear, and at the same time so minute, that they must place his fame as a teacher on a par with his reputation as a surgeon. The point of first importance is the position of the part.

"The position should be such, that the muscles and other parts should be perfectly relaxed; that is to say, the part should be in the state which would be the result of the strongest possible contraction of the injured muscles, or, in other words, their points of origin should approach as close as possible their points of insertion; thus, for example, when the flexor muscles are wounded, the limb should be strongly bent, and, when the extensors, it should be kept extended to the utmost; so in the adductors and abductors. When the wounds are oblique, the parts should be placed in such a midway position as will fulfil, as far as possible, the above indication. There are, however, some parts in which position cannot be rendered available; such as wounds of the head, nose, ears, back, &c. Our whole dependence must then be placed on other methods of bringing the parts into contact. Perfect repose of the body, and of the wounded part especially, is indispensably necessary to favour the cure of wounds by the first intention; the repose of the body can only be obtained by the courage and patience of the patient; the immobility of the injured part may be secured by a variety of mechanical contrivances; such as plasters, bandages, sutures, instruments, &c." (Pp. 151-152.)

It must be confessed, by all who peruse this work, that, if Dupuytren is opposed to union by the first intention, his

objections do not arise from his incapacity to employ properly the means required for it. We know not where we can find such good directions for dressing wounds as are contained in the following passage. After enumerating the various kinds of adhesive plasters, and giving the preference to our court plaster, he proceeds thus:

"These different plasters are employed in the form of narrow strips, and varying in number and length according to the size and situation of the wound: when small, one strip will suffice; when large, two, three, or more, are required. As the plaster readily becomes hard, it must be softened previously to its application, either by heat, as in the adhesive plaster, or by moistening it, as in court plaster. The wound should be carefully cleaned, and the parts in the neighbourhood, if there be any hairs on them, should be shaved and well dried; an assistant should then draw the edges of the wound neatly together, and hold them in contact; the surgeon should then apply one end of the strip on one side of the wound, and then carrying the plaster over the edges, so as to hold them together, attach the other end to the opposite side of the wound. If it be requisite to apply more than one strip, a small interval should be left between each, in order to permit the exit of pus, should suppuration take place. When it is a flap-wound, the first strip should be applied from the base to the summit; in other cases, it should be placed across the part where there is the widest separation of the edges. After having applied all the requisite strips, if any one of them should be loose, let one of the edges be raised and drawn sufficiently tight, and reapplied. It is one of the great advantages of these strips that they can easily be tightened, according to the degree of force necessary to bring the edges of the wound in contact. Whatever may be the form of the adhesive plaster, when it is taken off, either to be changed, or because the wound is cured, one end should be raised first; drawing it gently towards the wound, near to which it should be left attached, care being taken to hold the parts together by the finger; the same should be done on the other side, and afterwards the central part should be pulled gradually away in the direction of the wound. If these directions be not attended to, but the plaster be dragged off from one end to the other, a great risk is run of tearing open the cicatrix, as yet soft and recent. These adhesive strips can act only on the skin, the subcutaneous cellular tissue, and those muscles which are attached to the skin; they are unable, therefore, to counterbalance the action of muscles endowed with any force. Hence they are serviceable only in combination with position, and in cases of superficial wounds." (Pp. 153-155.)

His directions as to the application of bandages are equally excellent; but, as the above quotation will furnish our readers with a specimen of his method of treating these subjects, we

must pass over the section altogether, and refer those who wish to study them to the work itself.

On the subject of *sutures*, Dupuytren's observations are extremely copious; for he not only describes those ordinarily in use, as the interrupted, the twisted, the glover's, and the quilled sutures, but a variety of others, amongst which are the arched suture (*suture à anse*), and a figure of eight suture (*suture en huit chiffres ou entrecroisée*), both of which are applicable to superficial wounds; others, too, by which the cut surfaces are not brought into contact, which are to be employed only in wounds of the intestines. These again differ from one another as they are calculated to bring the serous surfaces into contact, or, on the other hand, by inserting one end of the intestine into the other, applying the external serous to the internal mucous coat. The latter species of suture occupies a great deal of our author's attention, as he seems to think it the most efficacious means of preventing extravasation: we rather suspect, however, from the results of late experiments in this country, that the plan, though plausible, is impracticable.

We shall therefore leave M. Lembert, M. Jobert, Rhandor, and other writers quoted by the Baron, as authors of the various modifications of these sutures, to such as are curious on the subject, and proceed to the section on the *Union of Wounds after Suppuration.* It contains a most excellent history of the symptoms of the formation of pus after a wound, a description of the various kinds of pus, directions as to the method of dressing wounds which are likely to suppurate, and an account of the different dressings applicable to such cases. We can, however, only afford space to extract the following passage, with which the section concludes.

"The cure of wounds after suppuration may take place in two ways: 1st, by drawing the edges of the wound together; and, 2d, by the formation of a new tissue, which is termed a cicatrix.

"The cure by drawing the edges of the wound together is principally accomplished by a natural effort of the soft parts, which have a tendency to contract from the circumference towards the centre. Art may either assist or oppose this effort, by the position in which it places the wounded parts; the former is effected by placing the edge in contact, the latter, by separating them as widely as possible.

"The edges of the wound should be drawn together whenever their union in that position will not inconvenience the motions of the parts. On the other hand, cicatrization by means of newly-formed substance should be attempted, whenever the other method would give rise to the existence of bridles, contractions, or other

impediments to the action of the parts, such as constantly occur after severe burns.

"The former of these methods is much more speedy than the latter, and it should therefore be preferred whenever it is practicable; and it may be looked upon as practicable whenever there is no loss of substance. But, where some part is destroyed, it should be the aim of the surgeon to restore it by encouraging the formation of a new substance. Nevertheless, we must depart from this rule whenever the patient's life may be endangered by the prolongation of the effort requisite for a cure by cicatrization; this precaution is frequently necessary in cases of very extensive burns, and other large wounds, in which it is better that the patients should recover, either weakened or deformed, than die from exhaustion produced by abundant suppuration.

"The cicatrix, even when complete, ought to be the object of much solicitude. As it is at first delicate, and possesses but a very feeble power of resistance, it should be protected from all traction or friction, from the irritating action of the sun or air, from that of greasy substances which are liable to become rancid, and from the relaxation occasioned by baths, &c. This may be most effectually done by covering the parts with compresses of fine linen rag, and surrounding them with a tolerably firm bandage. Sometimes socks made of leather, convex or concave pads, and other apparatus, are required for the purpose. When it is likely to give way, from the constant efforts of the surrounding parts to disunite, it may be secured by means of metallic plates fitted for the purpose.

"But, in spite of all that can be done, it sometimes happens that a recent cicatrix is attacked by an ulcerous inflammation, which will destroy a part, or even the whole of it, with frightful rapidity: our first effort, therefore, must be to prevent it; our next, to arrest it when it does occur; and lastly, to repair the mischief, by the formation of a new cicatrix. These ulcerations are generally superficial, and embrace only the surface of the new cutaneous tissue that forms the cicatrix.

"It might appear that the ends of both nature and art are attained immediately that a wound is covered by its cicatrix; but it often happens that this cicatrix is badly formed, that it causes the contraction or obliteration of certain openings, or that it has enlarged others to an unnatural extent, or that it has occasioned bridles, contractions, and other deformities. Here then a new path opens to the surgeon: in order to obtain a cure exempt from such inconveniences, he must commence by destroying all that has been done. He must divide and lay open the cicatrix, separate the edges of the wound, and perform other operations having for their object the conversion of parts into a recent wound, which may again be healed in any convenient manner.

"But we should never determine to destroy a labour thus completed, without having carefully weighed the advantages and dis-

advantages of the operation. In all cases we must take care not to compromise the life of the patient, in order to obtain some second-rate or uncertain advantage, and never to lose sight of the fact, that small operations, in certain states of the constitution, may prove as fatal as the most severe."

In the section on *Wounds traversing Parts of different degrees of Vitality*, Dupuytren recommends an endeavour to unite the parts by the first intention in all cases, though he advises the surgeon to be ready to break up the adhesions, should any symptoms of suppuration supervene.

We must omit the sections on *Flap Wounds*, and on the *Union of Parts completely separated from the Body*. While treating of the former, he speaks of the rhinoplastic operation, and upon the latter subject he relates some remarkable instances of union after the lapse of a considerable time, such as an hour or two.

The chapter upon *Wounds by Cutting and Puncturing Instruments* is short, but contains some good hints upon the subject of internal hemorrhage. The Baron relates a case of hemorrhage from one of the intercostal arteries into the pleura, where the wound had been injudiciously closed; and he would recommend in such cases its enlargement, and that the artery should be tied.

He mentions also the frequency of recovery after severe wounds of the abdomen, and attributes this to the sword pushing aside the viscera, instead of wounding them. This, however, since the researches of Mr. Travers, is a disputed point. We should have been glad if the Baron, taking the hint from his own experiments with the needle, had directed some of his young fencing friends to try on the dead subject, and this important point might then have been set at rest. In speaking of the means of cure, he mentions the plans of suction and compression: the latter he would avoid, on account of the pain inflicted by it, when inflammation follows the wound. He equally disapproves of suction, especially in cases where any large vessel has been wounded, as it causes the constant removal of the clot, upon the formation of which the patient's life depends.

Though our author objects so strongly to the plan of suction, we trust our readers are not of the same opinion, as we intend to put it in full force upon the chapter on *Lacerated Wounds;* a class of accidents which, since the increased employment of machinery, are daily becoming more frequent, and against which every surgeon should be perfectly provided.

He divides the lacerated wounds into three species: 1st, the ordinary lacerated wound by a blunt instrument; 2d, that

produced by the rupture of a viscus; and 3d, that occasioned by a violent wrench, as when a limb is dragged off from the body: as however these injuries strongly resemble one another, they are classed together in the same chapter. The ordinary lacerated wound may be caused by the violent withdrawal of puncturing or hooked instruments, as the bayonet or halberd in military surgery, and the carpenter's saw, or the horns of animals, in civil practice. One of the most frequent methods of its production is by the protrusion of the bone in compound fractures. The ruptured wound is generally the consequence of overdistension, or the weakness of the parietes of some hollow viscus; a tendon, however, is not unfrequently broken through by the action of its muscle, and an aneurismal pouch from the diseased state of its coats. The ruptures are sometimes produced by external force; thus, a blow on the epigastrium, after a tolerably full meal, will sometimes occasion rupture of the stomach. When a viscus of the importance even of the stomach or bladder is suddenly ruptured by a blow, or by distension, it is not, as might have been supposed, followed by immediate death: the patient may survive for several days, and then die of acute inflammation, the consequence of the extravasation. Rupture of the intestinal canal will sometimes happen, either from distension with wind, or from their sudden and violent contraction, or when suffering from disease and thickening of their coats; but it must be remembered that extravasation of the stercoraceous matter does not necessarily occur in these cases, and the patients may recover, adhesions having formed between the ruptured parts and the viscera in contact with them. Lacerated wounds may exist in two states, not only different in themselves, but in their consequences; they may occur either in the external parts in contact with the air, or in the internal parts excluded from it: in the former case they always suppurate, in the latter this process is extremely rare.

Lacerated wounds have generally a very uneven surface, arising from the different degrees of resistance offered by the several parts. The edges are slightly ecchymosed, and there is rarely any violent hemorrhage; this is, however, more common in internal ruptured wounds than in those which are external. When it takes place in a parenchymatous viscus, a pouch is formed, in which the blood coagulates and becomes absorbed; in most cases, without any serious consequences.

Should hemorrhage occur in the external wounds, it must of course be stopped in the ordinary manner. When this has been done, the surgeon should draw the edges of the wound together by the means recommended in the chapter

on incised wounds. If it be an internal organ that is ruptured, as the stomach, the only means in our power of retaining the edges together is to keep it constantly empty; the other indication is to moderate the inflammation consequent on the injury. When patients recover from these accidents, it is generally by the formation of adhesions, as before mentioned; sometimes, however, abscesses form, and the matter comes away from them tinged with the secretion or contents of the viscus. The cicatrices are seldom well formed, and various inconveniences may result from them; such as weakness of the affected muscle, hernia when the wound is in the parietes of the abdomen, &c.

When a limb is torn from the body, it is seldom the effect of direct force; in most instances, this is combined with torsion, as, for instance, in the almost exploded practice of accoucheurs twisting off children's arms. Our author relates several cases of this species of accident, in which arms and legs were taken off by the motion of a wheel, and in all of which the patients recovered. The principal characters which distinguish these wounds are the extreme inequality of the surface, (the projection being principally on the side of the limb, and the depressions on the stump,) and the nearly constant absence of hemorrhage. This arises partly from the retraction of the vessels, and partly from their structure. As the three coats of the arteries possess different degrees of tenacity, the inner one healing first, then the middle, and lastly, the cellular coat, the end of the vessel presents the form of a cone with its apex turned outwards; in this cone a clot is formed, and inflammation speedily takes place, which obliterates the canal. These accidents are less fatal than might have been supposed; there is but little pain, and no hemorrhage, and therefore the cure depends but little upon art. Should any hemorrhage take place, the usual means must be had recourse to. The surgeon must likewise pay some attention to the surface of the wound, and, should any parts project very much, he must remove them by the knife. The edges of the wound must be drawn together, and, should any unpleasant symptom arise, it must be met as in other cases.

The Baron prefaces his observations upon *Contused Wounds* by some remarks on concussion and coma. But, as these are not treated at length, we shall omit them, and refer our readers to English works, where they may find them more minutely discussed. He divides contusions, according to their severity, into four classes. The "contusion au premier degré" answers to the ordinary bruise; the second embraces those cases where pouches full of blood are formed by the rupture

of a vessel of tolerable size; the third may or may not be accompanied by a lacerated wound, and is generally followed by the death of the part; and the fourth occasions instant disorganization.

Cases very similar to these last, viz. *Crushed Wounds*, are treated of in the following chapter; and we are thus gradually led to the consideration of *Gunshot Wounds*, the subject which is usually supposed to be of most interest to military surgeons, but on which we shall not dwell very long, as we possess most excellent treatises upon the subject in our own language.

The Baron commences by some remarks on the *Physical Effects of Projectiles from Firearms*, the principal of which are as follows. When the gun has been discharged close to the wounded part, the opening by which the ball enters is smaller than that by which it makes its exit; but if at a distance, so that the ball is nearly spent, then the reverse will be observed. In the one case the powder will adhere to the wound, in the other, none will be found. The canal made by the ball in the former instance will be conical: hence the extreme difficulty of extracting it, when lodged in a bone, without the use of a trephine. In passing through a flat or spongy bone, it makes a clean hole, without splinters; but, in perforating a long bone, the wound is generally ragged, with splinters of bone sticking into the soft parts; at other times it fractures these bones, without further injury. When a ball strikes a convex part of the body obliquely, it not unfrequently takes a circuitous course, and escapes at a point opposite to its entrance: thus, it may strike the sternum, and make its exit near the spinous processes of the vertebræ, without perforating the cavity of the chest; so in the head, &c. If linen be loosely applied to the body, the ball will frequently push a large portion, like a funnel, before it, into the wound; but, if the linen be tightly strained, it will carry away only a piece of its own size. It is not an uncommon accident for the ball to be broken by striking against a bone, and for the two fragments to go in different directions; it may otherwise alter in shape, so as to render its extraction extremely difficult. Such are the chief physical effects of these projectiles themselves; but they may be complicated, by means of splinters of wood, portions of the dress or arms, driven before them. These complications, however, vary infinitely; and we have not space to follow the author through his disquisitions upon their different consequences. We must likewise pass over the *Vital Effects of Gunshot Wounds;* and shall conclude this article by abridging

Dupuytren's opinions with regard to *Amputation in Cases of Gunshot Wounds.*

A simple wound of the soft parts seldom requires the loss of the limb; only in cases where, from constitutional or other causes, traumatic gangrene is about to take place. Fractures of bones are the most common wounds requiring amputation, but here the surgeon must exercise some discretion. If the bone be not much shattered, and if the soft parts are not much bruised, and the constitution is tolerably tranquil, the patient, being treated as with a severe compound fracture, may perhaps retain his limb, especially if he be extremely young; but, if these favourable circumstances do not exist, recourse should be had to amputation. Of course, the chances are more in favour of a patient who is admitted at once into a civil hospital, than of him who is wounded and treated on a field of battle.

Wounds of the large joints, or vessels, if they cannot be secured, require the removal of the limb; as also very extensive lacerations of the soft parts, by the explosion of mortars, &c. Another circumstance must also be taken into consideration, viz. whether the patient has sufficient strength to bear up against a tedious suppuration; if not, this is sufficient reason for the operation.

As to the period at which the amputation should be performed, Dupuytren agrees with all reasonable surgeons, that it is more successful when done within six or eight hours, than after inflammation has commenced: if, however, it should be delayed beyond that time, the surgeon should not wait till the patient's strength is exhausted; but, as soon as he perceives that his treatment will be unsuccessful in saving the limb, he should lose no time in removing it. The occurrence of hemorrhage or traumatic gangrene would only increase the necessity for instant operation.

Our author, in cases of amputation for gunshot wounds, recommends the attempt to heal the stump by the first intention, but he makes the reservation, that it can never be completely effected. The endeavour will, however, lessen the wound, which is to be healed by the slower process of granulation. He cautions surgeons to remember that the operation, after all precautions, will frequently prove fatal: he says that one patient dies out of six operated upon.

With these observations the Baron finishes the first volume of his work. His second will contain his opinions upon hemorrhage, traumatic fever, visceral abscesses, hospital gangrene, &c., and the nature of wounds in each part of the body.

We now close the book, and shall say but little in its praise at present. This does not arise from any doubt that the second volume will equal the first, but from a conviction that the reputation of Baron Dupuytren will render almost every member of the profession curious to peruse his lectures. When once opened, we may safely leave them without other observation, than to caution the reader not to sacrifice every other engagement to their engrossing interest.

Nouveau Système de Chimie Organique, fondé sur des Méthodes Nouvelles d'Observation; par F. V. RASPAIL. *Accompagné de douze Planches gravées, dont six coloriées.*—Paris, 1833. 8vo. pp. 576 and 96.

A New System of Organic Chemistry, translated from the French of F. V. RASPAIL. *With Notes and Additions, by* WILLIAM HENDERSON, M.D., Lecturer on Materia Medica in the University of Aberdeen.—London, 1834. 8vo. pp. 602 and lxxvi. Plates.

M. RASPAIL is a man of great talents and unquenchable zeal, who has no more respect for the right divine of chemists than of kings, and who, in the course of the very curious work before us, deals out sundry hard knocks to people of note, with the hearty goodwill of a man who is perfectly in earnest. We give the dedication, because it is so very French, and so very original.

" A la mémoire d'un homme de bien, mon pauvre maître, l'Abbé Eysséric.

" A toi qui sus allier le prêtre de l'évangile avec l'homme de la science et de la civilisation! A toi qui, à Paris, aurais mérité de n'être d'aucune académie, et qui, dans mon village, ne voulus jamais t'élever au-dessus de la dignité d'instituteur des pauvres! A toi, philologue d'une immense érudition, qui te dévouas toute ta vie à faire épeler des lettres! A toi, prêtre, qui n'a jamais voulu vivre que du travail de tes mains!

" A toi l'hommage de ce livre!

" Puisse cette consécration pieuse le rendre aussi utile à la science que l'ont toujours été tes exemples et tes leçons à la cause de l'humanité!

" Adieu. RASPAIL.

" *Maison d'Arrêt de Versailles;* 20 *Mars,* 1833."

Many of our readers will thank us for pointing out this excellent work to their notice, but they must excuse us for not even attempting an analysis of it. We are deterred from doing so not merely by its bulk, but also by the consideration that it would be alien to the object of our Journal to devote

a very large space to the review of a book whose scope has but a distant connexion with the practice of physic. We shall therefore content ourselves with two or three extracts, which may introduce Raspail to our readers: we leave it to them to form an intimate acquaintance with him.

Our author's great instrument of discovery has been the microscope, and he seems to have been led to its use by the following considerations:

"We can understand how, by the help of the crucible and re-agents, the undecomposable elements of an inorganic body may be separated and weighed; and yet how do the difficulties of analysis increase with the number of these elements? But, when we deal with an organized substance, how can we have recourse to the crucible without decomposing the organ? And how shall we employ re-agents to isolate the contained substance, disregarding the obstacle which the organized coats of the organ present to the reaction? Accordingly, from the instant I began to read the works on Organic Chemistry, I could not help a feeling of vagueness; and, notwithstanding the confidence with which the details were given, I all along suspected that the results obtained did not represent the natural state of things. Operations of a kind little employed by the scientific world at last furnished me with the means of explaining the cause of my hesitation, and changing my suspicions into certainty. I saw and delineated organs of excessive minuteness, and whose varied aspects and forms seemed to me to indicate different functions and properties. These organs occur side by side with each other. The eye can distinguish them, but the scalpel cannot separate them. Now, said I to myself, when the chemist bruises, triturates, macerates, or boils in a menstruum, even the smallest fragment of animal or vegetable matter, he must necessarily confound and mix in the same liquid a multitude of substances which nature had placed in separate organs. It would seem as if, confident of the power of his art, he sought to blend every thing together, in order that he might have the pleasure of again separating each part. But, when he has mixed and confounded the whole, he struggles in vain with difficulties which his art has no power to overcome. Hence the contradictions, the incongruities, the extravagances, of the theories to which recourse is had to reconcile inexplicable results; hence the number of undetermined or misnamed substances, of identical bodies viewed as being different, and of new names, which are at last so multiplied as to overload the most attentive memory, and give distaste to the least scrupulous mind.

"It is evident that, if the chemist had understood that each of these substances which he had so unhappily blended, was, by the laws of nature, deposited in a different organ, he would of himself have overturned the scaffolding which he has reared, and done ample justice upon his undecisive results. But, during the whole

of the most brilliant period of this mode of chemical observation, this idea never came into any one's mind. The chemist would have spurned at being required to become an anatomist, or a botanist, or a zoologist. He held on his own way, as the botanist and the physiologist did theirs, just like two travellers journeying side by side on two roads, which, in the end, must lead them away from their common object, talking, in the meanwhile, of other people's matters, without seeking to give or receive information respecting their route." (P. xiii.)

The following extracts may serve to show M. Raspail's acuteness as a microscopic observer, as well as his tact in applying his scientific acquirements to the business of real life.

"*Physical Characters of the Granular Particles of this Substance* [*Starch*] *in general.*

"4. This powder, when examined by the microscope, shows nothing but rounded unconnected grains, of variable form and dimensions, not only in different vegetables, but even in the same vegetable. A sufficiently exact notion of these varieties may be formed from the figures delineated in Pl. II. Thus, the fecula of the potatoe (fig. 1.) exhibits grains whose size varies between .0049 and .00013 of an inch, and whose forms are very various, while the largest grains of the fecula of the millet scarcely exceed the latter dimension, and they are all of one form, as far as the limits of the magnifying powers used enable us to judge.

"5. These grains increase in size with the age of the vegetable and of the organ which contains them. In the pericarpium of the ovary of the gramina, previous to fecundation, the grains are not larger than .00013 of an inch; but, after fecundation, they grow until they attain the size of .002 of an inch (Pl. II. fig. 12.)

"6. In certain other organs they change their form at the same time that they increase in size. Thus, in the tubercles of the *Iris florentina* or *germanica*, they possess in the month of June the form and apparent size shown in fig. 13. If the tubercles be left in the open air, and in rather a dark place, they will be found at the end of a fortnight with the singular forms represented in fig. 14., and possessing a size which they scarcely attain till autumn, if left to vegetate in the earth.

"7. There are some vegetables, in the various organs of which the feculent grains are different both in size and form. In the grains of the *Chara hispida* they possess the form and apparent magnitude shown in fig. 3.; but, in the articulations of the same plant, their form and apparent size are those seen in fig. 4. I shall notice all these varieties of form, after treating of the organization of fecula."

"*Refractive Power of the Grains of Fecula, and Appearances connected with it.*

"8. The shades which are observed on examining the grains of fecula vary according to the kind and the magnifying power of the microscope used.

"9. If a grain of the fecula of the potatoe be examined, when dry, by transmitted light, its refracting power being considerably different from that of the surrounding air, it will necessarily happen that those rays of the light thrown upon this irregular sphere which impinge obliquely on its inferior surface will be considerably refracted, both when they enter it and when they pass out again, so that scarcely any light will reach the focus of the microscope, except what has traversed the centre of the sphere; consequently, it will appear to the eye of the observer like a black ball having a brilliant round spot in the centre (Pl. II. fig. 21.), or like an irregular black pearl with a somewhat elliptical luminous hole pierced through it (fig. 22.) A bubble of air examined by the microscope under water (Pl. III. fig. 11. *f'* and Pl. VI. fig. 12. *a'*) gives an exactly similar appearance, arising from the same laws of refraction.

"10. If, on the other hand, the grain of fecula of the potatoe be placed in water (Pl. II. fig. 1.), as its refractive powers differ little from that of the surrounding liquid, it will then exhibit the appearance of a brilliantly-shining pearl; and, if the microscope be as powerfully illuminated as simple microscopes generally are, the transparence of the grain of fecula may be such that it shall be undistinguishable, except by its outline (Pl. II. fig. 23). In this case the grain appears of a larger size, an illusion which is to be corrected by measuring it.

"11. It is however possible gradually to diminish the transparence of the grain of fecula observed under water, by diminishing the diameter of the cone of light which is thrown by the mirror on its inferior surface. For this purpose a metallic diaphragm is employed, which is pierced with holes of different diameters. We may thus diminish the transparence of the object to such a degree, that the grain of fecula seen under water shall present almost the same appearance which it does when observed in the air. The reason of this is, that by means of this diaphragm the number of rays impinging perpendicularly on the inferior surface of the grain of fecula is diminished, while a greater number are permitted to fall on it obliquely which do not reach the focus of the microscope.

"12. But if, then, the object-holder be brought nearer, so that the centre of the grain is no longer in the focus of the microscope, the contrary effect will take place. The centre of the grain will appear like a black point in the middle of an illuminated zone, or like an opaque kernel inclosed in a transparent shell; and, if the largest opening of the diaphragm be used in the observation without altering the place of the object-holder, in place of a black point, a luminous spot of a blue colour will be seen." (P. 78.)

"*Fecula of the Æsculus Hippocastanum.* The grains of this fecula vary in their size, according to the size and age of the chesnut. They are very irregular, constricted in the middle of their length like the coccoon of the silkworm, kidney-shaped, or pyriform. The largest does not exceed .0012 of an inch in size. The fruit of this tree, though rich in fecula, and abundant, is not applied to any use, on account of the presence of a bitter matter and a large quantity of potash, which alter the quality of the fecula, and render it unfit for food. Yet by very simple processes it would be easy to convert it to use, and to obtain from it 30 per cent. of fecula, while the potatoe does not yield more than 22 per cent. It would only be necessary to rasp the fruit, as is done with potatoes (94.), and to wash it with water very slightly (23.) acidulated with sulphuric acid, and then to wash out the excess of acid by plenty of water, by which means the fecula would be deprived of every thing that renders it disagreeable and hurtful. Or the process of the starch-maker (104.) might be employed, fermentation being caused by the addition of gluten, or any other fermentable substance.

"Vergnaud recommends the pulp extracted from the horse chesnut, and made into starch, without any other preparation, as an excellent batter for weavers, on account of the deliquescent salt which it contains, and which would allow of their working fine goods in less damp and unwholesome places than they are at present obliged to use, to prevent the batter from drying." (P. 119.)

"For some years past, I have seldom met with wheat in the market of Paris which did not contain an appreciable quantity of the fecula of the potatoe, whose price is so low that the vender may gain 25 per cent. by the mixture. Although its presence does not alter the appearance of the flour, yet, with a little practice, it may be discovered by the unassisted eye, when there is a large proportion of it present. The flour has a crystalline appearance which does not belong to it. By the microscope the fraud is easily detected, and I would undertake to discover it though it were only $\frac{1}{100}$ of the flour. Those who provide bread for public establishments, obliged to purchase the indulgence or the connivance of a great many persons employed in them, adulterate the flour contracted for with farina obtained from coarser substances, such as beans, damaged pease, and even vetches, &c. If a small quantity of this flour can be obtained, or if any of those knots of unbaked farina which the bakers call 'browns' can be found in the bread (76.), it is possible, by the help of the numbers and figures which I have given (93. 119.) to discover the nature of the mixture. No one could fall into any mistake about the fecula of rye, lentils, and potatoes. But, if it should be difficult to ascertain the precise nature of the foreign substance, it will always be easy to obtain a negative result. If a sample of flour be given as wheat flour, and the grains of fecula, instead of being .002 of an inch in size, are mostly under .001, it is evident that the statement is false. To obtain a more positive result, it is necessary to take into account

statistical and commercial considerations relative to the price and the place of growth of those substances whose presence is suspected, to resort to analysis on the large scale, and sometimes to the microscopic and comparative analysis of the different organs which are met with in the flour. I shall afterwards speak of the various organs which enable us to recognise by the microscope the farina of the *Cereales.*" (P. 131.)

Perhaps one of the most successful parts of M. Raspail's system is the attempt to show that many of the proximate elements of organic bodies are, in fact, mixtures of some other well-known substances: thus, that "tannin is merely an association of resinous matters with an acid (generally the gallic,) which renders them soluble in water (1128.) For, 1st, it has hitherto been found impossible to obtain tannin free from acid; 2d, by treating any resin, or charcoal, with nitric acid, or by acting on camphor, the resins, or some of the gum resins, by sulphuric acid, an artificial tannin may be obtained, possessing all the properties of the tannin of gallnuts or oak-bark; and, 3d, the presence of the acid employed in its preparation may always be detected in artificial tannin, as long as it retains its characteristic property." (P. 491.)

In conclusion, we must remind our readers, especially our younger ones, that this work is not one to be skimmed, or lounged over, or merely read; but that it requires to be studied and worked through, with a microscope and test-tubes ever at hand, as its proper interpreters and commentators. Those who are deterred by the regal price of a fashionable microscope, will be glad to hear that a really useful instrument is by no means expensive: indeed, M. Raspail informs us that Deleuil, of 24, Rue Dauphine, has entered into his enthusiasm for young students, and sells for thirty francs a microscope which could not be had elsewhere for less than eighty.

Dr. Henderson's translation is well executed, and he has enriched it with some useful notes.

A Demonstration of the Nerves of the Human Body. By JOSEPH SWAN.—London, 1834. 4to. pp. 98 and lxxxii. Twenty-five Plates.

IT is related that, when Voltaire was asked why he did not write critical observations on Racine, as he had done on Corneille, he answered, "*C'est deja fait; vous n'avez qu'à écrire en bas de chaque page, beau, pathétique, sublime, harmonieux.*" Mr. Swan's Plates of the Nerves place us in a like difficulty, and render criticism impossible: we have no-

thing to do but to admire and learn. The present work contains copies of the plates in the folio edition, and, though the size is smaller, the engravings are exquisitely distinct, even to the minutest fibrils. The reduction of size, too, has been accompanied by even more than a corresponding reduction in price, so that every friend to science may not only hope, but expect, that the book will be in everybody's hands.

The following passage, which details some interesting points in neurology, will show the refined accuracy of Mr. Swan's demonstrations.

"*The Third Trunk of the Threefold, or Fifth Pair of Nerves.*

"It passes through the oval foramen of the sphenoid bone, and divides into five principal nerves. But, before describing these, it will be necessary to speak of the anterior portion of the fifth accompanying it.

"The anterior portion appears to consist of four principal fibrils; the most anterior passes down, and, after becoming connected with the Gasserian ganglion, goes to the part of the branch chiefly terminating in the temporal muscle; the second, towards its most inferior part, likewise gives a filament to the same deep temporal branch; the rest of the second fibril and the third are given to the buccal nerve, and the fourth joins the gustatory.

"The deep temporal nerve passes externally, and gives a branch to be joined with the first and part of the second fibril of the anterior portion, and then distributed to the temporal muscle; it communicates with the branch of the facial nerve joining the temporal branch of the malar by filaments which pierce the temporal muscle; the rest of the nerve passes just anterior to the condyle of the lower jaw, and proceeds downwards, to terminate in the masseter muscle, after giving filaments to the capsular ligament of the lower jaw: sometimes this joint is supplied by the superficial temporal.

"The superficial temporal nerve is formed of two branches: it passes behind the condyloid process of the lower jaw; it sends a filament on the external carotid artery, to anastomose with filaments from the sympathetic, and with one from the inferior dental passing on the internal maxillary artery; it communicates with the facial nerve by three branches, and gives filaments to the membrane lining the external auditory meatus, and the skin at the anterior part of the ear, and mounts up to the temple, to terminate on the skin of this part.

"The inferior dental nerve, the continuation of which forms the inferior maxillary, descends between the two pterygoid muscles, and sends a filament on the beginning of the internal maxillary artery to communicate with the filaments of the sympathetic nerve, ramifying on the internal carotid artery, also with the other branches from the spheno-palatine ganglion, passing on the inter-

nal maxillary artery; it sends a branch downwards for some distance in a groove in the lower jaw, to pass, just before the anterior corner of the submaxillary gland, to which it gives a small branch, and then between the mylo-hyoideal muscle and the maxillary portion of the digastric, and divides and terminates in these muscles. The inferior dental nerves, accompanied by the dental artery, passes into the aperture at the superior and posterior part of the lower jaw, and, almost as soon as it has entered this, sends a branch downwards, which gives a filament to the posterior fang of the second molar tooth, and passes forward round the superior part of the same fang, to terminate in the cancellated structure. It then proceeds just beneath the fangs of the teeth, and gives a filament to each fang of the molar, and the second bicuspidated; it sends a branch forward to give a filament to the first bicuspidated, the cuspidated, and incisive teeth, and then passes out at the foramen near the chin, and, after communicating with the facial nerve, terminates in the buccal glands, the muscles, and skin of the lower lip and chin.

"The buccal nerve appears to be principally formed of the third fibril, and part of the second of the anterior portion of the fifth; it gives branches to the temporal and external pterygoid muscles, and then passes close to the inner surface of the coronoid process of the lower jaw; in its course some filaments are distributed to the membrane lining the mouth, and, after emerging from behind the masseter muscle, it communicates with the facial nerve, sends filaments on the facial artery to join others from the sympathetic nerve, and then terminates in the buccal glands, the muscles, and skin at the side of the mouth. Near the part whence the buccal nerve arises, filaments are given to the circumflex muscle of the palate.

"The gustatory is at first so connected with the inferior dental, as to appear part of the same nerve. It receives the fourth fibril of the anterior portion, and is joined by the chord of the tympanum just after it has separated from the inferior dental; it then communicates with this nerve; it passes at first between the internal and external pterygoid muscles, and to the former of these gives a filament; it then passes just behind the last molar tooth, underneath the membrane of the mouth, giving filaments to this, and winding over the superior edge of the submaxillary gland, expands into a broad and flat nerve, which frequently assumes a ganglionic appearance; it gives many filaments to the submaxillary and sublingual glands, and to the membrane situated between the outer edge of the tongue and lower jaw; it communicates with the ninth nerve, and, in passing over the insertion of the hyo-glossal muscle, divides into several branches, which proceed by the exterior side of the lingual artery between the insertion of the genio-hyo-glossal and lingual muscles, then subdivide into smaller branches, pass through the delicate muscular fibres composing the superficial part of this organ, and terminate in a villous form on two-thirds of the anterior

portion of the external surface. It is difficult to decide whether some filaments, in penetrating through this fine muscular structure of the tongue, do not partly terminate on it.

"The chord of the tympanum gives filaments to the surrounding membranous structure, and then enters a canal by the fissure of Glaser; it gives filaments in its course, and particularly about the membrane of the tympanum, and the laxator and tensor muscles; it passes over the handle of the hammer to be joined to the facial nerve, just before this emerges from the stylo-mastoid foramen. It is supposed that the chord of the tympanum does not unite with the gustatory nerve, but passes in mere contact with this; but if a preparation that has been kept in spirits be carefully examined with a magnifying-glass, and at the same time an attempt be made to disunite these nerves, it will be found that the filaments of both are intermixed, and cannot be separated without violence." (P. 41.)

Practical Hints on the Treatment of several Diseases. By JOHN PEACOCK, M.D.—London, 1834. 8vo. pp. 77.

THIS is a collection of strange cases, queerly narrated by a doctor who is evidently rather an odd fish, but nevertheless a sound and sensible practitioner. Dr. Peacock writes in a slashing, old-fashioned style, as if he had sailed in the capacity of surgeon with Commodore Trunnion or Lieutenant Hatchway; but his cases are told with so much candour, and his practice is so much to the point, that, if we ever ventured so far north, and found ourselves seized with some critical distemper in the County Palatine, we should have no hesitation in entrusting the care of our reviewing selves to Dr. Peacock.

The work commences with several cases of mortification, treated with opium, ammonia, and aromatics: of course, we have nothing to say against this plan, but we are surprised that our author considers it as original. In giving the first case, cured in this manner, he says, "I here merely put out my FEELERS, having had some peculiar opinions concerning mortification some time, resolving to take the first opportunity of putting them to the test." (P. 9.) The following is another of these cures.

"An old sailor who had served his Majesty a great number of years, in every variety of climate, came to the Dinsdale sulphur baths to seek relief from a violent pain in both legs, but more particularly in one of them. As I attended frequently at this delightful spring, I was sometimes applied to by this poor man, and I administered to relieve his sufferings, but often in vain: as the cold weather advanced his sufferings increased, and grown desperate, he cut down upon the metatarsal bones of his worst foot with a

penknife, with the view, as he said, to bottom the complaint. A mortification immediately ensued, and as he had been frequently assisted by some kindhearted ladies at the hotel, chiefly of Lord Dundas' family, as I was not there the first day, they were good enough to procure him two surgeons. As soon as I heard of it I called upon the man, and found his leg was condemned, as the surgeons had told him he must lose his limb or his life. I am sorry that I could not attend more to professional etiquette. I was vexed at the man being taken from me, and being conscious this was a case I was perfectly master of, I was provoked to tell him that if he remained with me I could cure him. I have related this gossip, just to shew that it was considered a very serious case. There was nothing remarkable in the recovery. The bones of the great toe were so completely denuded of their periosteum, that they were obliged to be removed, and the restoration of the limb was rather slower than I expected; but it is not to be wondered at, when a constitution is based upon grog, which I dare say is frequently the case among the sailors in the navy. The medicine used on this occasion was from the formulæ in the first page, with now and then a slight alteration.

"The man walked well when he set off for his home, at South Shields. I should not omit that the family of Lord Dundas stood the whole expense." (P. 15.)

Here is a case of diabetes successfully treated.

"I was consulted by a military gentleman, about fifty, who was a good deal wasted by the complaint: he had a craving appetite, much thirst, and a dull pain in the region of his stomach, which he could not call heartburn, but it was nearly allied to it, for he had formerly suffered a great deal from the heartburn; his skin was dry, and his urine, he said, had long tasted sweet; it was pale, and measured about six quarts in the twenty-four hours, sometimes more; the pulse was feeble, but not very quick; the tongue red, and very dry—such a tongue as is frequently seen in the typhus fever; he had a trifling cough, such as is generally called *symptomatic;* his bowels were very confined. We began with ten leeches applied to the stomach, and a couple of the common aperient pills, to be repeated every two hours till a passage is procured. The next day the following powder was ordered, to be repeated every four hours, night and day, in spring water:—℞. Ferri præcip. gr. v.: Opii, gr. ss. ad gr. i.; Pulv. Aromat. gr. iij.; Cretæ pp. ʒi.; Pulv. Gum Arabic. ʒi.; Pulv. Jacobi, gr. iij. M. ft. pulvis.

"The half-grain of opium in this prescription was not inserted as an astringent, but, from my experience, nothing prevents the acid fermentation of the stomach so certainly as a small dose of opium, or Extract. Papav. Alb. This gentleman lived some distance from me, but he left me with directions that he was to please his appetite in what he eat, making a point that animal food should

prevail when he could make it agreeable to his taste, and he was sworn to take only water to drink.

"A fortnight was given him to try the effects of the medicine, and then to let me see him; but he wrote to me in the course of a week, begging me not to forget the prescription; he said I should see a gay young fellow at the end of the fortnight. When he came, there was indeed a strange alteration; from a withered old fellow he had become corky and facetious, and begged me to fix the day when we could have a bottle of wine together. I ordered him to be bled with leeches the next day, and then again a fortnight after that; and from this time he rapidly got well, without any alteration in his medicine, except increasing the opium a little, but never to exceed a grain, and I had to vary the aperient two or three times to please his whims. I think, from first to last, he took the cretaceous medicine about six weeks; but he confessed that he sometimes, towards the latter end, lengthened the interval between the doses.

"I have got to place implicit reliance upon this plan of medicine, when we have our patients tolerably early; but they too frequently apply when the tone of the stomach and other viscera are entirely destroyed, and a hopeless emaciation has taken place." (P. 20.)

Dr. Peacock gives a second case, in which the disease alternated with anasarca, and the patient died under the care of another practitioner; and a third, in which the patient was cured.

There is probably no reader of these pages who is ignorant of the fact so ably set forth by Gooch, Marshall Hall, and others, that pain from exhaustion may simulate inflammatory pain so accurately as to deceive even skilful practitioners; but as this truth, though known, is often neglected, we offer no apology for the insertion of the following cases.

"*Pain from Exhaustion.* Whether I designate this chapter aright I cannot say, as I am so little disposed to theorise; and those who like this employment may settle it their own way: it is from the mode of cure that I have taken up the idea.

"A gentleman, apparently between forty and fifty, came to our popular watering-place, Middleton, with a violent deep-seated pain in his head; which, upon any exertion, as walking, or lifting even a moderate weight, threw him into convulsions, apparently of the epileptic kind. I found, upon enquiry, he had had some troubles upon him, which he had dwelt upon a good deal. His pulse was about eighty-six, and neither hard nor strong; the eyes were not red, but the pupils were a little larger than we generally meet with in health; the urine sometimes very pale, and in good quantity; from what I could learn, the depletory system had been carried to some extent; after emptying his bowels, I gave him the following powder, to be repeated every six hours.—℞. Pulv. Ipecac. Comp.

gr. vj.; Pulv. Aromat. gr. iij.; Calomel, Opii. Pulv. ana. gr. ss. M. ft. pulv.

"This medicine released him from his sufferings very soon, so that in a few days he was enabled to go home.

"I was called in to consult upon the case of a carpenter, in Piersebridge, who had long suffered under an intense pain in the head, which had, with some reason, been supposed to proceed from occasional inflammation of the membranes of the brain. The pupils of his eyes were rather contracted; his pulse from a hundred to a hundred and ten, when the pain was bad; and, when it was upon him, a sudden shake, or a false step, was very inconvenient. The depletory practice was pushed to no purpose. This case was a puzzle; but the compound ipecacuanha, with small doses of opium and calomel, restored him.

"A near neighbour to me had a fine well-grown child, about three years old, who had been observed to droop a good deal during a fortnight or more; a strong light, or a noise, both offended him; he frequently was observed to rest his head upon one of the chairs, and often screamed suddenly, putting his hand to his head; his bowels were costive, and his stools very dark; his pulse ran two or three changes during the twenty-four hours, but the heat of the skin was always great, and the tongue always white; he had an acute pain always in his belly.

"The first step was to purge him briskly, but this made no change in the colour of his stools. The pupils now became large, accompanied with a complete strabysmus, and frequently flushings of the face: as his plaints from his head and belly were now becoming very intense, I ordered him gtt. vij. tinct. opii. to be repeated every three hours. I was greatly encouraged when I found him quite calm and placid under this medicine. When he had taken it five times, the dose was increased to eight drops every four hours. He complained a little of his belly during the night; but we had no more of those shocking yells from the shoots into his brain. The next morning I gave him his purge again, and repeated it every three hours till it had the full effect. After this the opiate was continued every four hours till his stools began to take their natural hue, which was in about three days; whether it was the opium which brought about these changes I cannot yet say; but it is worth the while of those who attend children's dispensaries to make themselves fully acquainted with its mode of action till more is known.

"I had scarcely got the last case recovered before I was called to a little girl of four years old, in Darlington; but in this child the disease made more rapid progress at the commencement: one of her first symptoms was great heat and pain in her forehead, with pain in her belly, and very quick pulse, along with dark stools, and her bowels very slowly acted upon. Jalap, scammony, and calomel, were now the order of the day; but these were attended with little relief, and no change of colour. The pupils were generally large

when in health, and her hair light coloured; she was much inclined to keep her bed, and her pulse, from being one hundred and thirty, had now got to be a little more than sixty, with a palpable strabysmus, and the pupils much enlarged. I was resolved to delay no longer, but gave her tinct. opii. gtt. ix. and repeated this dose every three hours; except every now and then we rested upon our oars for the sake of giving the purgatives: but, from the time of the opiate being given, there was an evident relief from pain, and the parents of the child made this remark with great joyfulness. I have the satisfaction to state, that in the third day of giving the opiate her stools got more natural, and she had no more pain." (P. 37.)

Our author, in a communication with which he favoured us about a twelvemonth since, and which appeared in an abridged form in our second Number, p. 440, asserted that calomel and cold water are infallible specifics in cholera; and here he says the same thing over again.

"But as soon as we administered a grain of calomel every ten minutes, washing it down with a draught of cold spring water, we did not lose one patient, although several of them did not send for assistance till their hands and feet, and some of them their faces, were a deep black blue; we had twenty-three cases in August, and before the disease left the country we had thirty, not one of whom died; although there were spiteful and unprincipled people to be found who were ready to say that we had not the Asiatic cholera in Darlington. But their motive for saying so was very good to understand. Had two-thirds of them died, as was the case in many places, they would have been ready enough to allow it to have been cholera. But I have often remarked, that I have made more enemies by a successful practice than an adverse. Were there need, I could produce a host of evidence that many of our patients had dark blue extremities, with every other symptom of Asiatic cholera, and recovered. What do the sceptics say to this?" (P. 49.)

Now we, who are not sceptics as to Dr. Peacock's good intentions, but only as to his infallibility,—we, who are not "spiteful and unprincipled people," but, on the contrary, the very essence of honesty and goodhumour, will explain to our author why all the world does not treat cholera with calomel and cold water.

The fact is, that, were we to lend a ready ear to doctors' laudations of new remedies, we should find that we were theoretically possessed of at least six specifics for every known disease. Taught by a thousand disappointments, we listen to the physician's tale of marvels with the same feelings with which we hear a fond parent's praise of the cleverness of his child. It is in vain that he tells us that John is the

sharpest fellow in London; we want to hear his evidence confirmed by colder judges. It is just the same in physic; we cannot possibly doubt a gentleman's word, but still we would wish to have the remedy tried by other physicians. But, when this has been done, how unsatisfactory is too often the result. If you want one instance out of ten thousand, just open Thomson's Dispensatory, at the article *Toxicodendri folia*, and read of their properties and uses. "The leaves are stimulant and narcotic. In the hands of Dr. Alderson, of Hull, who introduced them as a remedy, they proved successful in several cases of paralysis; but we believe their efficacy in this disease has not been confirmed by the observations of other physicians." (P. 531, 4th edition.) These illusory specifics, which fall to the ground one after another, as numerous and as evanescent as the leaves in autumn, make us sceptical even as to real ones, which come, "like angels' visits, few and far between." We are disposed to try their merits by severe tests, but truth does not dread them; just as, in a great town, every stranger is taken to be a rogue, but no honest man is offended that he is suspected.

Now, when a practice is so amazingly successful as Dr. Peacock's, we should expect that the most envious doctor in Darlington must cry "Euge!" or, at any rate, that the public, who have no great relish for medical squabbles, but who can tell if a patient died or not, would solicit our author's attendance at every cholera case within forty miles. Nay, more; we should expect that other doctors, not absolutely in Darlington, (for their motives, as our author says, "are very good to understand,") but pretty near it, would be compelled for very shame to save their patients; or that, if they too were pitiless, that the laity of Durham would take the calomel into their own hands, and refuse to die by rule.

As these natural events, however, do not seem to have happened, we are compelled to suppose that our author was in some degree misled by his partiality for the remedy he had introduced; and we take to this supposition, because we always think it more probable that one physician should be mistaken than a dozen.

We next come to a case of hydatids.

"A lady in the north, somewhat connected with the navy, had been sometime pestered with these equivocal beings, for which she had been in the habit of pouring in broadsides of the most drastic purgatives, which generally brought some away. They occupied the whole of the intestinal canal, but luckily had not found out any of the other cavities, but she could accurately distinguish where they were; they occupied the upper part of the gullet, and the

whole of the stomach and intestines. As soon as I was honored with the command, I was resolved to '*board*' them, which I did very promptly with large doses of the Calais sand of the shops, stirred up in treacle, and mixed with the briskest purgatives in our possession. The enemy soon 'surrendered at discretion,' and in greater numbers than I had any previous conception of. The lady has had no return." (P. 50.)

Our author gives the following pills as a specific for headachs of all kinds:

"℞. Bac. Capsici, ℈ij.; Gum Arabic, gr. x.; Syr. Alb. q. s. ft. pil. xx. quar. sum iv. 2da quaq. hora dolore urgenti."

We see no objection to these pills in the ordinary atonic headach, so common in London; but of what benefit could they be when the headach proceeds from a loaded stomach, or a diseased brain?

Dr. Peacock has been very successful in treating lupus, but he is afraid that the doctors will pounce upon these cases too, and analyze, and criticise, and distinguish, till they have shown that a wolf is a lamb.

"But I presume all these cases, like the successful cases of cholera, will be disputed, because they were successful. However, if men of candour and industry, who have the care of infirmaries and dispensaries, will have the goodness to make a trial of the following remedy, I think they will be pleased with it. The part affected is smeared with it two or three times a day, either by the finger, or, if the diseased part is very sensible, by means of a camel's hair pencil.—℞. Axung. Porcin. ℥j.; Sulph. Prœcip. ℥ss.; Hydrar. Sulph. rubr. gr. x. M. ft. ung.

"As a medicine, I find the following pill, taken three times a day, alleviate the suffering very much.—℞. Opii.; Pulv. Digitalis. an gr. ss.; Syr. q. s. M. ft. Pil. j.

"Should the pulse become intermittent after taking this pill a few days, then to take it only twice a day." (P. 71.)

This little work does honour to Dr. Peacock's talents as well as industry, and will be consulted as a repertory of remarkable cases and judicious practice.

Fragmenta de Viribus Medicamentorum positivis, sive in sano Corpore humano observatis. A SAMUELE HAHNEMANN, M.D. Edidit F. F. QUIN, M.D., Medicus Ordinarius Leopoldi, Primi Regis Belgarum, &c.—London, 1834. 8vo. pp. 214.

SIR GILBERT BLANE observes, in his Select Dissertations, (vol. i. p. 201 *et seq.* 2d edition,) that it would be an instructive thing to compare the results in a given disease, when nothing is done, with those which are obtained from the exhibition of remedies. In the present state of the medical art,

however, he thinks it unjustifiable to leave the patient to the resources of nature; and therefore the comparison can be instituted only by observing what results were obtained in the infancy of our art, when inert remedies alone were often administered. He accordingly takes forty-two cases of acute disease, detailed by Hippocrates in two sections of one of his works, and finding that, of these, twenty-five terminated fatally, exults in the improvement of the medical art that has since taken place. Now Sir Gilbert appears to us to have misunderstood the scope of the work of the Father of Physic. It was not intended to give the average results of his method of treatment, but the more interesting cases which had occurred to him. The sage of Cos was not writing to get into practice, and therefore did not think it necessary to trumpet forth his successful cases; he selected those which were the most instructive, those in which the symptoms were the most severe, and the character of the disease consequently best developed. Hence these cases can by no means be quoted as showing the average result of medical practice B.C. 400.*

But what Hippocrates did not show, Hahnemann does. His method of giving a disguised nothing, a well-dressed and innocent zero to the patient, allows full scope to the *vis medicatrix naturæ*. It is on this account that we think homœopathy worth the attention of the most enlightened physician; for, if the followers of Hahnemann outrage common sense by their theory, they often appeal to it by their practice; and the results of the swallowed infinitesimals might have convinced Sir Gilbert Blane that if diseases, even acute ones, are let alone, the mortality will not be 25 in 42. It would be absurd, indeed, when the case clearly admits of being benefited by medicine, to follow the system of the nothingarians; but it may afford encouragement to the hypochondriac physician, who often fears both the disease and the remedy, to know that his maxim of *saltem non nocere* is a just one, and that it is not necessary to kill patients, on the supposition that the only alternative is to let them die. And thus it is that, as chemistry borrowed much that was valuable from alchemy, so homœopathy will throw new light on the practice of physic.

* It is pleasant to see the way in which a celebrated compiler has touched upon this subject. One might almost suppose that he imagined the forty-two cases to have formed the sum total of Hippocrates' practice. "Skilful and diligent in his profession, he openly declared the measures which he had taken to cure a disease, and candidly confesses that, of forty-two patients which were entrusted to his care, only seventeen had recovered, and the rest had fallen a prey to the distemper, in spite of his medical applications."—*Lempriere's Classical Dict.*, art. Hippocrates. 8vo. edit. 1809.

The work before us consists of Hahnemann's account of the effects of a number of remedies on the healthy body: these effects are apparently those produced by small doses; and he subjoins the symptoms as given by other authors, being apparently those resulting from large ones: thus, for example, Hahnemann gives the following account of the symptoms produced by cantharides.

"LYTTA VESICATORIA L.

(*Pulveris Tinctura.*)

Vis.*

"Micturitio.
"Lotium guttatim destillans.
"Dolor pressorio lancinans in vesicæ collo.
"Formicatio et pruritus in urethrâ inter mictum.
"Dolor mordax in urethrâ inter mictum.
"Dolor strictorius in artibus, fere paralyticus.
"Dolor in affectâ parte (v. c. ulcere) lacerans.
"Dolor lacerans in dorso.
"Effluvium auctum ex affectâ parte (v. c. ex ulcere pedum, e naribus in coryzâ chronicâ, ex urethrâ in blennorrhœa chronicâ.)
"Muci in coryzâ chronicâ in sanguineum mutatio.
"Sensus mordax in oculis, quasi a sale culinari insperso.
"Inappetentia ciborum.
"Debilitas, prostratio virium.
"Morositas.
"Diarrhœa sine torminibus.
"Tormina.
"Incarceratio flatuum in hypochondriis.
"Agrypnia.
"Pruritus in cute.
"Sudor lenis nocturnus." (P. 47.)

After this, Brassavola, Lange, Paschalius, Occo, Pareus, Vierus, Joach. Camerarius, and others, testify that cantharides will cause bloody urine, priapism, inflammation of the penis, &c. &c.

This work is certainly of some use, as well as a medical curiosity; and it may be consulted with advantage as an index of cases of poisoning occurring in the older writers.

* "Vires hujus remedii durant ultra dies quatuordecim.—*Ed.*"

Cases of Tic Douloureux, and other Forms of Neuralgia. By John Scott, Surgeon to the London Hospital, &c.—London, 1834. 8vo. pp. 52.

Mr. Scott is of opinion that the constitutional causes of tic douloureux may be arranged under five heads:

"1. A plethoric state of system, which, however, it must be observed, very rarely gives rise to the affection.

"2. An asthenic state of system, which certainly produces the disease much more frequently than the opposite condition; hence its frequent occurrence in the decline of life, when the power of the circulation begins to fail, and during periods of mental suffering and anxiety.

"3. A gouty or rheumatic diathesis seems particularly liable to the disease, which often occurs in conjunction with affections of this character in other textures, or immediately on their subsidence; and it is observed that persons who are habitually exposed to cold and moisture, as fishermen, and the inhabitants of marshy districts, are particularly liable to the disease in question.

"4. A disordered condition of the digestive organs, attended by the usual symptoms which characterise such derangement.

"5. The impression of malaria on the system; in which case the disease assumes the intermittent character, the paroxysms recurring regularly at a given hour, and increasing or lessening in duration as the disease becomes more or less severe." (P. 17.)

We doubt whether a sufficient number of cases of this formidable disease have yet been observed and registered, to allow us to generalize on the classes of men most subject to it; but we doubt still more whether, when this shall have been done, fishing will be found to be among the predisposing causes. It is not among fishermen that we should look for cases, but among those who are hypochondriacal by profession; such as clerks, comic actors, authors, and reviewers.

In illustration of the first variety, our author says,

"When the disease depends on a plethoric state of system, it will of course be attended with the symptoms which usually characterise that condition.

"A gentleman, about fifty years of age, of a full habit of body, affected with constant pain in the head, and occasional dizziness and vertigo, laboured under disease of the supra-orbitar branch of the fifth pair of nerves for some years, which resisted all the various modes of treatment that were adopted. At length he was affected with an apoplectic seizure, for the relief of which he was largely bled, and the antiphlogistic treatment carried to its fullest extent; in consequence of this discipline, he not only recovered from the attack, but the tic douloureux also disappeared, and he remained free from the disease for many years." (P. 18.)

On the other hand, when the disease depends on debility, the carbonate of iron, recommended by Mr. Copland Hutchison, often effects a cure.

"A young lady, twenty-three years of age, of a delicate scrofulous habit, whom I had previously attended on account of a disease in the hip-joint, applied to me on the 24th of February, labouring under a severe attack of tic douloureux, chiefly affecting the infra-orbitar branch of the fifth pair of nerves on the right side of the face: the pain extended during the paroxysms to the ear, the temple, the forehead, the lower jaw, and the lips, and terminated abruptly at the mesial line of the face. She stated, that on Friday, the 14th of February, she was first attacked with the disease in the parts above described, being suddenly seized with a violent shooting pain, as if a sharp instrument were darting through the face; and this had been preceded by slight uneasiness in the parts for about a quarter of an hour: the acute pain lasted for about an hour, and then suddenly ceased, the uneasiness by which it had been preceded subsiding in about half an hour afterwards. During the continuance of the pain, the part was so exquisitely sensitive, that she could not bear the slightest touch; but she thought she experienced some relief from her agony by powerfully compressing it with her hand. Every day, from the time above mentioned, she had experienced three or four attacks similar to that I have just described, with occasional slight variations in their severity and duration; generally they occurred spontaneously, and sometimes they appeared to be brought on by mastication or talking.

"She was directed to take a drachm of the carbonate of iron every four hours, to be much in the open air, and to use a generous diet.

"Under this treatment the paroxysms soon became less severe, less frequent, and of shorter duration, until the 3d of March, on which day she had a very severe attack; after which they entirely ceased until the beginning of April, when she had one or two slight attacks, but not of any severity or duration. Her health was much improved by the treatment employed, and she has not had any return of the affection." (P. 19.)

The next case is one of a delicate woman, who was cured of her first attack by the carbonate of iron, taken for a month; and on a relapse occurring, by the sulphate of quinine. This patient used the veratria without benefit, though it produced so much pain that she could scarcely endure its application.

Mr. Scott thinks that a gouty or rheumatic diathesis is the most frequent among the constitutional causes of neuralgia; and he gives, as an illustration, the following instance, in which the disease was seated in the first branch of the fifth pair of nerves on the right side.

"The pain commenced with a falling of the eyelid and corrugation of the brow, attended with a throbbing sensation in the part, which symptoms indicated the approach of the attack. It came on gradually, commencing at sunrise; became very severe about ten o'clock in the morning; and at noon the pain would be often so excruciating, that he could neither sit, stand, nor walk, but actually writhed in agonies on the carpet, and was obliged to go to bed to hide his suffering; from noon, the pain gradually decreased in severity until the evening, when it entirely subsided; so that he slept perfectly well during the early part of the night, and was awoke in the morning by the renewal of his sufferings. The attacks were more violent in cold, particularly during an easterly wind, than in warm weather; but they always affected the same spot, occurred at the time and in the manner above described, and pursued their own course, without being relieved by any remedies, or aggravated by any exciting causes: neither mastication nor talking would produce them, nor increase their severity; but at one time they certainly appeared to be much more violent during a period of great mental anxiety. These attacks would recur daily for two or three weeks, and then spontaneously subside for two or three months, and again recur without any assignable cause; at other times they would occur regularly for a day or two, and then there would be an interval of a week or more before any fresh attack: in short, there was no regularity in the frequency of their recurrence, nor in the length of time they would continue; but he never passed a year without many attacks, for a period of twenty-eight years, with the exception of three successive years, during the whole of which he was subject to constant attacks of acute rheumatism, in almost every joint in the body in succession, and they were so severe, of such continuance, and so frequently renewed, that he scarcely left the house during that period; but he was perfectly free from tic douloureux the whole of this time. As soon, however, as the rheumatism disappeared, the original disease was reproduced, with its usual frequency and severity. Of course, a vast variety of treatment was adopted at various times: among other remedies, he took large quantities of quinine of iron and of colchicum, but nothing appeared to have the slightest influence on the disease; blisters, leeches, opiates, &c. were employed, and he was advised to have the nerve divided, but would not consent to the operation." (P. 22.)

He was cured by sarsaparilla and purgatives.

The fifth variety is that in which the disease is intermittent. The patient, whose case is given as an example of this form, was a lady who had two attacks daily, one at two A.M., and the other at three P.M. The sulphate of quinine, the carbonate of iron, and bark, with muriate of ammonia, were given without benefit, but she was cured by large doses of the

liquor arsenicalis: ten minims were given at first every six hours, and afterwards every two hours.

So much for the treatment when the disease is constitutional. In protracted cases, however, the disease becomes local, and the remedies hitherto mentioned are found to fail. In such cases, Mr. Scott, some years ago, tried the effects of a topical application. "The plan I adopted was to keep constantly applied to the part, on a piece of flannel, an ointment composed of one drachm of tartarised antimony and an ounce of mercurial ointment, renewing it as frequently as it could be borne; the object being to produce such a degree of irritation on the skin as would insure the mercurial influence on the part." (P. 31.) This ointment, and some aperient pills, removed the neuralgia of a patient aged sixty-two, who had suffered at intervals for thirteen years, and who had gone through the ordinary routine of remedies without advantage.

Our author then thought that the iodurets of mercury might prove more effectual, and accordingly tried an ointment composed of the deuto-ioduret (℈ij. to ℥i. of lard,) in the case of a lady who had gone through not only the most violent attacks of the disease, but the following remedies:

"Sulphate of quinine, fifteen grains in the day.

"Carbonate of iron, three ounces in the day for many weeks.

"Arsenic, till the gastric irritation it occasioned prohibited its continuance.

"Belladonna, till the sensorium was seriously affected by it.

"Musk, black drop, hyoscyamus, colchicum, and mercury in small doses, until the mouth became affected." (P. 35.)

She was cured in six weeks.

Mr. Hollis, of Lewisham, has furnished our author with a case, in which the same remedy proved successful, though the patient was seventy-three years of age.

The rest of the cases we will give in a tabular form, to save room.

Patient.	Situation of Disease.	Remedies employed.	Result.
A lady in Albemarle-st. ill eight years	The supra-orbitar branch of the 5th pair on the left side	Deuto-ioduret & Proto-ioduret of Mercury, Mercurial Ointment, and Purgatives.	Cured.
A gentleman, aged 92	The supra-orbitar and infra-orbitar branches of the fifth pair	Deuto-ioduret of Mercury	Cured.
A young woman, aged 21.....	The left breast ...	Proto-iod. of Mercury, and supporting the breast by a bandage.	Cured.
A young lady	The left knee	Proto-ioduret of Mercury	Cured?

Our author then says, "It is unnecessary to increase the length of the foregoing list of cases, since my object is not to display the marvellous effects of any specific remedy, in controlling the painful disease which has been the subject of the preceding pages, but to analyse the constitutional causes of the affection." (P. 50.)

We cry you mercy, Mr. Scott! We thought that your object had been "to display," &c.; for you tell us of none but successful cases. When a man sets about analysing the causes, or the treatment of a disease, we expect him to make a clean breast, and give us an account of his failures: the painter, whose office is to select merely the agreeable, may delight us with the bright skies and rich verdure of a tropical climate; but the faithful chronicler must speak also of poisonous serpents and overwhelming tornadoes. Mr. D'Israeli, however, tells us that many authors consider the first edition of a work as a sketch merely, to be distributed among their friends, by whose judgment they are to be guided in expanding the outline into a book. We hope therefore that the sale of this treatise may be so rapid as to enable Mr. Scott immediately to supply this deficiency. Meanwhile we bid him farewell, recommending his new remedy for trial, and his essay for perusal.

A Dictionary of Terms employed by the French, in Anatomy, Physiology, Pathology, Practical Medicine, Surgery, Midwifery, Pharmacy, Medical Zoology, Botany, and Chemistry; with their Derivations from the Greek, Latin, French, German, and English; Explanations in English; and Illustrations in different Languages. By SHIRLEY PALMER, M.D., formerly of Tamworth. Part I.—Birmingham, 1834. 8vo. pp. 160.

WHEN you go into company, gentle reader, you will often hear people talking of the possibility of learning French, or even German, in a few months: nay, you will sometimes meet a Thraso who has the face to say that he has done so himself. Should such things be uttered in your presence, we recommend you, if you be a man of tact, and desirous to get on in the world, not to cry out, as Dr. Johnson used to do, "No, sir; it is not so; what you say is otherwise:" rest satisfied with thinking this, and, like the heroine of a novel, utter silent ejaculations. If this millennium of languages is ever to arrive, when French and German may be acquired by a lawyer in the long vacation, we are certain that it must be preceded by a very prodigious improvement in the present dictionaries; and we hail this technical lexicon, by Dr. Palmer, as a first step towards the construction of the great

verbal railway. Had any one, before the appearance of this work, inquired where he might find an explanation of French scientific terms, we should have referred him to the *Vocabulaire de Wailly*, or the *Supplément au Dictionnaire de l'Académie*, (Paris, 1827, 4to. pp. 559.) When our author's dictionary, however, is completed, it will be far preferable; partly because Dr. Palmer, having confined himself to a few sciences, has room for more copious explanations, and partly because the other works, being in French, are useful to those only who have made considerable progress in the language. Moreover, it will be an attraction to many students, that our author gives the German synonyms; and, as he promises an index of them, on the completion of the work, it will become in fact a German dictionary also. This will be an especial lift to our medical brethren; for, though they have been nibbling at German pretty extensively for the last ten years, we fear there have been but few bites: indeed, if we were to make a guess at the number of doctors who can read German with fluency, our opinion might be thought impolite, and unworthy of a place in this, the most urbane of Journals; and we will therefore not even hint our suspicions.

Two or three quotations will show our readers the plan of the work.

"A and $\bar{a}\bar{a}$ represent, in medical prescription, the Greek *ἀνὰ*, (French *de chaque*, and German *von jedem*,) of each. In Latin, the adject. singulorum or —arum, according to the gender of the preceding nouns, is more precise and elegant. *Exs.* Extracti Anthemidis,—Pulveris Scillæ, *singulorum* ʒ1. Tincturæ Sennæ,—Tinct. Alöes, *singularum* ʒ1. In French formulæ, the *āā*,—in German, the *ana*,—is commonly employed.

"Abaissement, s. m. —depressio, defectio, f. L.—herabziehung, niederziehung, f., niedersinken, n., niederschlagung, f. G.,—lowering; sinking or falling down; depression; failure, lowness. *Exs.* 1. An effect of the action of depressor muscles: *Abaissement* du bras, *lowering* of the arm.—2. The condition of a part or organ sinking from its own weight: — de l'uterus, *falling down* (prolapsus) of the womb.—3. A mode of surgical operation for cataract: operation de la cataracte par *abaissement*, operation for cataract by *depression*.—4. A mental affection resulting from the influence of physical or moral causes: — de courage, — defectio animi, L.,—niedergeschlagenheit, f. G.,—*depression*—*failure*—*lowness*—of spirits.

"Abaisseur, s. m., and adj.,—depressor: a name given to those muscles (musculi depressores, L.---niederziehende muskeln, G.), whose function consists in *depressing* the organ or part to which their moveable extremity is attached. *Exs.*

"1. — *de l'œil*, depressor of the eye. See Droit *inférieur* —.

"2. --- *de la mâchoire inférieure*, depressor of the lower jaw. See DIGASTRIQUE.

"3. — *de l'aile du nez*, (alveolo-nasal, Chaussier),---depressor, alæ nasi, myrtiformis, L.,---herabzieher des nasenflügels, G.,---depressor of the ala nasi: a pair of muscles extending from the vicinity of the anterior nasal spine to the posterior region of the corresponding ala nasi.

"4. ---*de l'angle des lèvres*, (maxillo-labial, Ch.)---depressor anguli oris, triangularis menti, L.,---herabzieher des mundwinkels, G.,---depressor of the angle of the mouth: a triangular muscle extending, on each side, from the external oblique line of the lower jaw to the commissure of the lips.

"5. --- (*carré*) *de la lèvre inférieure*, carré du menton, (mento-labial, Ch.)---depressor labii inferioris, quadratus menti, L.---herabzieher der unterlippe, G.,---depressor of the lower lip: a square muscle extending, on each side, from the external maxillary line to the lower lip.

"ABAISSEUR *de la langue*,—γλωσσοκάτοχος,—linguæ depressor: an instrument wherewith to *depress* the *tongue*, instead of the spoon ordinarily employed, in examination of the fauces." (P. 1.)

There seems to us to be a relationship between the *ana* of prescriptions and one sense of the Greek ἀνὰ, but not quite so clear a one as the writers of medical lexicons would have us believe. Thus, when Xenophon talks of a journey being performed ἀνα πεντε παρασαγγας της ἡμερας, at the rate of five parasangs a day, we may imagine a kind of equal distribution of parasangs over the whole time occupied in the journey, and hence that ανα came to be taken by the prescribers to signify equality. The mark (there should be but one,) over the āā is a substitute for the n, and has done duty for that letter for many centuries.*

"CÉPHALÉE, s. f.,—κεφαλαία,—cephalæa, f. G.: correctly a chronic—employed by some writers as expressive of very violent and obstinate—*headach*: frequently, as a synonym of CÉPHALALGIE.

"CÉPHALINE, s. f.: a term borrowed from the *Greek*, κεφαλίνη; and signifying the base or root of the tongue.

"CÉPHALIQUE, adj.,—κεφαλικὸς,—cephalicus, L.,—cephalic, belonging to the *head*: an epithet, in anatomy, applied by Chaussier to the primitive *carotid artery*,—*Artère cephalique*, F.,—kopfschlagader, G.; and to the internal *jugular vein*,—*veine céphalique*. The latter term has commonly been assigned to a

* In Greek MSS. the line stands for *ν*, if written over a vowel, and for *α*, if over a consonant. (*Porson in Hec.* v. 1161.) In Portuguese, the n often has a waved line over it, (the *tilde*,) which alters the pronunciation, and may therefore be considered as constituting another letter. Want of attention to this made Lord Byron take *pena* with the line for *pena* without the line, the former signifying *rock*, and the latter *punishment*. See *Childe Harold*, Canto 1. stanza XX., and his two notes upon it.

cutaneous vein (radiale cutanée, Ch.), situated on the outer side of the thoracic limb; from which the ancients were accustomed to take blood in *cephalic* affections: probably influenced, in this practice, by observing that the vessel almost invariably anastomozed with the external jugular vein. In materia medica, the term *Céphaliques*, pl., is applied to remedies—κεφαλικὰ φάρμακα,—remedia *cephalica*, L., *haupt*mittel, G.,—prescribed for the removal of affections of the *head*." (P. 120.)

"CORDE, s. f., (χορδὴ, the string of a bow, or musical instrument, made of gut),—chorda, f., funiculus, m. L.,—strick, m., saite, f. G.,—chord or cord: a term in anatomy, applied, 1., by the ancients, to *tendons* in general; and, especially, to the great tendon of the leg, *corde d'Hippocrate*, F.,—tendo Achillis, L.,—see TENDON: 2. to a slender *nerve* of the internal *ear*,—la *corde du tympan*, ou *du tambour* (filet tympanique du nerf facial, Ch.), F., — *chorda*—*funiculus*---tympani, L., --- paukenfell*saite*, G.;---which, quitting the facial nerve in the aquæductus Fallopii, enters the cavity of the tympanum, by an orifice situated above the pyramid; and, passing between the longer process of the incus and the handle of the malleus, goes out through the fissura Glasseri, to unite, at an acute angle, with the lingual branch of the inferior maxillary nerve, and thus establish a communication between the spheno-palatine and submaxillary ganglia; and 3. to the *ligaments* of the *rima glottidis*,---*cordes vocales*, F.,---*chordæ* vocales, L.,—stimmritzen*bänder*, G.,---which some anatomists have regarded as tense *chords* producing the phenomena of voice.

"In certain cases of acute blennorrhagia, or urethritis, the spongy structure of the male urethra forms an indurated and knotty *tumour*,—in *French* pathology termed *corde*,—of oblong figure, beneath the membrum virile, and opposing the elongation of that organ in the state of erethism. This morbid condition constitutes the affection named *Cordée chaudepisse* by the *French*,—the harnstrenge of *German* writers." (P. 159.)

The part before us extends from A to CORNE: the second part is to appear about December, and the third next spring. When this work is completed, it will not only find a place in every well-selected medical library, but it will be a most valuable aid to the young student, and save him many a weary hunt for a hard word.

The Jamaica Physical Journal. Edited by JAMES PAUL, Esq. M.R.C.S. of London, &c. Nos. I.—VI., from January to June, 1834.—Kingston. 8vo. pp. 392.

THIS is a well-conducted periodical, and promises to be of service to our brethren in the West Indies. It consists partly of articles judiciously selected from European and American Journals, and partly of original papers. Among the former

we find several reviews, taken from our first Number, and among the latter some interesting cases, with one of which we will gratify our readers. It is narrated by the editor himself, and is entitled "Case of Recovery after severe Wounds."

"Sam, a negro, belonging to New-Pera estate, St. Thomas in the east, was addicted to running away, and consequently to plundering the provision-grounds in the neighbourhood, which he had successfully accomplished more than once on the neighbouring plantation Fairfield. The watchman of the latter place, finding his efforts to prevent the frequent depredations of no effect, was determined to watch his next appearance, and no doubt intended, if possible, effectually to put an end to the system; for which purpose, with cutlass ready in hand, he crouched by the side of the fence, not far distant to the aperture he knew the thief would pass. He had not long taken his station when the marauder appeared, who, unconscious of his intended reception, glided carefully along to the plantain-trees whose fruit was ready to be cut down. When he thought he had enough, he 'bagged his game,' and, throwing his load over his shoulder, was making for the place at which he entered: it was now that the watchman considered he had the opportunity of claiming his prisoner, and at once pounced upon him. Sam was not however so easily to be caught; and, watching the approach of his opponent, when he thought he was within reach, mustered all his force, threw his burden at him, and then took to his heels. As soon as the watchman recovered himself, he started in pursuit, and, before he gained the outlet, he was within stroke of his cutlass, which he immediately began to use. Before he was brought to the ground, he had received a sweeping cut, from the neck down the back, to the left of the spine, in length five inches, but only through the skin, a wound on the occiput, two inches in length, penetrating the outer table of the skull; and another over the posterior portion of the left parietal, which, glancing off, denuded about two inches square, the flap hanging by its lower edge; it was in all probability the former which had the effect. When he fell, he had quickly turned upon his back, probably for the purpose of grappling with his pursuer, who, taking advantage of his prostrate state, stood over him, and used his weapon with right good earnest, first right and then left, until he found there was no longer a chance of escape, or, more probably, that he had finished his man. He however left the poor wretch on the ground, went to the overseer of the plantation, and related what he had done. Additional people were then sent to the place, who conveyed him to the hospital; and I was sent for in the morning. I found him very weak, unable to speak aloud, and no pulse at either wrist. He had lost a large quantity of blood, but it had stopped, and there was not now the least oozing. His wounds lay gaping, and a cadaverous smell issued from them. On the arrival of Dr. Wm. Pine, who I

requested to assist me, we proceeded to examine the wounds, and determine what was to be done. Besides those already enumerated, both arms had the same quantity, and corresponding in situation, from the shoulder to the little finger. The deltoid muscles on both arms were cut through, the capsular ligament of the shoulder-joint laid open, and the head of the bone fractured. Spiculæ of bone were extracted from both joints; the next wounds were midway between the shoulder and elbow; they were mere fleshy wounds. Betwixt the elbow and wrist were three on each arm, also fleshy, except the carpal one on the right arm, which severed both bones, leaving the hand dangling by the flexor tendons on the fore part of the arm; the little finger of the left hand was split its whole length; there was a stab in the right side, and the little toe of the left foot was cut off.

"The debilitated state of the man precluded the possibility of operating, and we were at a loss to make up our minds to leave the right arm, where there appeared so little probability of a successful termination. We however judged that the most prudent course would be delay. All the wounds were therefore dressed, bringing the edges of each together by adhesive straps, and, where required, by sutures: the right fore-arm was treated as a compound fracture, the ends of the bones being placed in juxta-position, retained there by splints, and the whole bandaged. Gave him an opiate, and ordered gruel to be given occasionally. The following day he said he felt revived: the pulse was distinguishable at the left wrist; his skin had regained a natural warmth, and altogether he seemed to be doing well. Two days after, the wounds began to discharge, and, upon taking off the dressings, was agreeably surprised to see their very healthy appearance. Nothing remarkable now occurred till about a month after, when he was attacked with measles, with which he suffered severely, having no use of his arms, and consequently being unable to raise himself from a horizontal position, so that the sneezing and cough of the epidemic was very distressing. In two months from the date of the accident every wound had healed, and he had recovered the use of both arms." (P. 228.)

Mr. Paul announces his intention of bringing out this work quarterly, instead of monthly; and the first Number of the Journal, in its new shape, was to appear on the first Saturday in September. We wish it every possible success.

The Anatomy of the Bones, Joints, and Muscles, exhibiting the Parts as they appear on Dissection, and more particularly in the living Figure; as applicable to the Fine Arts. Second Edition, in two Parts. By GEORGE SIMPSON, M.R.C.S. &c.— London, 1834. 4to. pp. 141; with 30 Lithographic Drawings.

THIS work will undoubtedly be useful to artists, though we could have wished that the author had discussed his subject

at greater length. It appears to us that he has given the muscles only as they appear on dissection, and *not* as they are seen in the living body. This defect should be supplied when the book is reprinted, and Mr. Simpson should also add references to the works of the great masters, showing how and why particular muscles are brought into play.

The plates of the bones are handsomer than those of the muscles. This arises partly from their having been thrown off on India paper, which gives lithographic plates a relief and a breadth which they are otherwise apt to want; but chiefly from the real superiority of the drawings. These representations of the bones are so uniformly and equably beautiful, that it would be difficult to settle the precedence among them; but perhaps we might point out Plate V., giving a view of the scapula and humerus, and Plate VIII., a front view of the os innominatum and part of the femur, as reflecting the highest credit on the artist, Mr. Haghe. If Mr. Simpson would enrich his next edition with a number of drawings from the life by the same draughtsman, we would assure him a large sale: there is a quantum of merit which is irresistible.

Dispensary Abuses. Addressed to the Profession.
London, 1834. Pp. 8.

Our readers will observe that, in quoting the title of the important work before us, we have deviated from our usual custom, and have omitted to mention its size. Now this omission depends on a most cogent reason: there are no signatures to the book, and we have not a folder's eye, to determine at a glance whether it be in thirty-twos or sixty-fours. We may assist the student, however, in forming a notion of this unnamed size, by observing that it tallies with that of Bob Short's Rules for Whist. Not that we would have people suppose that there is any other resemblance between the two books: far from it; the one is a calm scientific treatise, the other an unsparing philippic. The sober Robert indeed does once sarcastically desire us to keep our temper, as if our temper was likely to follow our silver threepences; but the great unknown before us is Nemesis in the shape of a pamphlet in sixty-fours.

We shall now proceed to pirate all, or the greater part of the admonitions before us; and shall commence with an extract amounting to about three-eighths of the whole.

"Sir: London Dispensaries, as at present constituted, are an absolute nuisance, and peculiarly injurious to the poor, as well as

the just claims and respectability of medical men of education and experience. Indeed, those members of the profession who shall in future persist in attending such establishments, should be visited with the marked displeasure of the profession at large. From the commencement of your career, up to the present moment, your arduous and extraordinary exertions, which involve the health of British subjects in every corner of the world, have produced the most beneficial effects in many ways to the cause of humanity. But these admonitions, so fervently and clearly demonstrating the incalculable mischiefs arising out of such institutions to medical men and their families, have been so shamefully and ungratefully neglected, that we are inclined to believe that a species of fatuity exists among professional men, which ought to be called a medical dispensary monomania, and will authorise you, on application, to sign their certificates as just objects for admission into certain establishments, should they continue to adhere to their present course. Your efforts, so laudable in the eyes of reflecting men, have been heretofore under this department of flagrant abuse so much neglected, that we have been compelled to adopt the opinion, that these valuable exertions resolve themselves as it were into the throwing of pearls before the abhorred of the Jews. A meeting therefore of the profession on the subject of the attendance on dispensaries, which must be regarded as a species of medical *felo de se*, would be of admirable utility at the present juncture; as it would give vigour to the virtuous members of the profession, and bring the delinquents and evils arising from the vile dispensary system, which originated in that nest of fraud, the Colleges of Physicians and Surgeons, under the eye of the profession, and the nation at large. The receiving-rooms of dispensaries, into which diseases of a highly contagious nature are daily admitted, become the sources of direful evil to the community, because from thence as from a centre infectious maladies of a most inveterate character are diffused over every part of the nation where they exist, and thus they become sources of great expense, as well as of tragical events, as domestics convey these fatal diseases to the highest circles. The history of dispensaries and their abuses, by which medical men suffer most severely, would excite the astonishment and indignation of every virtuous and generous mind, by unfolding their defects. These institutions, in defiance of all your persuasive exertions, lamentable to be said, still continue to be anxiously sought after by medical men, greatly to their own degradation." (P. 1.)

The word *Sir* at the beginning might induce some of your quick people, who recklessly jump at a conclusion, without thought or inquiry, to suppose that this letter is a circular: no such thing. We learn from the P.S. that "the above was addressed to the Editor of a distinguished Journal, and hence its appearance in the original form." For our parts,

we cannot recollect the appearance of this letter in any of the distinguished Journals with which this island is blessed, and we therefore conjecture that it must have been published in some 64mo. Journal, known only to a select few.

It is melancholy to reflect how difficult it is to reform the world. Here, for instance, the editor of the unknown distinguished Journal has been wasting the midnight oil, and scores of patent pens, in endeavouring to teach doctors how to grow rich; but they have all refused to learn, to a man. Dispensaries and small beer for ever! has been their cry, when the editor was willing to give them claret and private practice. We do not wonder then that our pamphleteer proposes that the editor should send the afflicted dispensarians to "certain establishments." The act of parliament indeed requires *two* signatures, but mere formal difficulties of this kind are soon got over. Besides, a distinguished Journal probably has a sub-editor, and a number of blank certificates, with the two signatures ready written, might be kept waiting in some snug pigeon-hole, for the benefit of any doctors who should exhibit symptoms of a more than usual dispensarian friskiness. We admire our author's candour, in telling his friend that his exertions "resolve themselves, as it were, into the throwing of pearls before the abhorred of the Jews." We do not think his friend will like it, though. Nobody loves to be reminded that he has been engaged in washing blackamoors white, or twisting ropes of sand, or making silk purses out of the ears of "the abhorred of the Jews," or transmuting dispensary doctors into "virtuous members of the profession." The meeting, however, that our author talks of should be convened without the loss of a day; for it would not only be the parent of what would be called in America an anti-dispensary excitement, but might even be the forerunner of a general professional turn-out. The chair, we think, ought to be taken by a retired dispensary physician, on the principle that your reformed sinner makes the finest saint. We recollect that, some five or six years since, an excellent newspaper congratulated its readers that the cabinet was purged of the last taint of liberality: now, with the aid of the medical meeting in question, we think that the same foul canker might be cut out of our profession. We use these strong expressions advisedly; for, if the dispensary leeches will persist in their ruinous liberality, and shameful gratuitous advice, measures must be taken accordingly. If they will not listen to the friendly admonitions of the unknown Journal, they must be put to open shame.

" Cuncta prius tentanda, sed immedicabile vulnus
Ense recidendum est, ne pars sincera trahatur."

Our author complains (and with great justice) of the dispensary doctors, for diminishing the general funds of the profession, by seeing the poor gratis; for it would be foolish to say that they have no money to give in fees. Could they not give money's worth in clothes, victuals, and small articles of furniture? Nevertheless, it is certain that our author has furnished the delinquents with a defence which they will not fail to make use of. They will assert, (and will quote his pamphlet as irrefragable authority,) that what the profession loses directly, it more than gains indirectly, by the dispensary receiving-rooms becoming centres of infection, and, in consequence, " sources of great expense, as well as of tragical events." If the profession loses five guineas by Mrs. Finikin's gratuitous cure, doth it not gain a hundred by the infection being carried to my Lady?

We must content ourselves with one more quotation.

" Does the lawyer or the clergyman give assistance gratuitously to either poor or rich? Does the grocer, the baker, the brewer, the butcher, apply his goods to the support of those institutions? Certainly not; because they are well aware that, if *they* were to do so, they would be regarded as maniacs, or considered disgracefully inattentive to their own interests and that of their families. And were such goods offered, it would be difficult to persuade even the poor to make use of them; not only because of the disgrace of doing so, as taking advantage of an inconsiderate fool, but from the conception that the articles so distributed were unsound and worthless." (P. 5.)

It certainly is strange that no infatuated tradesmen have ever supplied their goods gratis. They would be very acceptable. The grocer might send his figs, (to make poultices,) the butcher his steel, the baker his alum, and the brewer his quassia. It is with great diffidence that we differ from a man who shows so profound a knowledge of the world as our author, yet we think that the poor *might* be coaxed into receiving other things gratis, as well as physic. We would bet him a handful of fees, that, if he will set up a gratuitous butcher's shop, in a quiet way, cutting up an ox or so per day, he will be able to do a good business, and will dispose not only of his edgebones and sirloins, but even of his clods and sticking-pieces.

We must now take leave of our author, giving him our hearty thanks for the composition of this letter. It is refreshing to know that there is such a man in the world.

ORIGINAL COMMUNICATIONS.

Cases extracted from the Note-book of HENRY DAVIES, M.D., Physician to the British Lying-in Hospital, &c.

CASE 1. *Marasmus, with Lymphatic Tumours.*

MAY 1st, 1820. J. Giles, who is now twelve months old, was born a fine healthy child, was vaccinated at the age of six weeks, took the breast well, and was a robust infant at the seventh month. At this period, small tumours appeared in different parts of the body, resembling carbuncles: they made slow progress, and were not painful. Being attacked with measles, however, the eruption disappeared suddenly on the third day; the limbs then began to swell, and the tumours slowly suppurated; first a whitish, and then a greenish matter oozed from them, without any apparent diminution of bulk.

The child is now thin, the skin pale and flabby, the eyes dim, and he moans constantly; there is no appearance of teeth, or increased secretion of saliva; the pulse is somewhat accelerated. The thigh, from a tumour near the acetabulum, appears as if dislocated. The mother has taken him to several medical practitioners, and his bowels have been well cleaned out. His stools are regular, and of the natural colour. The child will take nothing but the breast.

He was ordered an antispasmodic mixture, a purge of calomel and rhubarb, and the tepid bath every night.

May 3d. Hydr. cum Cretâ gr. iij. omni nocte. Continuentur balneum, et Mist. Antispasmodica.

May 10th. The child wastes more, and is extremely emaciated; his eyes are brighter; there is no appearance of teeth; the temperature of the skin is low. He perspires copiously; the urine is turbid, and stains his linen. He was ordered a nourishing diet, with wine and beef-tea, and to have the following ointment rubbed in: ℞. Camphoræ ʒi.; Antim. Tart. gr. v.; Ung. Hydrarg. mit. ʒij. M. ut fiat unguent. cujus quarta pars dorso quotidie infricetur.

14th. The general symptoms are as in the last report. A tumour is forming on his finger, and the one on the thigh is discharging a thin matter. He vomits after taking the breast.

24th. Looks livelier; stools more frequent; sleeps ill.—℞. Hydr. Subm., Pulv. Antim. āā gr. ss. M. ut fiat pulv.

h. s. s.—℞. Opii pul.v. ℈i.; Antim. Tart. gr. x.; Axungiæ ℥ss. M. ut fiat ung. cujus quarta pars dorso infricetur o. n. Continuetur balneum.

28th. The bowels are quieter. He does not throw up the breast-milk, but, if he is made to take anything else, vomiting and violent spasms are the consequences. He sleeps better since the opiate friction.

June 2d. He rests better; there is a pustular eruption on his back; the tumours are diminished in size.—Continuentur medicamenta.

June 8th. Continues to waste; takes the breast well, but not anything else.

June 20th. Died exhausted.

Dissection. The intestines were empty, and the arch of the colon was filled with flatus, distending the abdomen; the mesenteric vessels were somewhat turgid, and the glands slightly enlarged. The stomach was much contracted, but not diseased in its structure. The lungs were tuberculated throughout.

The tumours were encysted, and contained a curdy matter.

Dr. Cheyne mentions the occurrence of tumours in cases of hydrocephalus. They were of the size of a nutmeg, and apparently situated in the cellular texture, suppurated without pain, and left behind scrofulous sores. He says that he has never known these tumours except in constitutions where there was a strong tendency to scrofula, and that they are not dangerous unless numerous. Recovery, however, seldom takes place: some new form of scrofula appears, and the patients die tabid.

I have, however, seen two cases, in which the recovery was perfect. Miss C., when two years old, suffered from a protracted cough, marasmus, and several of these tumours: she is now a fine healthy girl of fifteen; her mother died consumptive. Miss G. had these tumours, of which one was large, and at the insertion of the deltoid. The remains of the tumour are still to be seen; but this patient likewise is now healthy.

In the case of Giles, as he was of an age when he ought to have had teeth, I endeavoured to procure artificial salivation, to produce counter-irritation, and to give him temporary support by stimulants. In consultation, generous living was advised; but his stomach resisted it. It is probable that the recession of the measles had affected the lungs.

Case ii. (Reported by Mr. Laidlaw.) *Scrofula.*

July, 1826. The subject of the following dissection was about five years of age, of a fair complexion, and delicate habit. The disease had existed between two and three years. The symptoms were, latterly, emaciation, debility, slight cough, and difficulty of breathing, but no expectoration.

Sectio Cadaveris, sixty-five hours after death. Skin of a mottled green colour; emaciation considerable, but greater on the thorax than the abdomen.

Thorax. The lungs on both sides adhered to the pleura costalis, and also to the diaphragm; they were of a mottled, dark, blackish colour, when cut into; tubercles were found to pervade their whole substance; several of them were two-thirds of an inch in diameter, and one of them, at the apex of the left lobe, communicated by an aperture with the cavity of the thorax. At the superior part of the right lobe, where the bronchi enter, two concretions were found. There were about five ounces of fluid.

Abdomen. On exposing the viscera, the intestines, which were red and much inflated, were found to have formed extensive adhesions with the peritoneum. They were so vascular, that, in several parts, the whole circumference of the intestine assumed the appearance of a well-injected preparation.

Mesentery. Its glands were enlarged throughout, several exceeding a pigeon's egg in size. When cut into no one was found to have suppurated, or become scirrhous, but they were of a doughy consistence.

Spleen. The adhesions of this organ with the stomach were so strong as to be separated with great difficulty. These adhesions were probably formed by the irritation communicated from the mesentery and the intestines in its vicinity, which were more inflamed here than in any other part; for, when the spleen itself was cut into, its substance was found to be quite natural.

Stomach. The stomach contained a considerable quantity of fluid, but, so far as it was examined, was in a healthy state.

Liver. The liver had formed extensive adhesions with the diaphragm, which appear to have been produced by the irritation communicated from the lungs. The disease was merely superficial; for, when cut into, the substance of the liver was healthy.

Gall-bladder. This viscus was two-thirds full of yellow bile, and was in every respect perfectly healthy.

The cavity of the abdomen contained about half a pint of bloody serum.

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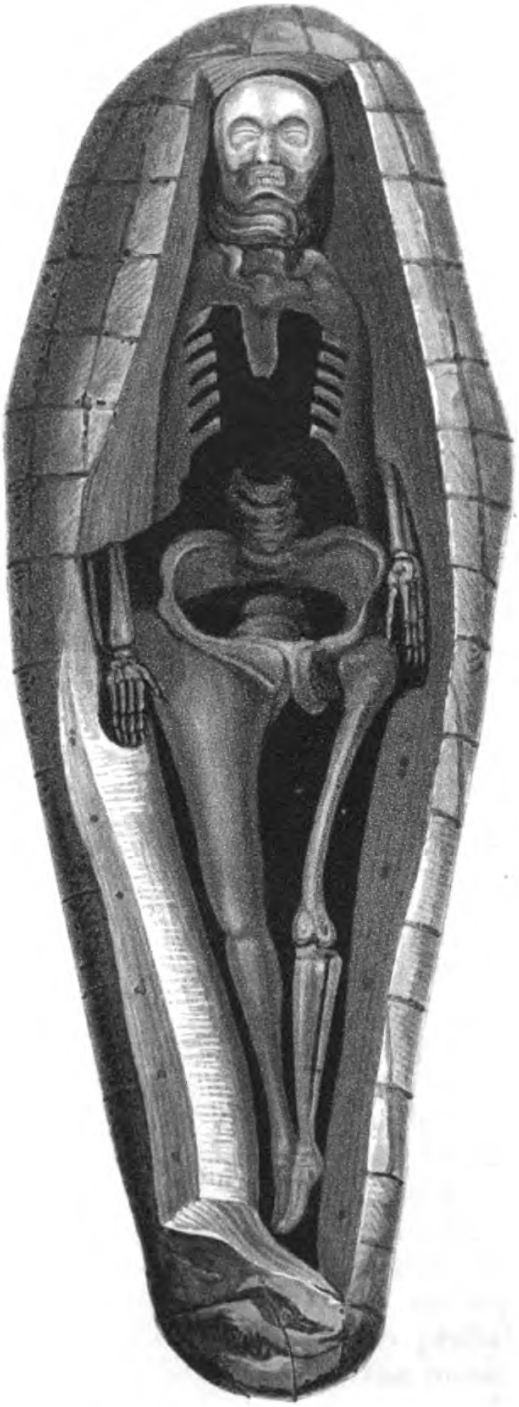



Mummies found in Wymondham Abbey, Norfolk.



Fig 1.



Fig 2.



Fig 3.

Mr. Howship's Cases of Œstrus Humanus

An Account of the Examination of two Bodies, found in the Vaults of the Ruins of Wymondham Abbey, in Norfolk. By JOHN DALRYMPLE, Esq., Assistant Surgeon to the London Ophthalmic Infirmary.

[WITH AN ENGRAVING.]

ON the 23d of December, 1833, whilst some labourers were engaged in clearing away a portion of the ruins of the old abbey of Wymondham, a market-town in the neighbourhood of Norwich, a vault was discovered, and laid open, containing two leaden coffins, of very different dimensions. From the great antiquity of the ruins, these relics excited much curiosity among the inhabitants of the place; and the larger of the two coffins was without loss of time divided throughout, in the direction of its length. Within was found not the mouldering fragments of a skeleton, but an entire human body, carefully wrapped in cerecloths, and to all appearance in a state of high preservation. At this point curiosity for the present stopped; further investigation was deferred, and the coffins, for safety, conveyed to the interior of the adjoining church, until a more minute and satisfactory examination could take place.

On the fifth day after the discovery thus made by the workmen, my father was requested to go over from Norwich, to make an inspection of the body contained in the larger coffin; but, being prevented by unavoidable circumstances from accepting the invitation, I took his place, and, accompanied by one of my brothers and by Mr. Woodward, an excellent antiquarian, residing in Norwich, I proceeded to Wymondham, and, in the presence of the clergymen, and several medical and other gentlemen of the place, began my examination of the newly discovered body.

The two coffins were of very unequal dimensions: the larger measured six feet two inches in length, thirteen in breadth at its widest part, and ten inches in depth; it tapered slightly from head to foot. The small one, still unopened, measured only sixteen inches and a quarter in length, by six inches in breadth at the head, where it was five inches and a half deep. This one was also somewhat narrower at the feet than at the opposite extremity, and four inches in depth. The lead of both coffins was very fresh in its appearance, and had lost so little of its metallic lustre, that its line of solder was still bright. Neither coffin bore any date or inscription, by which its antiquity, or the name of the body it contained, could be ascertained. There were no traces of any wooden casing exteriorly, and I believe I

am correct in stating there were none within. Owing to some fragments of the brick vault having formerly fallen in, a portion of the lead, at about the centre of the left side of the coffin, was crushed, and admission given to both air and moisture. It may be recollected that an accident of nearly the same kind, and followed by similar results, had happened to the coffin of Henry the Eighth, as mentioned in Sir Henry Halford's admirable paper on the discovery of the remains of King Charles the First.

The length of the larger coffin internally measured five feet eleven inches; the extreme length of the body in its wrappers was five feet nine inches.

The general form of the body was not unlike that of an Egyptian mummy. The linen bandages were, however, *throughout* saturated with a resinous compound, smelling strongly of gum galbanum, and burning with a bright flame; the whole was carefully and neatly bound, both longitudinally and transversely, by a cordage rather thicker than a swan's quill. Although this cordage was nowhere actually disjoined, and the knots were still entire, yet it was so softened by the influence of moisture, that the least touch was sufficient to break up its texture. The anterior stratum of the investments of the body was of a light brown colour, somewhat decomposed, and easily removed in flakes. The impressions or marks of the threads of the linen remained, but the fibres had generally disappeared, and its consistence seemed owing to the resinous nature of the composition in which it had been immersed, when liquified by heat.

In many places we found the wing-cases and other remains of a small species of beetle lying upon the compound, and towards the extremity of the body the composition was much honey-combed by the labours of these insects. Some living larvæ found at the examination were taken, in order to witness their transformation into the perfect insect.

Upon comparison, these minute Coleoptera appear to be identified with the Cerylon Hysteioides of Latreille, which live under the bark of trees. The larvæ also probably subsisted upon the vegetable fibres of the linen or fragments of wood mixed with the resinous composition of the outer stratum.

Beneath the exterior surface, fresh wrappers of coarse cloth succeeded, again and again bonded with cordage, stronger and more perfect as we approached the body; and at either extremity of the body so firm were the investments, and so thoroughly saturated with resins, that it required a strong knife to remove them sufficiently to expose the enclosed

body. The cords which bound the outer and inner strata of linen rolls were applied with great nicety and regularity, and, by intersecting each other at right angles, where they were firmly knotted, the surface was chequered by squares of equal size. On reaching the surface of the body, the sternum and ribs first presented themselves, black, and bare of cartilage. The thorax and abdomen were filled with a dark-coloured pultaceous mass, among which no trace of any viscus was perceptible.

The left arm and hand were without flesh, but the size of the bones at once determined the question of sex; they must have belonged to a female of small stature. The pelvis was ample, the distance measured from the anterior and superior spinous processes of the ilia giving nearly nine inches; from the promontory of the sacrum to the pubes, five inches; and the outlet (antero-posterior diameter), four and a quarter inches. Of the left thigh and leg nothing remained but their bones; while on the right side the skin and muscle still existed. The length of the thigh-bone was sixteen inches, of the leg fourteen and a half; of the foot from heel to toe seven and a half inches. In respect to the position of the feet, they were placed somewhat across each other, and were extended into nearly a straight line with the body.

The viscera of the pelvis were still distinct; the organs of generation had been stuffed with flax mixed with spices. The bladder was collapsed. The rest of the pelvic viscera were partly converted into adipocire, mingled however with distinct brownish fibres, the remains of the iliac and psoas muscles. The hair still adhered to the skin of the pubes.

On exposing the head of the body, a large mass of long curling hair was found, placed round the neck and under the chin, of a glossy brilliancy and auburn colour, approaching to a reddish tinge: it had evidently been shaved from the head, and carefully arranged in the above position.

From the tenacity of the cerecloths at this part, I had hoped to have been enabled to have removed them as a mask, and so have preserved a mould of the features of the individual person: this, however, I found to be impracticable, the integuments being still adherent. The eyeballs had not been removed from the orbit, but, though shrivelled and retracted, (the eyelids falling in upon them,) were still distinct. The nostrils were stuffed with flax; the lips had disappeared, exposing a beautiful set of small and well-arranged teeth, the cutting edges of which had been but little worn. The scalp separated easily, and with that peculiar crackling noise

which attends this operation in the recent subject: the cellular tissue was, in fact, perfect. The ears, though wanting, had left their impressions in the waxen cloths, showing that the bandages were applied while the resinous compound was yet liquid. The total length of the body did not exceed five feet.

Some surprise was excited among the medical practitioners who were present, on finding that the capacity of the uterus equalled that of a small orange. This circumstance was explained by the contents of the lesser coffin, which we now proceeded to examine.

Within this second leaden case we found a small mummy, about thirteen inches long, hard, dry, and firmly bound with cords, tied at one end like the neck of a sac. The cerecloth of which it was composed was so fully impregnated with resin, which had been melted over it, that it was found necessary to use a saw to open its cavity. In dividing to about one and a half inch, a hollow was exposed, containing a second package surrounded by a bed of cummin-seeds, so fresh and dry as to yield a very powerful odour. This interior case was carefully corded like the first, and when opened showed a cavity filled with cummin and coriander seeds, nitre, common salt, and fragments of fragrant woods, producing a rich and pleasant perfume. In the centre of this bed was deposited a fœtus, about four and a half inches in length, black, dry, and flattened; the umbilical cord still remained; the sex unascertainable. This at once explained the circumstance of the uterus having admitted of being stuffed, and it led us to infer the probability of the female having died pregnant, and that, on embalming the body, the uterus had been opened, and the fœtus removed. This, I think, is more probable than that she had died in consequence of a miscarriage, as in that case the uterus would have been more contracted than we found it to be. As I before observed, there was no mark or date upon the coffin; neither was there any ring or ornament upon the body, or in the coffin. It was evident, however, from the care which had been taken in the preservation of the corpse of the mother, as well as of the fœtus, that it was a person of high rank, most undoubtedly young, and possibly dying pregnant of her first child.

The ruins of the abbey among which these curious remains were found are of considerable antiquity. Mr. Woodward, by measurement, ascertained that the vault was placed in the central line of the chancel, in the situation of the high altar; a position appropriated to the burial of the more illustrious personages. Old documents also prove that the

founder erected this structure about the year 1120, and buried his wife before the altar, she dying in early life.

The abbey of Wyndham, or Wymondham, was founded in the year 1120, by William de Albini, or Daubeny, who married a daughter of Ralph Bigod, Earl of Norfolk.

For the gratification of the collectors of legendary tales, I may mention, that a clergyman residing in the town informed me he had often heard a report among the lower classes, of a golden cradle being somewhere buried among these ruins. In almost every place where the remains of old castles, monasteries, &c. are to be found, there have existed, time out of mind, a race of *treasure-hunters*, and it is not improbable that the story of this interment had been handed down from the earliest period to the present time. The leaden coffin of the fœtus has been gilded by the imaginations of the romantic, and its narrow cell converted into the cradle of the infant of a once illustrious but extinct family.

Since the above examination was made, further excavations have brought to light some stone coffins, in which were found the skeletons, more or less perfect, of other persons who had been buried in the abbey, and which, from the remains of hair-cloth and other vestments, appear to have belonged to the common order of Benedictine monks. No traces of any process of embalming were, however, discovered. I have also ascertained that, about twenty years ago, the vault in which the coffins were found had been accidentally opened; but foul air having extinguished a candle, let down into the cavity by way of precaution, no person ventured to explore its contents. The vault was therefore hastily closed up, and all recollection of the circumstance gradually died away. It seems exceedingly probable, therefore, that the fracture in the side of the larger coffin was produced by the bricks and rubbish falling in through the carelessness of the workmen employed; and that, but for this accident, the body of the mother would have equalled in its preservation the best specimens of the Egyptian art.

8, *New Broad street;*
August 8, 1834.

Some Account of two Cases of Inflammatory Tumour, produced by the Deposit of the Larva of a large Fly (Œstrus Humanus) beneath the Cutis, in the Human Subject; accompanied with Drawings of the Larva. By JOHN HOWSHIP, Esq.

(See the Plate.)

THE stomach and alimentary canal of animals are known to afford support to several species of worms, and occasionally also to various insects: indeed, all the cavities communicating with the intestinal canal, and even the urinary passages, are subject to the occasional intrusion of insects, some of which are ascertained, and others not yet determined.

Some years since, in conversation, an intelligent friend mentioned having once seen, in Surinam, the larva of some large insect lodged in an inflammatory tumour beneath the cutis, in one of the men under his charge. His statement of the fact was too clear to admit of doubt, although to me it was so entirely new, that it made a deep impression; the only animals perhaps yet known to take up their abode in the subcutaneous cellular tissue of the human species being the Dracunculus, or guinea-worm, and the Furia Infernalis; the Pulex Penetrans, or Chigoe, forming its nidus beneath the cuticle only.*

In August, 1832, I had the pleasure of seeing a young gentleman, formerly one of my house-pupils, on his return to England. He had obtained the appointment of surgeon to a mining company, at a settlement near Santa Anna, Colombia, where he had been resident several years. On this occasion I was agreeably surprised by his presenting me with a specimen of a larva, which he had himself pressed out from a tumour. The case, he said, he had preserved for me; but as it was, with his baggage, not yet arrived, I noted the particulars at the time from his verbal statement.

It now appeared practicable to ascertain with some precision the particular description of fly to which the larva in question might be referred; but, on shewing it to Mr. Clift, he said he recollected having once, and only once, seen a similar specimen, with a very similar history, at the sale of the collection of the late Mr. T. Keate, surgeon-general to the army, although he did not know what became of it. It may be presumed that Mr. Keate had obtained his specimen

* For a knowledge of the existence of the Furia I am indebted to my distinguished friend, Mr. Hatchett, who, when I had the pleasure of reading these remarks to him, and mentioning the two other insects, immediately gave me the name of the third; referring me to the system of Linnæus, where it has a place, and also to Coxe's Travels in Russia, in which the severe, and even fatal effects, produced by its lodgment beneath the skin are well described.

as a curiosity presented by some gentleman, who, having seen the case, had brought the insect home with him. I subsequently mentioned the circumstance to Mr. Robert Keate, who regretted it was not in his power to give me any information regarding it.

Being told that some such instance had been placed on record, I consulted, but without success, several works to which I was referred; although I still doubt whether such notice may not somewhere be found.*

Under these circumstances the best course appeared to be, to obtain from good authority a description of the larva, including its probable place in a systematic view; together with those suggestions that might be useful in any future case, by enabling the observer to preserve the larva alive, until, breaking from its confinement in the pupa, it came forth, the perfect fly: thus affording the most desirable result, and only adequate means for determining its exact place in the extensive arrangement of natural history; and that it would then be desirable so to make known these observations as to meet the eye and obtain the attention of gentlemen who, from their professional duties abroad, may have the opportunity of following up, and completing, the present inquiry.

With these objects in view, I obtained, through my friend, Mr. Houlton, surgeon, an introduction to Mr. J. Curtis, an active member of the Linnæan Society; a gentleman, the extent of whose scientific acquirements is only equalled by the zeal with which he devotes his time and talents to the study of natural history, and most especially entomology. To this gentleman I am indebted for his valuable descriptive remarks subjoined, and for his attention in procuring the annexed drawings of the insect, by an artist of singular merit, exclusively devoted to these pursuits.

In reference to the first of the above-mentioned cases, I lately wrote to my friend, Mr. W. Gill, many years a surgeon in the army, and now a teacher of anatomy in Liverpool, who favoured me, in reply, with the following statement:

"In August, 1806, I visited a soldier of the 64th regiment, at an outpost, on the Marawina river, Surinam, with a boil, of the size of half-a-crown, on his back, a little below the scapula: it was acuminated, and sloping towards the margin.

* Having recently heard that this insect is described in Humboldt's Travels in South America, to ascertain the fact, I referred to the original copy, in the library of the British Museum. I read through the references to the plates on natural history, looked over the plates themselves, and also the letterpress bearing upon the plates, without finding it; yet it is possible I might have overlooked it.

Compression ejected a maggot, or larva, about this size and form.  Horizontal, dirty brownish stripes were on both surfaces, (I believe I am right,) which were alike somewhat convex. Between the stripes the colour was of a dirty white. Unfortunately it was not preserved, nor indeed accurately examined. I think the man was aware he had, as he said, a worm in his boil. The outpost (Prince William Frederick) was on a sandbank, closely hemmed in by the bush (wood.) The water for drinking was procured by sinking two rum puncheons into the sand, close to the sea, without bottom or head.

"The barracks were occasionally visited by the Vespertilio Cynocephalus, which sometimes bled us. One night, for example, I went to sleep without my mosquito-net: I awoke, and, placing my hand on my arm, found a small quantity of blood, which had flowed from a circular bite in the skin, effected by one of these gentlemen. It healed readily. Of course, in such a country, and such a position, we ate, drank, and respired animalculæ in abundance. The back water, in the woods, swarmed with fish; in the river, we had the Manatus. The wind blowing on us from the sea, it was healthy in the extreme. No ailment visited us, save an occasional dysenteric attack."

The following are the notes I took regarding the second case.

August 29th, 1832. Mr. G. Treherne brought me the larva of an insect, which he took from beneath the cutis of a patient, while on duty at Santa Anna, in the district of Maraquita, Colombia.

A young man, a carpenter, requested him to look at his scrotum, upon the anterior inferior part of which was an inflamed swelling, more than an inch in diameter, with two small ulcerated openings, discharging a thin purulent matter, little painful, but rather itching: he sometimes, however, complained of a smarting pain. It was intended, if the two little openings did not heal, to lay them into one.

In a day or two he saw him again, (the swelling having existed several months,) and then observed something white occupying the largest of the openings. Mr. Treherne, gently pressing the tumour, perceived a whitish substance advance and recede. He at length suspected it must be an insect, and, continuing to press it, the larva was further protruded, as the opening relaxed; and, with the effusion of a

drop or two of blood, the thickest part soon escaped, when it dropped out, and fell to the ground. It was lively, turned to and fro, protruded its extremities, and retracted them again.

On the escape of the larva, the little cavity very soon healed.

It is worthy of remark, that both these cases occurred in nearly the same parallel of latitude, Surinam and Santa Anna being each situated about five or six degrees north.

It now only remains, in conclusion, to add the following valuable statement, with the description of the larva, by Mr. Curtis.

"The insects that compose this remarkable group of flies have been divided into three genera, principally distinguished by the neuration of their wings; and it is interesting to find they also vary considerably in their economy. Two of these genera are inhabitants of Europe, and the third is confined, I believe, to North America. The former are named Œstrus,* and Gasterophilus;† and by the English they are denominated Bots and Gadflies. The first of these genera, containing several species, live, in their larva state, under the skin of animals, in the fauces, near the root of the tongue, or the frontal sinuses of the head; the latter, containing four described species, inhabit the stomach of the horse; and one of the American group, called, by Mr. Bracy Clark, *Cuterebra*,‡ resides under the skin of the rabbit.

From the economy of the larva submitted to my inspection, and considering the country it came from, it might fairly be inferred that it was related to Cuterebra; but, on a careful examination, it appears to me to resemble most strongly some that have been transmitted to me, that were taken from the fauces of deer, the fly from which I believe to be the Œstrus Pectus of the British Entomology. It is spined in a similar way, and appears to have two hooks over the mouth, which are said, by M. Reaumur and Mr. Clark, to be wanting in the larvæ of the Œstrus Bovis.

Without, therefore, having a specimen of the fly, it is impossible to say to which of these genera the insect belongs; perhaps to none hitherto described.

For the sake of identifying the insect in future investigations, I shall propose calling it for the present *Œstrus hu-*

* Curtis's British Entomology, vol. iii., fol. and plate 106.
† Ibidem, - - - - - 146.
‡ Clark's Essay on the Bots of Horses and other Animals.

manus;* and it may be thus characterised: order *Diptera*, family *Muscidæ*, genus *Œstrus?*

Œstrus humanus, Curt., fig. 1. The underside, fig. 2, side view. *a*, *a*. The head. Larva more than an inch long, subfusiform-ovate, dull ochrous colour, most attenuated and brown towards the tail, wrinkled, composed of nine rings. Besides the head, the first six, with the anterior margin, furnished with rather irregular rows of minute brown hooks, the third, fourth, and fifth having a transverse fold, armed in the same way;† anus truncated, retracted, and wrinkled. Head subglobose, furnished with an elongated orifice (Fig. 3, *e*,) on each side behind; mouth with two tubercles terminated by a vesicle, or aperture (*c*), another above them (*d*), and two strong, horny, and black spines below (*b*).‡

It must be observed, that this description would not completely represent the living animal, on account of the parts being contracted and hardened by saturation in spirits of wine. This may account for my not having detected any spiracula, which are strongly developed, I believe, in the Œstri, but not in the Gasterophili. There were some hairs floating in the bottle, which, I think, never were attached to the larva.

It is well known that the female fly of the Œstrus bovis deposits her eggs on the back of the ox and cow, where they hatch, and, eating through the skin, form a tumour beneath: the same accident might therefore readily happen to a man, if his skin were exposed, during the heat of the day, where the flies abound; and the same consequences would follow.

It would be extremely desirable to ascertain the fly that the larva produces, and to accomplish this it may be useful to observe, that, if at any time a full-grown one should be obtained, a garden-pot, or other earthen vessel, nearly filled with rather moist earth, put in lightly, should be taken, and, the grub being placed on the top, it would soon bury itself, and change to a pupa, or chrysalis. If the pot were set in a saucer, and a little water poured into the latter, so that it

* Pallas mentions an Œstrus Hominis, but, whether it be the same as our insect, I have no means of ascertaining at present.

† These hooks probably serve two purposes: by irritation, they cause an additional secretion in the cavity where they live, and by them they are enabled to turn round and change their attitude, as well as to make their escape from the tumour, when full-grown. They seem to be formed like the thorns of a rose or brier, and most of them point towards the tail; but some, especially approaching the posterior part, are directed towards the head.

‡ These spines are supposed not to exist in the subcutaneous feeding larvæ that have been examined, they being provided for attaching the animal to the stomach, &c., as in the Œst. equi; but those of the sheep, living in the frontal sinuses, as well as of the deer, as already mentioned, are furnished with them.

might be gradually absorbed through the bottom of the garden-pot, it would be kept moist; a very essential state for producing the fly; and, to prevent its escape when it hatches,* a piece of gauze, or anything that is transparent, must be laid over the top, and the fly ought not to be killed until some hours after it has come out from the pupa, that the wings and other parts may have time to dry, and assume their natural form and colour.

Saville row; November, 1833.

Account of a Case of Choleroid Affection, produced by the Poison of Muscles. Communicated to the Harveian Society, by Theophilus Thompson, M.D., Physician to the Northern Dispensary.

William Hooper, a tall, muscular man, aged fifty, came to me for advice, to the Northern Dispensary, October 7th, 1833. He was evidently labouring under great debility: streams of perspiration were running down his forehead; his breathing was short and interrupted; his countenance peculiarly pallid and anxious, and his lips were of a deep hue; the hands were extremely cold; the pulse, just sufficiently perceptible to be counted, was 100; the tongue much furred; and the epigastrium very tender on pressure. He complained of pain and a sensation of heat in that situation, which had lasted all day. Since the previous morning he had vomited all his food. Much diarrhœa yesterday; today less considerable. The respiratory sounds were natural, and the urine passed freely. No cramp, itching, or numbness. I questioned the man closely respecting his diet during the week, but he did not mention anything likely to produce the symptoms.

Six leeches to be applied to the epigastrium. To have two grains of calomel and half a grain of opium every two hours. Chalk mixture, with a few drops of aromatic spirit of ammonia, and tincture of henbane, after every loose evacuation. To drink freely of barley-water holding gum arabic in solution.

It was agreed that a messenger should bring me an account of the patient in the evening.

October 8th. Having heard no account of the man on the previous night, I called at the house, and found him in a

* This sometimes takes place in a fortnight after the larva enters the earth; at other times, I believe, two or three months elapse.

state very similar to that in which he appeared on the day before. The perspiration was still streaming down his face and chest; the extremities were cold, and the pulse 100 and regular, but scarcely perceptible, from its weakness; the action of the heart not strong, but could be distinctly heard over the lower part of the right side of the chest. The respiratory murmur was heard over the greater part of the chest. He evinced great anxiety and restlessness, frequently rising, and commencing a sentence with much animation, but lying down again before it was completed. The tenderness of the epigastrium was considerable, and the tongue was covered with a brown fur. There had been only one evacuation, which was reported dark, but had been thrown away. The leeches, before they were half full, had fallen off dead: the blood was extremely black. Vomiting still frequent.—He was directed to take tartrate of soda, with tincture of henbane, and to continue the pills of calomel and opium.

Although the case presented a hopeless aspect, yet, as the inflammatory symptoms were distinct, and the pulse remained unchanged, it appeared to me proper to try the experiment of bleeding, premising the use of the hot-air bath. The patient was to be kept in the erect posture during the operation, the finger to be kept on the pulse, and the blood at once stopped if the pulse should not rise. A small quantity was taken from the right arm; it trickled down thick and black, but soon stopped. The pulse having risen a little, a vein was opened in the left arm; an ounce and a half of blood was withdrawn in a slender stream, without any decided effect on the pulse, when it suddenly ceased to flow, and the patient fell back in a state of syncope, from which he never recovered.

Sectio Cadaveris. The body was inspected forty-four hours after death, with the valuable assistance of my excellent colleague, Dr. Stroud.

External surface: The body was well made, large, muscular, and moderately fat. The integuments of the sides and back had a livid aspect. This livid appearance was most observable in the arms, particularly in the course of the veins, and near the punctures made in venesection, which were still slightly bleeding, and surrounded with ecchymosis. The superficial veins of the neck, chest, and arms, were much distended. Percussion of the chest gave a dull sound. There was no shrinking of the extremities: a silver ring on one of the fingers could not be removed, either during life, or after death.

Thorax: The pleuræ were pale. The right pleura, at its upper part, presented many firm, short adhesions. The left pleural sac contained two quarts, and the right one quart, of transparent serous effusion. The lungs were collapsed and soft. The right lung adhered rather firmly to the diaphragm, and some vesicles at the edge of the lower lobe were emphysematous. The pericardium contained nearly a pint of citron-coloured serum.

The heart was of the natural size. The right auricle full of dark blood, by which this auricle, the right ventricle, and the pulmonary artery, were deeply tinged.

Abdomen: The peritoneum was in several places reddened, and in some parts, where it covered the ascending colon, distinctly ecchymosed. The colon was dilated to nearly twice its natural size; its transverse arch, bending down at an abrupt angle, in the middle descended below the umbilicus, then rising to the left hypochondrium, pursued its usual course. The sigmoid flexure was contracted, but healthy. The mucous membrane of the stomach was very vascular, and, with the exception of a small part near the lesser curvature, presented the appearance of a bright red patch tinged with grey. This appearance, when closely examined, was found to arise from hemorrhagic depositions of a capillary and punctiform character. There was a hemorrhagic spot, the size of a pea, near the pyloric extremity. Many venous trunks, of considerable size, were seen ramifying along the great and small curvatures.

The mucous membrane of the colon exhibited a number of patches, of a round, oval or irregular form, and mottled aspect, from one fourth of an inch to two inches in diameter; some of a nearly uniform livid red, others of a deep red, nearly approaching to black. These colours seemed to be produced partly by venous congestion, but chiefly by sanguineous effusion. Over the brighter patches the mucous membrane was little changed; over those of deeper tint, it was in a state of considerable vascularity and congestion. Over one of the largest patches a circular portion of the mucous membrane, half an inch in diameter, was soft, and of a dirty yellowish grey, presenting the character of a slough. Another portion near this, of similar form and size, appeared in a less advanced stage of sphacelus, of a deep green colour, and traversed by minute veins gorged with blood. At this part, and wherever the hemorrhage was considerable, the mucous membrane was softened; in all other parts its thickness and consistence were natural, and its colour was for the most part reddish yellow, with a tinge of grey and blueish

green.* It could be made to slide easily over the patches. The small intestines presented some congestion, chiefly ramiform, and a few small patches, of a bright red colour. The follicular structure was nowhere affected. The intestines contained a considerable quantity of feculent matter.

The liver was of moderate size: much dark blood followed incisions made into its substance. The gallbladder was full of dark bile, which was squeezed with difficulty through the ducts. The urinary bladder was empty.

The appearances on the inspection producing strong impressions that some unwholesome diet had been taken, careful inquiries were made upon the subject, and it was for the first time discovered that, on the evening of October 4th, four days before his death, this poor man had eaten about a pint of muscles, which were plump and fresh; they were boiled, and taken with pepper. The widow afterwards gave the following particulars of the progress of his attack: After taking the muscles he had slept pretty well, and the next day went to work, but returned at one o'clock to dinner, complaining of weakness and a peculiar feeling in the head, which he supported on his hand, and went to sleep. His wife awoke him, but he again fell asleep. After repeatedly dozing, and being repeatedly aroused, he took a little bread and cheese and beer, and went back to work. In the evening he took a little coffee. At two o'clock on Sunday morning, October 6th, he awoke with diarrhœa. In the afternoon sickness came on, and his hands became cold. He took a little apple-pudding for dinner, and afterwards some broth, but immediately after complained of violent pain in the loins. His wife rubbed him with spirits of turpentine, from which he experienced relief. On Monday morning, October 7th, he complained that exactly the same pain he had felt in the loins had come to his stomach.

On Sunday his bowels were purged six times, on Monday four times. He experienced no relief to the vomiting from its commencement, on Sunday, till a short time before his death. There was no itching nor eruption of the skin. He passed no urine during the last twenty-four hours.

He had tended a mill connected with a brush manufactory, and was much exposed to dust, which had occasionally produced fits of coughing; but this had been his only complaint, excepting an attack of pain in the stomach, (six weeks before

* Dr. Carswell has executed with his accustomed accuracy a beautiful drawing of the stomach, and of the part of the colon most affected; and, to ensure fidelity, I have to a great extent adopted his expressions, in the above description of the appearances of those parts.

his death,) which was immediately relieved by a powder obtained from a druggist.

Remarks. This case may be considered as an interesting example of the effects which may be produced upon the heart and capillary system, by a shock communicated to the stomach and intestines, and diffused, through the medium of the nervous influences, over various parts of the system.

It may serve to illustrate several of the more remarkable phenomena presented by malignant cholera, to which disease the case under review presents some striking analogies. There was the same failure of the circulation, both general and capillary, with a deterioration of the quality of the blood. The extreme coldness; the relaxed state of the capillaries of the skin, causing streams of perspiration to run down various parts of the body; and, ultimately, the suppression of urine, present additional points of resemblance. The failure of the circulation, and the deterioration of the blood, must in this case be referred rather to the influence of some septic cause, than to the diarrhœa and vomiting, which were insufficient to produce such effects. The evidence for the existence of some septic influence seems confirmed, when we consider that, from the time the patient's extremities became cold, there was no decided effort at reaction: and, when reaction fails to follow congestion in the large veins, it seems reasonable to conclude that some sedative cause prevents the heart from being excited by an unusual quantity of its natural stimulus.*

It is only by allowing the existence of a similar cause, that we can explain many of the phenomena of malignant cholera. The very first symptoms are frequently enfeeblement of the nervous power. The excitement of inflammatory action sometimes relieves the nervous depression; but, when reaction is insufficient for that end, the sedative cause prolongs its influence, and introduces a new train of symptoms. Hence the occurrence of typhoid symptoms, after recovery from the collapse of cholera.

The effect of this influence on the organic system of nerves appears analogous to that which is apt to arise from severe mechanical injury.† When dangerous injury of this nature does not immediately destroy life, the subsequent fever generally assumes a typhoid character, and any accompanying inflammation tends rapidly to gangrene.

In the case of Hooper, the existence of such a cause is not

* Vide Alison's Pathology, *passim*.

† Philip on the Laws of Organic Life. M. Hall, Researches on the Circulation.

a matter of speculation, and the post-mortem effects are of a nature not otherwise to be explained. The accuracy of our reasoning being in this case demonstrated, a strong presumption arises in favour of a conclusion, to which the same train of argument conducts us on the subject of cholera. What the specific cause may be in that disease, and to what extent analogous in its operations to the cause of the present case, are legitimate objects of inquiry. The effusion into the pleural sacs was an unexpected event; it must have occurred very rapidly. Some may attribute it to obstructed circulation, but we know that concussion does occasionally produce dropsy, and perhaps in this case the effusion might be the consequence of a similar nervous impression made on the capillary vessels. When the pleura is at all changed in cases of cholera, it is for the most part drier than natural: but may not serous diarrhœa counteract any tendency to effusion from serous membranes?

The morbid anatomy of cholera has hitherto failed to afford a satisfactory insight into the nature of diseased actions which constitute it, and has proved instructive rather in the way of negative than positive information. But we are not without descriptions of appearances in the intestines of those who have died of cholera similar to those in the case before us. Dr. Jackson, of Philadelphia, in his admirable narrative, mentions one case, where the collapse was rapid, in which "red patches were scattered through the internal surface of the stomach; the mucous membrane of the colon at first glance might be supposed to be sphacelated, but, on examination, the consistence of the membrane was found to be perfect, and the black hue proved to arise from blood effused into the submucous cellular tissue, or rather the derma of the dermoid tissue." In another case, "the mucous membrane of the cardiac extremity of the stomach was of a deep red colour; in the great curvature were patches of intense red, caused, by infiltration of blood into the tissue; stellated patches were observed at the pyloric extremity."*

Similar appearances are detailed by Annesley, Keir, Brière and Legallois, Searle, &c.

So far as we observed in Hooper's case, the follicular structure was not diseased, but in almost all the cases of cholera in which the intestines were much affected, the glands of Peyer and Brunner suffered.

It may be proper to consider to what extent the symptoms in the case before us corresponded with the ordinary symptoms of fish-poisoning.

* American Journ. of Med. Sciences, May 1833.

The most remarkable effects produced by poisonous fish are, general uneasiness, precordial anxiety, difficult respiration, frequent, small pulse, nausea, pain at the epigastrium, swelling of the face, then of the body, which is intensely red or covered with white petechiæ, more or less elevated, preceded by itching; cold sweats; sometimes coryza and asthma.

The great variety of parts affected in different individuals from the influence of the same cause, is remarkable. These differences appear to arise partly from the varying strength of the poison, partly from predisposition. The absence of numbness, prickly sensations, or urticaria, in Hooper's case, although remarkable, can scarcely be regarded as opposing the view I have offered. The occurrence of urticaria is probably rather favourable than necessary. It is a kind of reaction that evinces vital energy, and it may relieve the nervous oppression. The appearance of a scarlet rash in cholera is generally considered favourable; and in a case of poisoning from muscles, which occurred at Paris, a sense of imminent suffocation immediately followed the suppression of the eruption.

In most of the cases of poisoning with muscles which occurred at Leith, in the year 1827, there was no immediate local action on the stomach, but it appeared (to use the words of Dr. Combe,) that "the virus was first absorbed, and exerted its influence on the nervous energy." The first symptoms were those of debility, then followed numbness, a prickly sensation in the hands, cold surface, vertigo, sometimes, but not constantly, nausea and cardialgia.*

In all severe cases the action of the heart was feeble. In some the secretion of urine was suppressed. Those that died went off as in a gentle sleep, and spoke rationally to the last. The same peculiarity was observed in Vancouver's expedition, in a sailor, who died six hours after taking muscles. Hooper died calmly, as though from syncope, or increasing weakness, retaining his intellectual faculties to the last unimpaired; a peculiarity which Orfila and others specify as a distinctive characteristic effect of septic poison.†

Our medical records offer but few accounts of post-mortem inspections of those who have died from fish-poisoning; but those which are detailed accord with the appearances in Hooper's case. Foderé mentions,‡ as a general appearance

* Edinburgh Med. and Surg. Journal, vol. xxix.

† Toxicol. Generale, tom. ii. p. 449.—The effects of septic poisons have been summed up as follows: "Weakness, syncope, cold sweats, universal paleness, hæmorrhagy, extinction of the force of the heart, prompt death, with clear intellect. After death, flexibility and speedy putrefaction."

‡ Médecine Légale, vol. iv.

from poisoning with muscles, slight inflammation of the stomach. In one of the cases examined by Dr. Combe, several red patches were found in the small intestines. In the other the abdomen was tumid, the ileum presented some patches of effusion of a dark red colour, and the colon was constricted.

The limits of this paper will not allow an extended discussion of the question to which this case might lead, on what does the deleterious influence of poisonous fish depend? The opinions of Mohring, that it arises from the Stella marina; of Kerner, that it depends on margaric or oleic acid; and of others, that it is occasioned by a peculiar empyreumatic oil, appear equally incapable of proof; but the statement of Lamaroux, that muscles are apt to become poisonous when exposed alternately to the sea and the air, is favoured by some of the most striking instances on record.

Putrefaction does not destroy, but perhaps rather conduces to the development of the poisonous principle, and, as fish decay more speedily than warm-blooded animals, and diseased fish more speedily than others, this cause must be frequently in operation. In the fatal cases related by Dr. Burrows, the muscles were tainted. Foster, Quarrier, Thomas Clark, Kœmpfer, and others, agree that the same fish which is innocuous when fresh, may become poisonous when stale.* The case before us, however, is one of many which prove putrefaction not to be essential, as the muscles were plump and fresh.

This case offers no support to the opinion of Dr. Stone, Edwards, and others, that the effects depend on idiosyncrasy. Hooper's wife had on several occasions suffered from partaking freely of muscles, and in this instance probably owed her immunity to the small quantity she took.

Rondeau asserted that the deleterious effects of poisonous muscles might be obviated by boiling them with vinegar and water, and cayenne pepper. Salt has been long observed to be an antidote to the Clupea thryssa, Barra cuda, and other fish; but if incorporated with the fish, as in the case of red herrings, it seems to be inefficacious.

Of all the substances that have been recommended, sugar, and the juice of the sweet potato (*Convolvulus Battatas*), appear best entitled to the name of antidotes.†

* Edinburgh Med. and Surg. Journal, vol. iv. (Chisholm.)—There seems to be considerable evidence for the opinion that poisonous fish are the subjects of disease, changing their secretions, and producing a peculiar virus, not appreciable by our present modes of investigation. It is a remarkable fact, that at the same season the yellow-billed sprat, caught off Porto Rico, is innocuous; and the same species, taken at the neighbouring island of Eustathia, deleterious in the extreme.

† Edinburgh Philosophical Journal, vol. i. (Dr. Ferguson.)

It is obvious that the first indication in cases of fish-poisoning, is to relieve the stomach of the noxious ingesta, by the aid of emetics of sulphate of zinc or copper. When this has been accomplished, without material relief, we have to determine whether the symptoms evince a predominance of the sedative influence, or of the inflammatory state produced by reaction. Here the treatment of fish-poisoning, and that of some cases of cholera, with early exhaustion, appear to illustrate each other; and we are perhaps authorised in saying, that the most alarming symptom in each is depression of the heart's action, and that the use of stimulants is in the first instance often essential.

Ether has been found very successful by Dulong, Charlet, Montègre, Demangeon,* and Dr. Combe. Capsicum, and the oxymuriate of potash, have also been recommended on very high authority. Had Hooper applied for advice at the time the drowsiness first appeared, it is probable that ether, ammonia, or some other diffusible stimulant, might have saved his life. The case might then have become one of simple inflammation; but it does not appear that the tendency to enteritis in cholera (and analogous affections) contraindicates the use of stimulants at the onset of the disease.

It is an allowable inquiry, whether the abstraction of blood might not, in some cases, contribute to produce reaction. When inflammatory symptoms set in, and become predominant, we may reasonably expect to arrest the disease by the aid of the lancet, and by the general adoption of antiphlogistic measures.

Account of Three Cases of Carditis: with Remarks. Communicated to the Harveian Society, by WILLIAM STROUD, M.D. Physician to the Northern Dispensary, &c.

THE great interest and importance attached to disorders of the heart must be obvious, on the slightest consideration of the universal and powerful influence exercised by that central organ on every other part and function of the body. The difficulty of discriminating some of these disorders, more especially the inflammatory affections, has been acknowledged by the latest and best authors on the subject; since, as in other cases, prominent and alarming symptoms are often comparatively insignificant, and severe diseases may, for a while, be concealed under obscure and ambiguous indications. This difficulty of distinction, which more or less belongs to the general class of cardiac complaints, becomes

* Gazette de Santé, Mars et Octobre, 1812, and Mars, 1813.

still greater, as might naturally be expected, in reference to their subordinate details. For, in the heart, as in other complex organs, different parts may be separately or conjointly affected; the pericardium, the lining membrane, the muscular fibres, or the valvular apparatus: the actions of these several parts may be variously increased, diminished, or perverted; and the resulting structural derangements, whether atrophy, or hypertrophy, contraction, or dilatation, adhesion, or effusion, may be equally diversified. Among these affections, inflammation of the pericardium may, as is well known, exist independently of any other; but inflammation of the heart itself, however limited in its commencement, seldom fails, sooner or later, to become universal. The importance of an early and accurate diagnosis of these disorders is equal to its difficulty; since, like other inflammations, when promptly and powerfully counteracted, they are in a considerable degree subject to medical control; but, when neglected, or injudiciously treated, they too often produce incurable organic lesions, by which life is first embittered, and then curtailed.

The following cases are offered as a small contribution to the general stock of medical facts illustrative of this subject; and, as far as the opportunities of observation would permit, are related with clinical detail, in order that the reader may be placed, as nearly as possible, in the situation of a spectator, and enabled to judge, and reason for himself. The first was a case of obscure carditis, complicated with cephalic symptoms, which, not having been recognised in its earlier stage, presented for a while an unfavourable and threatening aspect; but, when it was at length ascertained, yielded completely, although gradually, to repeated bleeding, and other antiphlogistic treatment, carried to a greater extent than at first seemed to be admissible. The two other cases, which might probably be attributed to irregular and intemperate habits of life, are examples of similar, but more aggravated complaint; and are chiefly adduced to illustrate some of the final results of protracted cardiac inflammation, and to show how long, under certain circumstances, life may be preserved, and some of its most important functions tolerably well performed, under the pressure of so fatal a disease.

November 15th, 1831. I was called to visit, as a patient of the Northern Dispensary, Frances H...e, a married woman, thirty-one years of age, who has been four times delivered; the last time, seven weeks since, of a daughter, whom she suckles with difficulty, owing to the scantiness of her milk. She has laboured, during the last fortnight, under a febrile affection, with pain in the back of the head, and at the pit of

the stomach; as also in the loins, and limbs. The skin is generally hot, but the feet are sometimes cold. She has a slight cough, sleeps little, and is occasionally delirious. The pulse at the wrist is above 130, and weak. The tongue is white, with red edges. She has some thirst, and no appetite. The bowels, which are easily relaxed, have been open to day, but were previously confined. The urine is natural. The cause of the complaint, which was at first regarded as continued fever, is not very obvious, except a severe chill, followed by fatigue, anxiety, and watching, while attending a sick child; and exposure of the chest to the night air, while giving suck. About six years since, the back of her head was injured by a blow, followed by an abscess, and much local pain.

Prescriptions. Temporibus affigantur hirud. viij. Aquæ puræ f℥v.; Liq. Ammon. Acet. f℥iij.; Tinct. Hyoscyam. Liq. Ant. tart. *aa* f℥ii.; Spir. Æther. Nitric. f℥iij.; Sumatur f℥j. ter in dies.

18th. The leeches extracted dark-coloured blood, but the symptoms are little altered. The suction of the breast occasions pain at the pit of the stomach, but the infant seems to suffer no inconvenience.

Prescriptions. Inter scapulas admov. Empl. Cantharid. Hydrarg. Submur. gr. ij.; Pulv. Rhei gr. viij.; Sumantur primo mane, prout opus fuerit. Aquæ puræ f℥vi.; Potass. Nitrat. ℥j.; Pulv. Acaciæ gummi, ℥iv.; Tinct. Hyoscyam. f℥j.; Sumatur f℥j. ter in dies. Abrad. capillities; et removeatur infans a mamma.

20th. The head has been shaved, and the child is withdrawn from the breast. The blister afforded some relief, but the back of the head is still painful, with occasional delirium, disturbed sleep, and coldness of the feet. The bowels have been open without the aid of medicine. The pulse is nearly 140, weak, and indistinct. The tongue is white in the middle, with less redness of edges. She has a troublesome cough, with hurried respiration.

Prescriptions. Sumatur primo mane, prout opus fuerit, Ol. Ricini, f℥j. vel ij.—Mist. Camphor. f℥iv.; Liq. Ammon. Acet. f℥ij.; Pulv. Acaciæ gummi, ℥iv.; Spir. Ammon. Arom. m. xv.; Tinct. Hyoscyam. f℥iss.; Sumatur f℥j. quater in dies; et Extract. Hyoscyam. gr. v. omni vesp. horâ somni.

22d. The bowels are spontaneously open. The pain in the back of the head is severe, and is accompanied with some intolerance of light, and of sound, florid complexion, and contracted pupils. The sleep is still interrupted, and she is occasionally delirious. The cough is attended with expecto-

ration, and, after coughing, she has several times to day vomited a mucous liquid. The tongue is now natural.

Prescriptions. Nucha extrahantur per cucurb. sang. f℥viij. vel xij.; Axillis inung. omni vesp. Ung. Hydrarg. Camphor. ʒj. Aquæ puræ f℥vj.; Potass. Nitrat. ʒj.; Pulv. Acaciæ gummi, ʒiij.; Tinct. Zingiber. fʒij.; Liq. Ant. tart. fʒiv. Sum. f℥j. ter, vel quater in dies. Rep. Ol. Ricin. prout opus fuerit.

23d. The pain of the back of the head was relieved by the cupping, but there still remains some intolerance of light, and of sound, with disturbed sleep, slight delirium, and noise in the ears. The mixture excites vomiting. The bowels, and urine are natural. The cough is troublesome, and is accompanied with hurried breathing, white frothy expectoration, and pain in the middle of the chest. The pulse is from 120 to 140, and extremely small and weak.

Prescriptions. Extrahr. per V. S. sang. f℥viij. vel xij. Pectori superiori impon. Emplastr. Cantharid. Aquæ puræ f℥vj.; Potass. Nitrat. ʒj.; Pulv. Acaciæ gummi, ʒiij.; Tinct. Hyoscyam. fʒj.; Vin. Ipecacuan. fʒij. Sum. f℥j. ter vel quater in dies. Rep. Unguent. Hyd. Camphor. et p. o. f. Ol. Ricini.

25th. The bleeding was well borne. The blood drawn yielded a coagulum covered with a thin, red coat, but was otherwise nearly natural. The blister did not produce much effect. The gums are slightly influenced by the mercurial ointment. The bowels are open. The headach and nausea are removed, but there is still a morbid sound in the ears, and the sleep is unquiet. The cough is troublesome, and the expectoration scanty. The pulse is 130, and feeble, with a sense of internal debility.

Prescriptions. Mist. Camph. f℥iv.; Liq. Ammon. Acet. f℥ij.; Spir. Ammon. Aromat. m. xx.; Tinct. Scillæ, fʒj.; Tinct. Hyoscyam. fʒiss. Sumr. f℥j. quater in dies.—Emplas. Canth., Ung. Cetacei, āā ʒiv.; Antim. Tart. ʒj.; Ol. Camph. fʒij. Fiat ceratum inter scapulas illinendum.—Rep. Ung. Hydrarg. Camphor. etiam p. o. f. Ol. Ricini.

27th. The antimonial ointment has produced little effect. The mixture is said to be too heating. The bowels are open. The sleep is unquiet, and attended with slight convulsions. The noise in the ears continues, but without headach or nausea. The cough is nearly dry, the breathing is hurried, and the patient is in a state of disquietude and delirium, with a disposition to uncover herself, and to get out of bed. The pulse is very frequent, and feeble. The respiratory murmur, now for the first time examined, is sufficiently audible.

Prescriptions. Extrahr. per V.S. sang. f℥viij. vel xij.—Pulv. Rhei, gr. iv.; Magnes. Carbonat. gr. viij. Sumr. primo mane, p. o. f.—Aquæ puræ, f℥iv.; Liq. Ammon. Acetat. f℥ij.; Pulv. Acaciæ gummi. ʒiv.; Tinct. Digital. fʒss.; Vin. Ipecacuan. fʒj.; Tinct. Hyoscyam. fʒij. Sumr. f℥j. quater in dies.—Rep. Ung. Cantharid. cum Antim. Tart.

29th. The bleeding relieved the symptoms, without inducing syncope, although a sense of debility ensued. The blood drawn was nearly natural, but the coagulum was soft. The antimonial ointment has at length produced a powerful effect. On the whole, the patient is better, and manifests less disquietude; but her sleep is still disturbed. The action of the heart, examined this day for the first time, was found to be very strong, although the pulse at the wrist was extremely small, and weak.

Prescriptions. Extrahr. per V.S. sang. f℥xij. vel xvj. Præcordiis affigr. hirud. vj. vel viij. Rep. Med. præter Ung. Canth. cum Ant. Tart. cujus loco substit. Ung. Cetacei.

Dec. 3d. The bleeding, and leeches gave relief. The blood drawn presented the same appearance as before. The skin of the back is much ulcerated by the antimonial ointment. The patient is considerably better, but has still a dry cough, with hurried breathing, and a neuralgic pain in the left leg, extending to the hip. The pulse is 112, and more tranquil; as is likewise the action of the heart.

Prescriptions. Rep. med.

Dec. 5th. The cough, and difficulty of breathing are relieved, but, in other respects, the patient is rather worse. The pulse is 120, weak, and soft; the sleep is disturbed, and there is slight delirium. The tongue, however, is clean, and moist, and the bowels, and urine are natural. The pain in the left leg follows the course of the sciatic nerve, and is somewhat relieved by friction.

Prescriptions. Extrahr. per V.S. sang. f℥viij. vel xij. —Aquæ puræ f℥iv.; Liquor. Ammon. Acetat. f℥ij.; Pulv. Acaciæ gum. ʒiij.; Tinct. Digital. fʒss.: Tinct. Hyoscyam., Vin. Ipecacuan. āā fʒiss. Sumr. f℥j. quater in dies.—Rep. Ung. Cetacei dorso exulcerato.

7th. The bleeding again gave relief. The blood drawn was natural. The skin of the back is not yet healed. Since yesterday, a miliary eruption, attended with itching, has appeared on the head, and neck. A similar eruption preceded her last confinement, and was accompanied with profuse sweating, even when she was sitting still. Her sleep is disturbed by the pain of the left leg, and she has slight deli-

rium. The heart sometimes palpitates, but the breathing is tranquil. The pulse is 120, and weak.

Prescriptions. Linim. Sapon. comp. f℥iij.; Tinct. Opii, f℥iv.; Fiat Liniment. cruri dolenti infricandum. Rep. Med. sed augr. Tinct. Digital. ad m. xl.

14th. The skin of the back is now nearly healed; the pain of the left leg is relieved. The patient is generally better, but her head has lately been somewhat painful, and oppressed.

Prescriptions. Aquæ puræ, f℥vj.; Potass. Nitrat. ℥j.; Pulv. Acaciæ gummi, ℥iij.; Tinct. Digital. f℥ss.; Tinct. Hyoscyam. f℥j. Sumr. f℥j. ter in dies. Repetatur Linim. opiatum.

18th. The skin of the back is not yet entirely healed; the pain of the left leg continues, and is, perhaps, of uterine origin; as it commenced about two years since, during a confinement, and was attended with pain of the uterus, and yellow discharge.

The action of the heart is still too strong, and too rapid. The pulse at the wrist, in the sitting posture, is 140, and excessively weak. There is no cough, nor disturbance of breathing, but occasional headach, and noise in the ears.

Prescriptions. Mist. Camphor. f℥iv.; Liq. Amm. Acet. f℥ij.; Pulv. Acaciæ gummi, ℥iij.; Tinct. Digital. f℥ss. Tinct. Hyoscyam. f℥j. Sumr. f℥j. ter in dies. Repr. Linim. opiatum.

24th. The action of the heart is again increased, and attended with pain extending into the back, by which the breathing is impeded, but there is no cough. A few leeches recently applied to the præcordia extracted a little thick and very black blood. The sleep is still disturbed, with some headach, and noise in the ears. The bowels are rather confined. The urine is natural. The pain of the left leg is relieved.

Prescriptions. Extrahr. per V.S. sang. f℥xij. vel xvj.—Aquæ puræ, f℥vj.; Potass. Nitrat. ℥j.; Tinct. Digital. f℥ss.; Tinct. Hyoscyam. f℥j.; Liq. Antimon. Tart. f℥iij. Sumr. f℥j. ter vel quater in dies.—Ol. Ricin. f℥ij. vel iij. primo mane, p. o. f. Extract. Hyoscyam. gr. v. omni vesp.

28th. The bleeding gave great relief while the blood was yet flowing. The pulse, in the recumbent posture, was recently 90, and stronger. The action of the heart is tranquil, and the breathing is easy. With the exception of noise in the ears, some remaining pain in the left leg, and a sense of coldness in the loins, indicating, perhaps, the approach of menstruation, there is little complaint.

Prescriptions. Lumbis admovr. Empl. Canth. Repr. Med.

January 4th, 1832. The blister operated well, but did not remove the sense of coldness in the loins. Hitherto there is neither menstruation nor white discharge. The pain in the back of the head has returned, with noise in the ears, and pain in the left leg, from the ankle to the groin; the whole, probably, depending on latent menstrual disturbance. On recent examination, the uterus was found relaxed, and the vagina dilated, as if there were some danger of prolapsus. The action of the heart is tranquil. The pulse, in the recumbent posture, is 60, and placid. The bowels and urine are natural.

Prescriptions. Aquæ fervent. O j.; Canell. alb., Zingib. rad. āā gr. xv.; Gentian. rad., Quassiæ ligni., Aurant. cort., āā ʒss. Post horas ij. coletur Liquor. Infusi hujus amari f ℥vj.; Vin. Ferri, Vin. Aloes, āā f ʒiij. Sumr. f ℥j. ter in dies. Repr. p. o. f. Ol. Ricini, Extr. Hyoscyam. et Liniment. Opiat.

14th. Menstruation commenced on the 8th instant, and terminated yesterday. The discharge was sufficiently copious, but rather pale. On the first day of its appearance, there was some renewal of pain in the heart, which was relieved by a few leeches applied to the præcordia. The pulse, in the evening, and in the sitting posture, was 100. There still continue some nervous symptoms; namely, a sense of coldness in the loins, noise in the ears, pain in the back of the head, and painful swelling of the left leg, from the toes to the groin.

Prescriptions. Inguini sinistro affigr. hirud. vj.—Infus. Sennæ, f ℥vj.; Aq. Menth. vir. f ℥ij.; Magnes. Sulphat. ℥ij. Sumr. f ℥j. primo mane p. o. f.—Aquæ puræ, f ℥vj.; Potass. Nitrat. ʒj.; Pulv. Acaciæ gummi, ʒiij.; Tinct. Digit. m. xx.; Liq. Ant. Tart. f ʒiij. Sumr. f ℥j. ter in dies.

Feb. 14th. The neuralgic pain of the left leg was relieved by the leeches applied to the groin, and the cephalic symptoms by a blister, which the patient recently applied, of her own accord, to the back of her neck, and which operated very powerfully. The pulse today at the wrist, in the sitting posture, and after walking, is 120, and weak.

Prescriptions. Aquæ puræ f ℥vj.; Potass. Nitrat. ʒj.; Tinct. Digital. m. xx; Tinct. Scillæ, f ʒj.; Liq. Antimon. Tart. f ʒiij. Sumr. f ℥j. ter in dies. Rep. p. o. f. Mist. Purg.

The patient afterwards slowly recovered, although retaining for some time a disposition to irregularity, and undue frequency in the action of the heart. She soon became again

pregnant, and, towards the end of November, was safely delivered of a daughter, to whom, as to the last, she yielded a scanty supply of milk. At the beginning of February, in the following year, owing apparently to the influence of cold and wet, she had a slight return of the cardiac affection, attended with pain at the top of the head, which three months before had been accidentally injured, as also with a renewal of the former neuralgic pain in the left thigh and leg. On this occasion the complaint was, however, much less severe, and was attended with more obvious symptoms of gastro-intestinal irritation; namely, white tongue, prominent papillæ, pimples about the nostrils, thirst, bilious vomiting, moaning respiration, bowels usually confined, but easily disturbed by purgative medicine, red scanty urine, &c. Under the use of venesection, cupping at the back of the neck, followed by a blister, with aperient and antiphlogistic medicines, she speedily recovered, and subsequently continued well.

REMARKS. On taking a retrospect of this case, it evidently appears to have been an obscure, but serious inflammation of the heart and brain, which, after an active continuance of two months, terminated in gradual convalescence. The complaint had already proceeded for two weeks without control, when the patient first came under my care, about the middle of November, 1831; and, owing to the ambiguous aspect of the symptoms, which were at first mistaken for those of continued fever, another week elapsed before any active depletion was employed. Its true nature having at length been ascertained, bleeding was repeated six times in the course of a month, as circumstances seemed to demand, and afforded prompt and effectual relief, both at first, and several times afterwards, when the disorder, after a temporary check, was aggravated, or renewed. Independently of the application of a few leeches to the temples and præcordia, the whole quantity of blood drawn was, probably, between sixty and seventy ounces, of which about forty ounces were abstracted during the last week of November, and the remainder in the course of the following month. The inflammatory character of the complaint was strongly illustrated by this result, and by the benefit derived from the internal use of nitre, tartarised antimony, hyoscyamus, and digitalis, although some of these remedies seemed ill adapted to a state of apparent debility; as likewise from the counter-irritation of blisters, and more particularly of antimonial ointment, extensively applied between the shoulders, which at length produced a very powerful and durable effect, con-

tributing, no doubt, to secure the ground already gained, and to diminish the necessity for further bleeding.

By the end of December the disease was decidedly subdued, although slight symptoms occasionally recurred for some time later. Menstruation took place in the beginning of January, and the patient was ultimately restored to perfect health.

In this interesting case, the conjoined inflammations of the heart and brain, although mutually modified, were so equal, and independent, that it was difficult to ascribe priority to either of them. In a manner strictly parallel, they began, continued, and ended together; and the same complex character was again displayed, when, from similar causes, the complaint was renewed in a milder degree a year afterwards. The principal cerebral symptoms were pain and heat of the occiput, with coldness of the feet, flushed countenance, contracted pupils, intolerance of light and of sound, noise in the ears, delirium, disquietude, and watchfulness, or imperfect sleep, disturbed by convulsive movements. The principal cardiac symptoms were pain in the præcordia and epigastrium, sometimes piercing through to the back, occasional palpitation, vomiting after coughing, violent action of the heart, discovered by auscultation, together with an extremely weak and frequent pulse at the wrist, general debility, and tendency to fainting, on making the slightest exertion.

The internal constitution of complex disorders is often analysed, and demonstrated by the variable duration and succession of their several symptoms; and thus, in the present case, the early subsidence of the remaining complaints, in proportion as those above described were relieved, proved them to be secondary affections, of which the gastric, and febrile, probably depended on the cerebral inflammation, and the pulmonary on that of the heart. The miliary eruption about the face and neck, which attended the mitigation of the disorder, like the profuse local sweat by which it was accompanied on a former occasion, a little before the patient's last confinement, might be attributed to the joint influence of both. The neuralgic pain of the left leg, partly arising from a local disposition of uterine origin, but probably renewed by the excitement of the brain, and therefore aggravated by menstrual disturbance, seems at last to have become nearly independent, maintained, apparently, by an inflammatory state of the principal nerves of the limb, and hence relieved by the application of leeches to the groin. In like manner, after pertussis, various local nervous affections are sometimes observed to survive the temporary congestion of brain, from

which they originated. On the other hand, the continuance of the more simple functional derangements, such as weak and frequent pulse, slight headach, with noise in the ears, &c., during the commencement of convalescence, might reasonably be ascribed to a merely negative state of debility, remaining after the principal morbid action had ceased. The occurrence of the menstrual discharge, for the first time after delivery, was both a sign and a cause of amendment; inasmuch as that discharge, which mainly depends on a peculiar state of cerebral excitement, having been prevented by the more powerful excitement of the disease, during its active stage, served at once to attest and to accelerate its decline. The reduction of the pulse under this agency, within a few days, from 140 to 60, furnishes a striking illustration of the influence of the brain on the heart.

The predisposition to this severe attack, consisting in an irritable state of the organs principally concerned, seems to have been derived from various ordinary sources: the confinement a few weeks before; a scanty secretion of milk; domestic troubles and vexations; fatigue, anxiety, and want of sleep, while nursing a sick child; and a severe injury of the back of the head, which took place six years before, and produced at the time an abscess, and much pain. The influence of mental disturbance in generating disease is well known, but that of local injuries, from blows and falls, is not always duly appreciated, although many proofs might be adduced that it often continues to operate for several years; and, after a long and indefinite interval, may occasion very serious results. The exciting cause was probably cold, which is quite capable of inducing inflammation, both of the brain and heart, especially when thus predisposed. The whole body had been previously subjected to cold and wet; and the chest had been repeatedly chilled by imprudent exposure, while suckling an infant, during the night. The intercourse between this portion of the cutaneous surface and the contained viscera, which is at all times considerable, seems to be increased in females, during the process of lactation, and was well illustrated by the pain which, at the commencement of the case, the sucking of the child excited in the epigastrium.

Owing to the operation of the brain and the heart on each other, and on the whole body, the symptoms of this complaint were numerous, complicated, and obscure, closely resembling those of continued fever, which, indeed, there is every reason to infer, is essentially a disorder of the nervous centre, including the brain, the spinal chord, and the ganglionic

system. The low delirium, the tendency to fainting on the slightest exertion, the extreme frequency and feebleness of the pulse, and other signs of apparent debility, favoured this view, and seemed totally to forbid the practice of depletion. Yet the abstraction of not less than sixty or seventy ounces of blood was afterwards found necessary; and by this, and other antiphlogistic remedies, the complaint, which had been gradually increasing, and presented a very formidable aspect, was immediately checked, and ultimately subdued. The diagnosis was, at length, determined by stethoscopic examination, which, owing to hurry and preconception, had been improperly omitted in the first instance. Other considerations might, perhaps, have led to the same conclusion, but the violent action of the heart, thus detected, and its manifest influence in compressing and irritating both the lungs and the stomach, producing cough, dyspnœa, nausea, and vomiting, afforded the clearest proof of its inflammatory condition, and the surest indication of the mode of treatment to be adopted. This furnishes another example of the value and importance of the acoustic signs of disease, which are, in general, so decisive, and so easily attainable, that they ought never to be neglected. Had they been consulted, and followed, at the commencement of the case, there is every reason to believe that it might have been promptly subdued, with far less risk, and at a much smaller expense of time and strength, than actually occurred.

Under inflammation of the pericardium, or of its contents, the pulse of the heart is not always alike, but differs with the circumstances. It is sometimes, for example, short, irritable, and energetic; sometimes soft, obscure, and indistinct; according as the muscular function of the organ is variously modified, or directed. The pulse may be either strong in the heart, and weak in the arteries, or precisely the reverse: its shock, or impulse, also, is sometimes directed to the epigastrium, sometimes to the sides of the chest, and, in some instances, seems to be more operative on the contained blood, than on the surrounding parts. The diagnosis between carditis and pericarditis is by no means easy; but the character of the latter is, probably, influenced by the serous effusion into its cavity with which, at an early period, it is usually complicated. The frequency and feebleness of the arterial pulse, in conjunction with powerful action of the heart, is an interesting and remarkable circumstance, for which, in the absence of any permanent mechanical obstruction, it is difficult to account. It may be ascribed, either to the temporary dilatation of the cardiac chambers, by which their contraction,

although strong, is rendered less effective in expelling their contents; or to spasmodic constriction of the muscular fibres near the orifices of the great arteries; or to certain obscure conditions, not hitherto fully explored, in the vessels themselves, by which the circulation through them is either promoted or resisted. However produced, this condition serves to explain the mixed and ambiguous character of the symptoms in such complaints, combining excessive action with apparent weakness, and implies, perhaps, that inflammation is more dependent on local excitement than on the injecting force of the heart. It, also, serves to explain the unusual quality of the blood, which, in so inflammatory a disease, exhibited no corresponding character; the coagulum having been, for the most part, soft and red, without any tendency to separate a buffy coat; showing how much the condition of the blood depends on the vital action of the heart, and vessels, on which, in its turn, it exerts an important influence.

[The remaining cases of Carditis will be inserted in the ensuing Number.—EDITOR.]

A Case of Delirium Tremens successfully treated by large Doses of Opium. By C. J. ROBERTS, M.D., Physician to the Welsh Charity, and Infant Orphan Asylum.

NOTWITHSTANDING the progress of Temperance Societies, and in despite of threatened parliamentary enactment, drunkenness would seem still to hold on its course, with rather increased than abated vigour; and most probably will so remain, until the world shall become more enlightened and better acquainted with the mischief it produces, both at the time, and for the remainder of a person's existence. I shall not recapitulate the various diseases which are engendered by the baneful habit of drinking, but intend merely to describe one, which, however much it may be supposed to be known and well understood, still, like all other maladies, has its varieties, which call for corresponding alterations in the method of treatment. The complaint I mean is Delirium Tremens, so called from two very prominent symptoms which always mark its progress,—the delirium or aberration of mind, and the tremulousness of the body, extremities, and tongue. This disease would seem to have escaped observation, until its peculiarities were detailed by Dr. Pearson, practising at Newcastle-upon-Tyne, about the year 1801, who first gave an accurate account of it, in a small pamphlet, which he then published. In this he shewed the necessity of quieting the irritation of the brain, produced by the immoderate use of

fermented liquors, by other means than those of counter-irritation and depletion. Dr. Pearson details 93 cases, treated by the soothing plan, which all recovered; and then mentions others, who were depleted and managed antiphlogistically, and which terminated fatally. Dr. Sutton, of Greenwich, and the late Dr. Armstrong, have each demonstrated the same facts, and that so clearly, that I thought this method was generally allowed to be past denial the only one to be used in this complaint. Some practitioners I knew there were, who, having peculiar views of cerebral pathology, pursued the depleting plan, that they might at least have the credit of consistency; yet these were so few, that I considered their opinions rather more in the light of an eccentricity, than as being prosecuted with any thing approaching a seriousness of intention. I was however very much surprised to find that a Dr. Ware had published a paper, in the Transactions of the Massachussetts Medical Society for 1831, in which he seriously advocates this method of treatment, and as strongly reprobates the use of opium; asserting that, in many instances in which he has seen it employed, although it might have given temporary relief, yet the patients uniformly sunk afterwards, from its specific effects upon the brain. These are his words: "So far from being beneficial, I believe there is ground to believe that the effect of opium, given during the paroxysm, is to increase the violence of the delirium, to produce a tendency to convulsions, to prevent the termination by a natural and salutary sleep, or to throw the patient into a state of coma, from which he does not awake." (P. 49.)

These assertions are so far diametrically opposite to all our received notions of opium, and its effects in this disease, that I was first startled, and afterwards more especially surprised, to find, in looking further, that this gentleman impugns the good faith of others who have described cases of delirium tremens, by stating that, during their progress, depletion in some form or another was had recourse to, and that it was to that, and not to the opium, that the cure was attributable: and he even goes further, by maintaining that, in many instances, the administration of opium produces paroxysms of delirium tremens, which would not have occurred, had the narcotic not been administered. He does not however bring forward any evidence to prove what he asserts, but closes his attack upon the use of opium, in this species of cerebral irritation, by acknowledging that he has no power of shewing its deleterious tendency: "I do not mean to say that I have evidence to shew that opium is in all cases injurious in the diseases of the intemperate, or that it should never be employed."

During the fourteen years I have been in practice in London, I have treated many cases of this disease, and I only know of two persons who have escaped with life who were depleted at the commencement of the attack; and I have very seldom seen those who have suffered from epileptic paroxysms during any part of the progress of the disorder ever recover. During the time I was physician to the General Dispensary, I saw very many persons among the lower classes of society who were addicted to the intemperate use of fermented liquors, and in as many a peculiar condition of the brain supervened upon the irritable state of the stomach; and, although it could not be described as being precisely delirium tremens, yet it nearly resembled it in many of its characteristics, more especially in the watchfulness, the appearance of phantasmata during the night, and the tremulousness of the hands and tongue.

These symptoms in every case gave way to opium in conjunction with tonics. I may also state, that they all had that peculiar debility which belongs to this complaint. In all the instances which I have known, in which depletion was made use of, the pulse, although previously apparently full, and strong, has uniformly given way after the abstraction of even a very few ounces of blood, and has never again rallied. I can therefore only suppose, that the disease called in Boston Delirium Tremens, is not the same as the one we meet with in this country.

The case I am about to relate is neither singular in its symptoms, nor different from those of other persons who have suffered similar attacks; but merely serves to shew the utility of perseverance in a remedy when once you have determined that you are right in your diagnosis; and further, the benefit which may be expected from a steady continuance in the use of opium, in such a state of cerebral excitement.

On the 19th August, 1834, I was requested to see J. L., æt. 33, of a leucophlegmatic habit, and who had previously suffered from an attack of apoplexy, from which he recovered by the usual means. I found him labouring under delirium tremens, which had commenced two days before, in the night, having been accompanied by an epileptic paroxysm. He was enjoined quietude both by myself and by my friend, Mr. Benman, but he would not listen to us, and expressed extreme anxiety to go a short distance from town, where he had just embarked in an extensive concern. We both thought that he had better remain quiet at home, but he very much insisted that he would not; and, as he had an establishment at the house he wished to visit, we reluctantly permitted him to go.

The next morning we found that he had had another epileptic attack, and had been very restless during the night, notwithstanding we had augmented the dose of opium. He now remained at home, and we placed him under control, rather than restraint, although at intervals the latter was absolutely necessary. We continued to increase the quantity of opium both in a solid form, and also in that of tincture, until the 23d, when, on the evening of that day, he had nine hours of uninterrupted sleep, from which he awoke, if not completely cured of his tremulousness and hallucination, at least, very little of them remained: from this time his cure went on progressively. He was allowed during the attack strong beef-tea, jellies, and about ℥xx of bottled porter or stout, in the twenty-four hours, which he sometimes rather exceeded. The draughts consisted principally of Carb. Ammon. Conf. Piper. Nig. et Inf. Caryophyll. et Aq. Pimentæ. The Tinct. Opii was increased or diminished, as necessity demanded.

As I have not thought it necessary to detail each day's symptoms seriatim, I have added an account of the quantity of opium taken by this patient every day. I may here remark, that the opium never caused constipation, and that his pulse during the disease never was less than 130 in a minute, and was of a very feeble and tremulous character. As the disease abated, the Opium and Carb. Ammon. were abstracted gradually from his draughts, and Sulph. of Quinia added.

1834.	Tinct. Opii.	Solid Opium.	
August.	No. of *m*.	No. of Grains.	
18	180		Dividing the 2380 minims of Tinct. of Opium by 19,* will give $125\frac{5}{19}$ as the number of grains of solid opium said to be dissolved in that quantity of laudanum, which, added to $119\frac{1}{2}$, gives $244\frac{9}{38}$ grains, as the amount of the drug used in 13 days.
19	120	2	
20	180	12	
21	320	$24\frac{1}{2}$	
22	240	30	
23	280	35	
24	160	6	
25	200	5	
26	240	5	
27	160		
28	120		
29	90		
30	90		
13 days	2380 *m*	$119\frac{1}{2}$	

* Nineteen minims of Tinct. Opii contain one grain of the drug.

31, *New Bridge Street;*
Sept. 20, 1834.

COLLECTANEA.

PATHOLOGY AND PRACTICE.

OPERATION FOR IMPERFORATE ANUS.

M. Roux was called to see a new-born infant, who had no vestige of an anus in the perinæum, the rectum terminating in the urethra. The urethra did not open at its extremity, but beneath. There was a sort of erection, with hiccup and vomiting. The physician who was first called in had cut the membrane which obstructed the urethra, but had not ventured to attempt to find the anus. M. Roux, having placed the infant on the knees of an assistant, made an incision, eight inches long, in the skin from before backwards, in the situation which the anus ought to occupy, and discovered the fibres of the sphincter, which he separated by dissection. Having arrived at the *levator ani*, he separated its fibres likewise, continuing his course towards the coccyx, for fear of touching the bladder, and, above this last layer of muscles, he came upon a mass of cellular tissue, in which his finger recognised a soft and fluctuating projection. This was punctured with the bistoury, and gave exit to a large quantity of meconium. The puncture was then enlarged so as to permit the introduction of the first phalanx of the forefinger, and a large bougie, covered with cerate, was afterwards substituted, and allowed to remain. On the following days, the fæces were voided by the wound, and some also made their escape by the urethra. The incision was then enlarged in the direction of the coccyx, in order to permit the passage of the fæces, and, in consequence of this precaution, the artificial anus soon fulfilled all the functions of the natural one. The infant still lives, and enjoys good health.—*Archives Générales.*

OF THE REMOTE OR PREDISPOSING CAUSES OF CARIES OF THE TEETH.

Although caries of the teeth does not appear to arise from causes which affect the general health, many persons of robust constitution being observed to be exceedingly prone to this disease, and others, although of a more delicate frame, are almost wholly free from it, yet it is undoubtedly materially influenced by predisposing causes.

The first of these, perhaps, is hereditary predisposition; for it will generally be remarked, that, if the parents have bad teeth, the malformation will, in all probability, be reproduced in their offspring; and it is by no means uncommon to find the teeth of different individuals of a family decaying in exactly the same way at corresponding periods of life.

Imperfect congenital formation is another of the principal predisposing causes of caries. This may proceed either from the rudi-

mentary pulps having been in an unhealthy condition, or it may arise from the inactivity of the vessels by which the enamel and osseous substance were secreted. Either of these occurrences will impair the organization of the teeth; and, of course, render them more prone to disease.

Another predisposing cause of caries is the irritation produced on the constitution and general health of the child, by all those diseases incidental to infancy, which usually occur at the same time that the permanent teeth are in the act of being formed.

Febrile diseases, and all those affections that are attended with long confinement, dyspepsia and sedentary habits, often give rise to caries of the teeth. It has been remarked, that the disease is particularly apt to arise during the confinement attending on parturition.

But of all the injurious agents on the teeth, and predisposing causes to early decay, there is none, I believe, so frequently destructive as mercury. The effect of this medicine on the teeth is usually observed only at a more advanced period of life, when the operation of "the specific" on the mouth is considered as a criterion of its introduction into the system. But I am convinced that it is in earlier years that most mischief is done by mercury, and observe with regret, that the importance of this circumstance has not hitherto been sufficiently noticed by preceding authors. The large and continued doses of calomel which are so indiscriminately given to children, for almost every disease, either, by weakening the constitution, prevent the proper formation of the teeth, or, by the powerful stimulus which mercury always exerts upon the absorbent vessels, cause the absorption of their substance as soon as it is deposited. I am convinced that it is solely from this use, or rather abuse of calomel, that we must trace, not only the origin of that tendency to early and extensive caries, which so frequently terminates in the total and premature destruction of the teeth of youth, but also, that it is from the same source that those deficiencies of the enamel proceed, which are considered as unaccountable, and from which the teeth sustain irreparable injury.—*Jobson on the Teeth.*

[A very sensible, well-written treatise, though there are one or two minor points on which we would willingly break a lance with the author. He says, for instance, at page 115, that "all acids and acidulous fluids should be sedulously avoided." Surely he must mean to limit this prohibition to the stronger acids. Who would or could avoid vinegar and the acidulous fruits? Mr. Jobson is opposed, and rightly, to the authors who imagine the tartar collected on the teeth to be one of the chief causes of caries. The fact is, that this encrustation is found most frequently on those teeth which most rarely become carious, and *vice versâ*. We strongly recommend this work to our readers.—[Ed. *Med. Quart. Rev.*]

The eye being thus opened, and the eyelids retained asunder, the eye loses all the extreme sensibility with which it is endowed for its security, and preservation in its ordinary state. Public opinion, which on medical subjects is generally erroneous, although for the most part founded on professional authority, is in no instance more injurious than in relation to the eye. It pronounces it to be an organ of a very delicate nature, exquisitely sensible, requiring the greatest delicacy of touch, and the utmost nicety of management; which opinion some oculists formerly found it convenient to support, and which the public may still continue to believe, without any great disadvantage; but students in surgery must be taught otherwise. They must learn, that the eye is not a delicate organ; that it will suffer more comparative violence, with less injury, than any other of importance in the whole body; that, so far from being exquisitely sensible, it is, when exposed in a healthy state, nearly the reverse, only becoming permanently so on the occurrence of inflammation; and that the ablest and most successful operators are not apparently, although they are in reality, the most tender in their proceedings. The opinion of the exquisite sensibility of the eye has arisen from the pain which is felt on the admission of a small piece of dirt, or a fly, between the eyelids; but this occurs from a wise and preservative provision of nature, on account of the insensibility of the eyeball itself. Let the eyelid be raised, and the same piece of dust applied to the surface of the eye, no pain, and scarcely a sensation, will be produced: remove the piece of dirt, turn out the lid, and whilst it is retained everted, place the piece of dirt upon it, no greater sensation will be induced than is felt when it is applied to the eyeball. The inference is, that both surfaces, when touched separately, are nearly insensible to this species of irritation. But let the same piece of dirt be put between the eyelid and the eyeball, and the sensation produced is exquisitely painful. To give rise to this sensation it is necessary that the two surfaces should come in contact, and that the foreign body be grasped between them. If this were not the case, an irreparable injury would often occur to the transparent part of the eye before it would be observed; and if the raising of the lid and the separation of the surfaces did not nearly annul sensation, an operation could not be performed for cataract; for who could bear quietly the sensation which must arise from pushing a needle into the eye, if it were analogous to that arising from a fly or a dry solid substance between the eye and the lids? The experiment may be tried in a very simple and conclusive manner by any one on himself, by merely keeping the lids apart by an effort of the will, when the end of the finger may be placed boldly on the eyeball without any inconvenience. Inflammation, by enlarging the vessels, gives rise to pain in the same way, and the sensation is at first as if some extraneous matter were interposed between the lids. I was the first to mention

this fact, and to explain why it was so, although, I dare say, every body knew it just as well as I did; the only difference between us all being, that I was not afraid to tell the truth.—*Guthrie on Extraction of the Cataract.*

SUTURE OF THE PERINEUM.

M. Roux has communicated to the Royal Academy of Medicine the result of the seventh operation which he has performed to effect the reunion of the perineum. The laceration had existed for six years, and yet his success was more rapid and more complete than in any of the other cases. In fact, in the former ones, when the ligatures were removed, there always remained a small opening from the rectum into the vagina, which did not close till after the lapse of some time. In the present case the reunion was immediate, and the cure was complete as soon as the ligatures had been removed. The reunion in front, indeed, has been so great, that the vulva has been somewhat contracted.—*Archives Générales, Août.*

METHOD OF MAKING THE INCISION IN EXTRACTION OF THE CATARACT.

The pupil being fully dilated (and it is of no trifling importance to know that it ought to be dilated), the eyelids being separated, the eye fixed, and the knife ready, the surgeon commences the incision of the cornea, by introducing it near its edge, or junction with the sclerotica. Some say one quarter of a line, some say half a line, others a line: the intention of all is the same, viz. that it may be near to the edge of the cornea, in order to admit of the opening in it being as large as possible; it ought not nevertheless to touch the sclerotica, as parts of the same kind unite more readily than those which are of a dissimilar nature; and it should also be so much above the plane of the iris, that it will pass readily across without touching it. The upper half of the cornea must be completely divided, and, if anything, rather more than less, so that the point of the knife must be entered at nearly the least possible distance below the horizontal, or, as it is sometimes pedantically called, the equatorial line of the eye.

The manner of entering the point of the knife is disputed. The cornea being composed of several layers, constituting a substance of a certain thickness, there is some danger of passing the knife between the layers, and not across the anterior chamber of the eye, in front of the iris, if care be not taken that the cornea is fairly penetrated in the very first entering of the knife; which accident may happen, if the anterior chamber is small, and the iris is close to the cornea. In order to avoid this error, modern authors (I believe, without any exception,) recommend that the knife should be entered in the direction of the iris, as if the point were to be carried directly against it, but that, as soon as the cornea is penetrated, and the point is in the anterior chamber, the handle of the knife is to undergo a sort of almost imperceptible depression towards the

temple, by means of which the blade is to be placed with its flat surfaces parallel to the iris, across the anterior chamber; and it is said that the more quickly this is done, the less chance is there of the escape of the aqueous humour. To all this I object in the most decided manner; the gentlemen who think they do as they say, are, I believe, mistaken; and when they do, they do nothing but mischief. The very turning, or attempting to turn the knife, generally leads to the escape of the aqueous humour—the very thing they want to preserve, and to all the evils it is most desirable to avoid. The knife should, in my opinion, be held flat, and the point is to be introduced steadily in the same direction at the proper place; and, if the operator can neither see nor feel when it has penetrated the cornea, and is in the anterior chamber, the sooner he abandons operating the better. If a man has eyes, he can see when the point of the knife has entered the anterior chamber; and if he has fingers, he will feel when the resistance offered by the cornea is overcome. The young surgeon, instead of practising these manœuvres, which are worse than useless, should practise on sheeps' eyes, until he has acquired that tact which will enable him to know when his knife is in the right place.—*Guthrie on Extraction of the Cataract.*

[To this it may be objected, however, that it is not quite so easy to know by the sight whether the knife has the whole cornea before it, or the whole cornea minus one extremely thin lamina; nor will the absence of resistance always satisfy the young beginner, as the knife will still be pressed by the uncut part of the cornea.—[Ed. *Med. Quart. Rev.*]

CASES OF THE ADMISSION OF AIR INTO THE VEINS.

Case 1. Mr. William Burrill, of Salem, aged sixty, was admitted into the Massachusetts General Hospital, on the 16th October 1830. He had a cancerous affection of the left side of the face and neck, of the extent of three or four inches diameter. It was hard at the edges, of a livid red colour, ulcerated in the centre, very offensive, very painful, and had made an impression on the general health. The parotid gland, the submaxillary, the sublingual, and all the textures, excepting the bone, were involved in the complaint. The lower jaw was thought to be diseased, at first, but it afterwards appeared not to be so. In so bad a state of things, there seemed to be little hope of eradicating the disease, and the operation would not have been attempted, had not the patient solicited it.

Considering the extent of the disease; that important blood-vessels would be divided, namely, the facial and sublingual arteries, probably the temporal, and possibly the external carotid; it was thought best to secure the carotid trunk. An incision, for this purpose, was begun opposite the thyroid cartilage, and carried two inches downwards. The platysma muscle was divided, the edge of the mastoid exposed and dissected. Thus far, only a few drops of blood were discharged. The face of the sheath of the great vessels was a little uncovered, when a small effusion of venous

blood appeared under the knife, and checked the operation. At that instant a very distinct sound was heard, like the passage of air through water. A few bubbles were seen in the venous blood, the flow of which was immediately arrested by applying a finger on the part. The patient exclaimed, "I am faint." On regarding his countenance, it was not pale, but livid, almost black, and the muscles agitated by a convulsive motion. The respiration became deep, laboured, and stertorous, like that of apoplexy. The pulse being examined at the wrist, was found distinct, but very slow. The wound not bleeding, and very little blood having been lost, the temporal artery was opened, and the blood flowed from it with great freedom. As it flowed, the respiration became more frequent and less laborious, the pulse at the wrist more natural. The leaden colour in the cheeks assumed a reddish tinge, and the alarming character of the symptoms was evidently diminished. About twenty minutes elapsed during these changes. At the end of half an hour, it was thought safe to remove the patient to his bed, where he lay in a state of insensibility for two hours, at the expiration of which he awaked as from sleep, still breathing like an apoplectic. The night was passed without any accident, and on the following morning he was as well as usual, with the exception of a moderate soreness over the thorax, and a headach.

In seven days after the accident described above, the operation was performed without tying the carotid artery.

The diseased parts were surrounded in an elliptical incision, extending from the lobe of the ear to the upper part of the neck, and including the submaxillary, the sublingual and parotid glands, all of them in a morbid and disorganized state, and they were all entirely removed. The hæmorrhage was copious, but readily arrested, with the exception of that from a large vein, which, from its depth, under the jaw, could not be distinguished so as to admit the application of a ligature, and was therefore compressed by a sponge. The veins below the wound were compressed during this operation. The patient experienced a slight faintness, which soon passed off. He had no bad symptoms; and on the 10th of December, the wound being nearly healed, he requested his discharge, which was granted.

Case II. Nancy Bunker, of Trenton, of Maine, married, her age thirty-three. Three years since, she noticed a hardness in the right breast, which increased till it involved the whole gland in a tumour, very hard, moveable, yet connected with the pectoral muscle by a morbid adhesion. The nipple is drawn in. The axilla is occupied by a considerable tumour, of a globular form, and quite hard. An operation was performed on the 24th December, 1831.

The patient sat in a chair. The right arm was extended, raised above a horizontal line, in order to give tension to the skin, and permit access to the arm-pit, and was supported in this position by an assistant. The skin on the surface of the breast, with the diseased nipple, were included in an oval incision; the breast was dissected

from the pectoral muscle, and left connected with the axillary glands while the extirpation of these glands was effected. As they adhered to the great axillary vessels, they were cautiously detached by dissection, and by insinuating the finger, where the cellular substance was loose, between the tumour and the great vein. This separation was nearly effected, only a slight connexion still existing at either extremity of the tumour. Proceeding to separate it, at the outer part of the axilla, a vein was divided, and a small quantity of venous blood discharged. Scarcely was this done, when the patient struggled, her complexion changed to a livid colour, and at the same instant the bubbling or clucking noise, which had not been noticed before, was heard, though indistinctly; but the place from which it issued was not visible, the surrounding skin and fat lying over it. On this, the axilla was immediately compressed. The patient became insensible, breathing as in apoplexy. The tumour was at once separated. The posture of the patient was changed, and she was supported by those around. Some brandy was poured down the throat, and ammonia introduced into the nostrils. The pulse, however, became less distinct every instant. Cloths dipped in hot water were thrown over the extremities. Strong frictions were applied to the chest, and to all parts of the body. Considerable quantities of brandy were again poured down the throat. At this moment the livid colour of the cheeks gave place to a suffusion of vermilion red, and no glow in the cheek of a youthful beauty ever gave one so much pleasure as that flush. But the flush soon passed off; the lividness reappeared; the respiration became more feeble: pulse at the wrist scarcely perceptible: and, notwithstanding the redoubled applications of external heat and moisture, the extremities and the whole body cooled rapidly, and presently the respiration ceased.

As a last effort, the larynx was opened, and the inflation of the lungs by a bellows was put in operation in a speedy and perfect manner, imitating the movements of inspiration and expiration with great exactness, continuing at the same time the general application of heat and frictions to the whole surface. These measures were employed for about twenty minutes longer. At the end of this time, there was no remaining hope of the restoration of the patient to life. The friends being anxious to take advantage of a vessel then sailing for their home, the body was soon after removed, and no opportunity afforded for examination.—*Dr. Warren, in the Cyclopædia of Practical Medicine and Surgery, a Digest of Medical Literature, edited by Dr. Hays.*

[This is an American publication. It bears the marks of great industry, and will be very useful when finished. It is expected that it will be completed in forty parts, and a part will be published every month, if practicable. Part I. is dated July 1833, Part II. October 1833, and Part III. January 1834. The whole will make eight large volumes.—*Ed. Med. Quart. Rev.*]

SEPTAN AGUE?

Robert Kidson, æt. sixty-two, a mason, presented himself to Dr. Duncan on the 29th April, with asthma, of long standing, but which had been aggravated within the few preceding weeks. On each of the three preceding Mondays, he had had an attack of shivering, followed by heat. On questioning him, it appeared, that forty years ago, while residing in the neighbourhood of Northallerton, he had an attack of tertian ague, subsiding into quartan. He has not been out of Liverpool for the last twenty years.

The treatment was directed to the relief of the asthma, and to the improvement of the general health. No remedies were used specifically against the ague.

The shivering returned, as usual, on the two following Mondays; but his digestive system is now in better order, the chest symptoms are mitigated, and on Monday last (19th May), he escaped without his expected attack.

Was this an attempt at the renewal of morbid action, the latent poison taking advantage of the enfeebled state of the constitution, after the lapse of forty years? There are instances on record, we believe, of intermittents recurring after intervals nearly as long. Two or three years ago, a patient presented himself at the Dispensary, with ague. He was an old soldier, who, while in the Walcheren expedition of 1809, had, in common with most of his comrades, suffered from intermittent fever. During the interval, of more than twenty years, he had no symptoms of the disease. His last attack he attributed to exposure to a cold east wind.—*The Liverpool Med. Journal, June.*

CASE OF A WOUND OF THE TRACHEA AND ŒSOPHAGUS, IN WHICH THE HEMORRHAGE STOPPED WITHOUT THE ASSISTANCE OF ART. BY DR. A. NEUMANN.

A joiner, of the name of F—, attempted to kill himself on the 9th of June, 1830, at four o'clock in the morning, by cutting his throat with a sharp razor, after having shaved himself. When his wife, who slept in the same room with him, awoke, an hour afterwards, she saw her husband, covered with blood, sitting at a table, and writing with great earnestness. The author was quickly called in, and found the following injuries.

There was a cut, about three inches long, in the superior and anterior part of the neck, immediately under the submaxillary and sublingual glands, which, when the head was bent backwards, showed a truly horrible gaping wound. The sterno-hyoideus and sterno-thyreoidei of both sides, and the omohyoideus of the right side, were found to be completely cut through, and only a few fibres of the left omohyoideus remained entire. Besides this, the ligamentum thyreoideum medium, with the mucous membrane of the whole larynx on the anterior and posterior sides, together with the superior cornua of the thyreoid cartilages, with their ligaments;

and, lastly, the anterior and lateral parts of the œsophagus, were so completely cut through, that a finger, introduced to examine, could with facility reach that surface of the mucous membrane of the œsophagus which is attached to the spine. The trachea and œsophagus, therefore, with all the anterior parts, were entirely cut through, as far as the posterior wall of the œsophagus, (which could hardly be divided without injuring the spine,) and still no fatal hemorrhage took place, although the man, as he afterwards said himself, had done nothing to stop the bleeding, except that, after washing his neck and hands with cold water, he put a dry woollen cloth on the wound, and fastened it round his neck. Yet the author did not find it necessary to take up any artery, nor even afterwards, during the process of suppuration, on account of any secondary hemorrhage. It is true, however, that, according to the above description of the wound, it would not have been easy to have hit upon a place in the trachea and œsophagus where there are less vessels of consequence than directly in this spot. But our surprise must be so much the greater, that the parts adjacent to the trachea and œsophagus could remain uninjured, the depth of the wound being so very great. It is probable that the cut was so directed forwards on the middle of the windpipe with the right hand, that the point of the razor was pushed through the trachea into the œsophagus from the left side, and then immediately drawn out again anteriorly. By this means the wound must have had a very extraordinary depth in comparison with its breadth, since the blunt end of the razor only pushed back the important organs on each side, without injuring them.

The strength of the patient, after the incision, which enabled him to sit up, and even write for hours afterwards, showed how few vessels had been divided, and how little blood had been lost.

In a physiological point of view, it was remarkable that, although the larynx itself had remained whole, still the patient was not able to speak, till a thick wet cloth was applied to the wound, when it was found that his voice had lost little or nothing of its clearness.

The patient lived till the 22d June, full fourteen days, and died at last from weakness, partly from his age, (for he was fifty-five,) and partly from delirium tremens, produced by drinking: indeed, it was in a paroxysm of this disease that he committed the deed. Under such circumstances it was not to be expected that the edges of the wound would diminish in extent, although the bloody suture, as well as Köhler's cap, were applied for that purpose; and the patient's surviving a fortnight is the more surprising, as the greater part even of the fluid nourishment injected flowed out again through the external wound. This may show, however, that such a wound need not be accounted absolutely mortal, either on account of the bleeding, or of the suppuration, should it occur in a young and healthy person.—*Gräfe und Walther's Journal.*

Practical Observations on the METHOD *of* REDUCING DISLOCATIONS *of the* HUMERUS *downwards by the Heel in the Axilla.* By G. PAOLO CUMANO, Professor of Surgery at Trieste.

This method of reduction was known to Hippocrates. It has been mentioned in the writings of almost every author since his time, being praised by some and depreciated by others, and frequently confounded with some twelve or fifteen other methods prescribed by the ancients for reducing this dislocation. In our own times it has received the preference from Sir Astley Cooper, at least in recent cases.

Professor Cumano relates eight cases in which it has succeeded. The first, a young athletic sailor; the second, another sailor, æt. eighteen; the third, a peasant, æt. forty; the fourth, a sailor, æt. twenty-seven; the fifth, a man, æt. fifty-three; the sixth, a man, æt. fifty; the seventh, a woman, æt. fifty; the eighth, a man, age unknown. In the first six cases the dislocation was downwards. The first, which was the most recent, had existed only an hour; the last, which was of the longest standing, four days. We have mentioned the ages, in order to fix the period at which this dislocation may occur; and, after particular research upon the subject, we are inclined to believe that, like that of the femur, it is rarely met with after sixty years of age.

The two other cases deserve more lengthened notice.

CASE I. In the evening of the 14th of July, Anna Vida, æt. fifty, a very stout woman, while drawing some water, suddenly fell down. Being called to her the following morning, says the author, I found her on the bed, suffering severely from a dislocation of the left humerus, with various bruises, and a lacerated wound on the summit of the joint. The forearm was bent, and the arm raised and removed from the trunk, so that the patient's hand was in contact with her head. The dislocation, which had existed twelve hours, was downwards and forwards under the pectoral muscle, and was attended by severe pain down the arm, and a sense of distension in the fingers. The reduction was accomplished by the heel in the axilla. On the following day the arm was discoloured by ecchymosis along the biceps muscle, particularly at its lower part, which was swoln and painful. The application of a few leeches restored the mobility of the arm, excepting in the direction upwards, the deltoid muscle being partially paralytic; but in the course of a year this symptom also was removed under the use of friction.

In one of the preceding cases, where the dislocation downwards had existed four days, perfect motion of the limb was not regained till after two months, during the whole of which time there was a sense of distension in the fingers. The author attributes the paralysis to the length of time that the head of the bone was pressing upon the brachial plexus of nerves, and to rheumatism, from which the patient had formerly suffered. In the case of

Anna Vida, he believes it to have been dependent on the internal disease, which occasioned the loss of consciousness at the time of the fall.

Case 11. Lazzaro Marpurgo fell from a carriage on the 4th of October, 1833, in the neighbourhood of Gorizia; the humerus was dislocated, but the nature of the accident was not discovered till the patient arrived at Trieste, twenty days afterwards. Dr. Forté and Professor Cumano soon recognised a dislocation forwards. The patient was bled twice largely, and on the twenty-fourth day the head of the bone was returned to its socket on the second trial with the heel in the axilla. Half an hour after the reduction the patient had a rigor, attended with severe pain down the arm, which was followed by general heat and sweating, accompanied by alleviation of the pain. In the course of a fortnight the arm had regained all its motions excepting those of the deltoid, which was affected by a partial paralysis, consequent on the pressure of the brachial plexus and the circumflex nerve: this, however, gradually disappeared.

The author has several times since had the opportunity of employing this method with success, as also have his colleagues, (excepting in a few cases,) whenever the dislocation had existed only a few days, or where the head of the bone was very forward, or in those cases in which unsuccessful attempts had been previously made at reduction. In such cases the author employed indifferently the method of Desault, the pulleys of Cooper, or extension upward, in the manner recommended by Mothe. This conclusion well displays the uncertainty of our knowledge on the subject; for Desault recommended that the extension should be made downwards, Cooper prefers it outwards, and Mothe directly upwards; and yet the author finds them equally successful. This arises from ignorance of the nature of the injury, and of the exact position of the head of the bone, each author having deemed success a sufficient apology for his method. Again, out of eight dislocations, three were followed by paralysis; but it may be questioned how far this depended on the method employed in the reduction.—*Gazette Médicale.*

[It is not difficult to estimate the real value of the method of reduction by the heel in the axilla. There are two principles on which these and all dislocations may be reduced: one, on that of direct extension in such a direction as will meet with least opposition from muscular contraction; the other, the employment of a lever, by which one hand may acquire the power of many. The former has the inconvenience of requiring assistants, who, from want of skill, may embarrass the operation. The latter is entirely in the power of the surgeon; but, as a great portion of the force must fall upon the affected part, injury may be done to the nervous trunks in the vicinity, and paralysis may ensue. By care the objections to the former may be overruled, and, in our opinion, it should therefore be preferred whenever the requisite assistance can

be obtained: where, however, this cannot be done, the surgeon must endeavour to employ the latter, provided always that his dorsal muscles are equal to the task.—*Z.*]

TREATMENT OF ANEURISM.

We cannot terminate the present article without noticing a table attached to M. Lisfranc's thesis (our analysis of which we have now completed), which at once shows immense literary research, and may serve as a foundation for several curious and useful deductions.

The table contains 242 cases of aneurism, and indicates, in parallel columns, the work in which the case is described; the surgeon treating; patient's name, age; artery affected, and species of aneurism; process employed; accidents; date of the ligature coming away; and termination. It is subdivided into sections, according to the different methods employed.

I. II. and III. contain eighteen cases which were treated by refrigerants and Valsalva's method. In five cases treated by Valsalva's process there are four cures (carotid and subclavian aneurisms); the remaining thirteen, treated by styptics, refrigerants, &c., give six failures, six cures, one uncertain.

IV. Compression between tumour and heart, thirteen cases; eight unsuccessful, five cured.

V. Compression on the tumour, five cases; one cure (aneurism by anastomosis of temporal artery).

VI. Compression on the whole limb, five cases; three cures, two failures.

VII. Compression without indication of the spot, twenty-four cases; cures eleven, failures thirteen.

VIII. Ligature after the old method, thirty-one cases; failures six, cures twenty-three, two doubtful.

IX. Anel's, or Hunter's method, 151 cases; failures forty-five, cures 106.

X. Brasdor's method, fourteen cases; four cures, ten failures.

XI. Torsion; *refoulement*, one case; cured without accident.—*Lancet.*

MALPOSITION OF THE HEART.

Andrew Dunlevie, æt. fifty-three, is at present attending Dr. Duncan, with chronic bronchitis and asthma, but without any signs of effusion into the chest. The heart beats on the right side, the chief impulse being felt between the fourth and fifth ribs, immediately below the nipple. The pulse is regular, and of about equal strength in both arms; the impulse on the right side of the chest is natural, and none is felt on the left side. He was for thirteen years in the army, and served in the Peninsula, and in Canada, but has always enjoyed good health until lately. He does not remember that he ever felt pulsation on the left side.—*The Liverpool Med. Journal, June.*

ADDITIONAL CASES OF CLUB-FOOT TREATED BY DIVISION OF THE TENDO-ACHILILS.

Henry Lezing, ætat. seven, the son of a gardener, in the neighbourhood of Hanover, was born with both his feet deformed. By constant surgical treatment their proper form was partially restored, especially that of the left foot. When he came under Dr. Stromeyer's care, the right limb was much wasted, the edge of the foot turned inwards, and the toes downwards. When he attempted to walk, he rested but slightly on that side, the outer edge of the foot being in contact with the ground, and the toes were directed very much inwards. Its voluntary motion was extremely limited, but it might be returned to its natural position without much force. As time was an object with the patient, the division of the tendo-Achillis was proposed, in order to equalize the action of the flexor and extensor muscles. The operation was performed on the 26th of August, 1832, in the same manner as in the two preceding cases. The external wounds were united, and the cut edges of the tendon were adhering on the fifth day.

Although it was foreseen that the union of the tendon would be more firm in so young a person than in an adult, yet extension could not be attempted till the eighth day, on account of the tenderness of the wounded part. The foot was readily restored to its natural position, under extension gradually increased for fifteen days; and it then formed an angle of about seventy degrees with the anterior surface of the leg. It was left in this position during three weeks. On removing the apparatus, I found, says Dr. Stromeyer, the intermediate substance thinner than the tendon, but not above two or three lines in length. The form of the foot was restored for the time; but in a few hours the bad position returned, in spite of the ordinary instruments which were applied, but removed again in a short time on account of the pain which they occasioned; so that the boy's state was not in the least ameliorated.

The error in this case was, that extension was not commenced sufficiently early to lengthen out the substance uniting the tendon. A second operation was proposed, in order that this fault might be corrected, but the parents of the boy rejected the proposition.

Case ii. Henry Linse, ætat. thirteen, the son of a peasant, of Schulenburg, near Hanover, had been affected with a club-foot since the age of four, without any known cause. As nothing had been attempted for its relief, it had continued to get gradually worse. He came under Dr. Stromeyer's care in August, 1833. The deformity was greater in this case than in that of Lezing: he walked entirely on the outer edge of the right foot, and this occasioned so much pain, that the poor boy was forced to give up every kind of motion. The toes, more especially the great toe, were drawn inwards by the action of the flexor longus pollicis pedis, the tendon of which could be seen in a state of extreme

tension. The outer edge of the foot was rendered very hard by constantly supporting the weight of the body; the leg was wasted, and the foot scarcely moveable; considerable force, however, would partially restore it to its natural position.

Before dividing the tendo-Achillis, Dr. Stromeyer cut out that of the flexor longus pollicis pedis, introducing the knife underneath the tendon from the inside of the foot, about half way between the toe and the heel. On the third day an extensile apparatus was applied; and on the eighth a great improvement was perceptible in the direction of the foot. The tendo-Achillis was then divided on the 15th of August. On the fifth day there was adhesion of the tendon, and extension was applied; and, on the tenth day, the foot formed an angle of seventy degrees with the thigh.

In four weeks' time the apparatus was removed, and the foot placed in an iron boot; and extension was kept up during the night, by means of a screw. The boy afterwards began to walk, and that with so much ease, that he was permitted, on the third day, to walk out in a well-paved street, for a quarter of an hour. He transgressed, however, the directions of the doctor, and remained out three hours, with no inconvenience, saving fatigue. A fortnight after, he was in a state to walk four or five leagues. The foot had then recovered its natural form, excepting a slight inclination inwards; it was perfectly moveable, and had increased in size. Six months afterwards he was in the same state as to the foot, but the leg had continued to enlarge.

Case III. Ferdinand Wesl, ætat. nine, a native of Celle, was born with a club-foot on the right side. By surgical treatment the state of the foot was somewhat ameliorated during the early years of his life. When he was five years old, he came under Dr. Stromeyer's care, who applied the ordinary instruments, the iron boot, &c., with which the boy was able to walk. This plan was continued for five months. He remained in the same state for three years, when, being attacked with illness, his foot became worse. In December, 1833, Dr. Stromeyer again saw him. The state of the foot was then much worse, walking being nearly impracticable, on account of the pain which it occasioned. The dorsum formed a convexity with the anterior surface of the leg; the toes were turned inwards, and drawn towards the heel, and the great toe was bent backwards in a very singular manner.

January 10th, 1834. Division of tendo-Achillis.

On the 15th, adhesion of the cut edges and extension commenced. The foot was readily straightened.

It was left in the apparatus till the twenty-eighth day after the operation, and then put into the boot. The child walked immediately with the greatest ease.

As the point of the foot was still directed a little inwards, the tendons of the flexor longus pollicis pedis was divided, and within three days afterwards that of the extensor. The foot was placed

again in the apparatus, and the great toe was drawn forwards. In eight days' time he was allowed to use the boot. The division of the tendons of the muscles of the great toe, so far from paralysing its motions, appeared rather to have allowed them to be more free. By the end of March the foot was restored to its natural form and action.

Case iv. Mlle. Brandes, ætat. nineteen, a native of Hanover, having suffered much in her childhood from scrofulous disease, was seized with paralysis at the age of two years, while running across the room. She however recovered from the paralysis, excepting that it left great weakness of the right leg, the foot of which became gradually contracted. Every attempt at restoring the foot was not only useless, but attended with considerable pain.

When this young lady came under Dr. Stromeyer's care, the dorsum of the foot formed a straight line with the front of the leg, in consequence of the projection of the astragalus; the foot was turned slightly inwards, so that the point of support during walking was the external surface of the metatarsal bone of the little toe. With a cork heel nearly four inches high, the sole of the foot scarcely touched the bottom of the boot; the leg was wasted, and she had no power over the motions of the foot. External force had but little influence in removing the deformity.

March 11th, 1834. Division of the tendo-Achillis. On the fifth day there was union of the cut surfaces, and extension was commenced. In three weeks the foot formed an angle of seventy degrees with the leg; a boot was then applied, which kept the leg in the same position. This occasioned œdema of the foot, which disappeared in a week, under the use of friction with alcohol. The young lady then began to take regular exercise, but walked with some difficulty at first, in consequence of her habit of using the limb in a perfectly different manner. Nevertheless, as she constantly exercised it, her progress was rapid. Three weeks after her first attempt she walked firmly without any support, and the form of the foot was restored to its natural state.

In these last three cases it is impossible to describe the length of the intermediate substance, as it requires a most diligent examination to discover one part of the tendon thinner than another. When the position of the calf is remembered, it will be seen that it must be of considerable length. The two boys, with casts in plaster of their feet in the original state, have been seen by the Society of Medicine at Hanover. Dr. Stromeyer, in publishing these cases, has endeavoured to direct the attention of the profession to an operation, which, though extremely useful, has of late fallen into disuse.—*Archives Générales, Juin.*

PARALYSIS OF THE PORTIO DURA.

Two cases of this interesting local paralysis have lately occurred in the practice of Dr. Carson, jun. The first, in a middle-aged man of rather full habit, came on suddenly during a severe coryza, con-

sequent on exposure to cold. The other was the sole remains of a complete hemiplegia of the left side, which occurred thirty years ago. In neither of them was there observed that absence of distortion mentioned by Bell, during the quiescence of the muscles of the face; the mouth was continually drawn to the sound side. In both cases, at first, the tongue appeared to be thrust out to one side, but this appearance altogether arose from the distortion of the mouth. On comparing it with the teeth, it was evidently protruded straight forward. One of the most remarkable symptoms was, the total absence of nictitation in the eyelid of the affected side. This, in the case of long standing, has been followed by chronic conjunctivis, with destruction of vision. The inflammation of the eye came on about seven years ago, when he went to work in a sal ammoniac manufactory. No doubt, the eye not being occasionally lubricated by the lid, the acrid vapours of the ammoniac had excited such a degree of irritation as to destroy vision. There is in this case a degree of deafness in the ear of the affected side, such as that, though he can perceive sounds, he cannot distinguish them. Query, can this be attributable to a paralyis of the muscles which tighten the tympanum, and move the small bones of the internal ear; and if so, may not this deafness be a distinguishing symptom between the affection arising from disease of the brain, and the rheumatic affection arising from cold?

By the repeated application of blisters behind the ear, leeches to the seat of the origin of the nerve on the face, and the use of calomel and jalap purges so as to affect the mouth, the patient, in the course of a month, completely recovered.—*The Liverpool Medical Journal.*

CRYING OF THE FŒTUS IN UTERO.

I was some time since called to the wife of a blacksmith at Preston, about two miles from my residence, who was in labour with her tenth child. I had attended her in several former confinements, and she had always had quick deliveries, as the pelvis was unusually capacious, and her pains were active. After I had been a few minutes in the room, I proposed and made an examination, and found the face presenting, and making its descent into the pelvis, the chin resting on the os pubis.

A few strong pains succeeded, and I again examined, to ascertain if the face had made any advance. I found it had done so, and that it was pressing on the perineum; but, in making this examination, my finger passed freely into the mouth of the child, and it immediately gave a convulsive sob, and cried aloud, to the great terror of the mother and of the bystanders, when they found that it was still in the womb. I had great difficulty in calming the agitation produced by this event upon the woman, whose pains were suspended for nearly an hour, but I eventually succeeded by explaining that the face was presenting, and that, from the circumstance of my having passed my finger into the mouth, the air had

gained admission, and enabled the child to breathe; this, with a little spirit and water, and a dose of the ergot of rye, succeeded in bringing on the uterine action, and, after two pains, the child was expelled alive and well, at least one hour after it had respired and cried in the womb. I am not aware that any instance similar to the above is on record, but I consider it one of consequence as a physiological and medico-legal point, and one which will throw additional difficulties in the way of that clear proof which is so desirable in cases of infanticide.—*Mr. Tomkins, in Lancet.*

TREATMENT OF DIARRHŒA IN INFANTS.

In treating all cases of purging in infants, our attention should be especially directed to two objects: first, the feel and appearance of the abdomen; secondly, the character and kind of the evacuations. Upon feeling the abdomen, (which should be done when the child is in an easy posture, and not crying,) if it be found full, hard, or irregular in its shape, a purgative will almost certainly be required, notwithstanding the frequent evacuation of fecal matters. The most effectual purgative in such cases is a grain or two of calomel, either combined with jalap or scammony, or rhubarb, or given by itself, and followed in a hour or two by a dose of castor-oil, or solution of salts in almond emulsion. This purgative is to be repeated according to circumstances, and in the meantime a cretaceous mixture may be given at intervals, or, what is often preferable, a solution of carbonate of soda or potassa, in mucilage or emulsion.

If the evacuations be hard, lumpy, scyballous, or pasty, or of a green, or leaden, or blackish colour, the same plan is required; and the aperients must be continued daily, or as often as may be found necessary, till the evacuations become of a better consistence and better colour.

When the use of the more active purgatives shall have relieved the complaint, the cure must be perfected by giving a small portion of ipecacuanha, a grain or two of rhubarb, and a few grains of chalk, with the addition of a little aromatic, twice or thrice a day.

But, when the abdomen is not fully hard, or irregular in shape and feel, but flabby and collapsed; and when the stools are thin and watery, pale coloured, or white and frothy like yeast, the use of calomel and purgatives is to be rejected, and other more appropriate means must be employed. The case now requires the use of cretaceous medicines, kino, and catechu; opiates must be occasionally interposed, and an attempt must be made to improve the secretions, by three or four grains of Hydrarg. c. Creta, or a grain of Pil. Hydrarg. rubbed into a powder with four or five grains of carbonate of magnesia: sometimes a combination of ipecacuanha, rhubarb, and soda, very effectually answers this purpose. Change of diet, as Dr. Underwood recommends, is indispensable; and change of air is sometimes to be recommended.—*Dr. Merriman's Notes on Underwood.*

CASE *of* EXTIRPATION *of a* TUMOUR *of the* NECK, *in which the Carotid Artery and Internal Jugular Vein were tied: with Remarks.* By WILLIAM GIBSON, M.D. Professor of Surgery in the University of Pennsylvania.

George Washington Reynolds, seventeen years of age, came to Philadelphia from Delaware, in November, 1832, and placed himself under care of Dr. Horner, on account of a tumour of the size and shape of a cocoa-nut, which occupied the whole of the left side of the neck. Dr. Horner referred him to me, and at the same time requested the opinion of Dr. Physick on the case. The friends of the patient stated that the swelling had made its appearance five years before, that it arose without evident cause, and had gradually increased to its present magnitude. The boy now sought relief, on account of the difficulty of breathing and of deglutition he experienced, and which increased with the growth of the tumour. In other respects he felt no inconvenience from it; his complexion was florid and healthy, and his constitution apparently sound and vigorous. In consultation, it was determined that nothing less than extirpation would afford a chance of recovery, and I was requested to undertake the operation. Previously, however, I thought it advisable to reduce the patient by bloodletting, low diet, and other antiphlogistic means, both to diminish hæmorrhage, and to guard against inflammation. Having fulfilled these indications, I commenced the operation, (November 20th,) assisted by Drs. Horner and J. R. Barton, in the theatre of the Alms-house Infirmary, in presence of several hundred students. The patient was placed at full length on a narrow table, his head inclined to the right side and supported by a pillow. An incision two inches long was made over the course of the carotid, low in the neck, and that vessel tied by a single ligature. Over the most prominent part of the tumour, commencing immediately under the angle of the lower jaw, and extending nearly seven inches, another incision was made through the integuments; continuing the line thus chalked out, layer after layer of condensed cellular membrane, of fasciæ, and the fibres of the platysma myoides, were successively divided, as well as those of the sterno-mastoideus, which last muscle was spread out by pressure of the tumour, and converted into a thin muscular expansion, intimately incorporated with the platysma, and rendering it difficult to distinguish one from the other. During this stage of the dissection the internal jugular vein was exposed, tied by two ligatures, and divided between them. The ends of the vein were then dissected from the surface of the tumour, and turned to one side. In order to get round the tumour, and raise it from the cavity in which it was deeply imbedded, it became necessary to separate the integuments, fasciæ, platysma, and other coverings. This proved very difficult, and was not accomplished without great risk, owing to the distribution of the par vagum and descendens noni nerves, both of which lay on the surface of the tumour, and were

closely attached to it. I soon found it was impossible to get out the tumour, and at the same time preserve the descendens noni. I therefore cut it across. Instantly a slight shudder passed over the patient's frame; but the effect was momentary. I determined, however, not to divide the par vagum, dreading the result either immediately or remotely. I was obliged, therefore, to dissect along the edge of the nerve for five inches, and succeeded in detaching it from the tumour, to which it had formed a very close adhesion. This was the most painful and difficult part of the operation, and nothing but the uncommon composure and fortitude of the boy, perhaps, enabled me to accomplish my purpose, for he remained during the whole operation motionless, and neither complained, sighed, nor groaned. The par vagum having been thus pushed aside and out of danger, I continued the dissection, taking up occasionally small vessels, sometimes separating with the handle of the knife the adhesions between the tumour and a firm fibrous sac, in which I now found it enclosed, at other times using the edge of the knife until I reached the base of the tumour, which was intimately connected with the pharynx and œsophagus, and to remove it from which required every possible precaution. In this also I at last succeeded, though not without the division of four or five vessels, which at first shed blood freely, but were soon tied, or shrunk of their own accord. The action of the pharynx and œsophagus was distinctly seen, even at a distance, whenever the boy imitated the action of swallowing, or took fluid by the mouth. The cavity left by the tumour was even larger than had been anticipated, owing to the influence of pressure upon all the surrounding parts. To guard against return of hæmorrhage, the patient was left on the table for twenty minutes, and the edges of the wound held together temporarily. No hæmorrhage occurring, the wound was dressed regularly by adhesive straps, &c. and the patient put to bed. The operation lasted thirty-four minutes.

The tumour having been cut open and examined in presence of the class, was found to consist of a medullary-like matter, of rather firmer texture, however, than that usually met with in fungus hæmatodes. The idea was at once impressed upon my mind, and for the first time, that such indeed was the nature of the disease. The unusually healthy appearance of the boy, and in particular his florid complexion, (circumstances so uncommon in fungus hæmatodes, which is almost invariably accompanied by a sallow, cadaverous countenance,) had prevented any of us from entertaining suspicion of the kind. There was not, moreover, the elastic feel, and deceptive sensation of fluctuation, so characteristic of fungus hæmatodes.

[The patient was discharged cured in six weeks after the operation; but the disease soon returned; and, as it was then obviously a case of fungus hæmatodes, nothing could be done, and the patient died soon afterwards. The author concludes with the following remarks. Ed.]

There are two points connected with the operation just detailed,

which give it an interest it might not in other respects, perhaps, be entitled to,—the application of a ligature to the internal jugular vein, and the division of important nerves. It is an opinion generally received among surgeons, that large veins cannot be tied without great risk of inflammation of their internal surface speedily following, and proving fatal by extending to the heart. Such certainly has been the result in numerous instances in European practice, but it is equally certain that the occurrence in this country is extremely unusual; for, out of a great many instances in which I myself have tied varicose saphenæ veins, and have seen the operation performed by others, I have never met with a single case of injury, much less of death, from such a cause. The only instance, indeed, that has ever come to my knowledge of death from tying the saphena vein, occurred a few years ago in this city, in the practice of a respectable surgeon. There were circumstances, moreover, connected with that case, which rendered it very doubtful whether the unfavorable issue was owing to the operation, or to other causes. I think it very probable, therefore, that the constitutions of patients in this country, (owing to all classes of people being well fed and clothed, and little exposed to hardships,) are generally superior to those of Europeans, and, as such, more capable of resisting the operations of injury or disease. Whether this be true or not, however, it is certain, judging from the details published by European writers, that the patients that have fallen a sacrifice to phlebitis, occasioned by the ligature of veins, have very generally been among the lowest classes, whose constitutions were of the worst kind, and whose operations were performed in the crowded hospitals of large and unwholesome towns. I do not wish to be understood, however, to say that there is no danger from including a large vein in a ligature. On the contrary, I am well persuaded that there is always more or less risk, much greater risk indeed than would follow the tying of a large artery. I only mean to imply that there is less danger in tying a vein than is commonly imagined. Influenced by this opinion, I ventured, in the case I have related above, to tie the internal jugular in two places. There are only a few examples on record, I believe, in which this vein has been tied, and most of them had a successful termination. The operation was first performed, there is reason to believe, by Dr. Simpson, of St. Andrew's, in Scotland, eighty years ago, and the patient recovered without a bad symptom. Mr. Simmons, of Manchester, in England, also tied up the internal jugular, and with a similar result. Giraud has recorded a case, in which a French surgeon, at Toulouse, tied the trunks of the common carotid artery and internal jugular for a wound from a musket-ball. The patient had no unfavorable symptoms as far as the sixth day; but it is not stated whether the man recovered. In this country the internal jugular has been tied by Drs. Mott and Stevens, of New York, by the former in 1828, and by the latter in 1830. Both patients recovered. Some interesting remarks on the ligatures of veins, in which cases and experiments have been de-

tailed, have been published by Trousseau, and may be found in the 14th vol. of the "Archives Générales de Médécine." The author is induced to conclude that there is less danger from tying a vein than is commonly imagined, and that the danger is often owing to prematurely pulling the ligatures away, and other mismanagement on the part of the surgeon. Fatal cases of wounds of the jugular veins have been reported, and the death of the patients attributed to the introduction of atmospheric air.

The division of the descendens noni, in the case of Reynolds, produced little or no inconvenience, it will be seen, to the patient, owing no doubt to this nerve being chiefly destined to supply the muscles of the neck, and holding no important connexion with the vital organs. The dissecting up the par vagum, by which it was more or less disturbed, probably gave rise to the erysipelatous inflammation of the abdomen, this nerve having an intimate relation to the stomach, intestines, &c. A division of it during the operation would probably have produced great disturbance in the animal economy, or have led, remotely, to the patient's death. The only further remark I deem it necessary to make in relation to this case, is, that could I have known the tumour to have been of the nature of fungus hæmatodes, I should certainly not have undertaken to remove it, upon the ground, that there is not a single well-attested case on record in which this inveterate malady has been successfully removed by extirpation, and very few where the patient has recovered after amputation.---*American Journal of Medical Sciences.*

A CASE OF OSSIFICATION OF THE MUSCULAR TISSUE.

By David L. Rogers, M.D., Lecturer on Surgery in New York.

In June, 1832, Dr. R. was first consulted in the case of James Mulwill, aged thirteen years. His father stated that his son, from his infancy, had been in good health, and was remarkable for animation and a high flow of spirits. About six months ago, it was perceived that his health began gradually to fail, and without any perceptible cause. At first a loss of motion in the arms was noticed: he was unable to raise them to his head, or carry the elbows to any great distance from the body. The motion of the right arm lessened every day, until it was permanently fixed to the side of the body. Shortly after his head inclined forwards and downwards on the sternum. At the time Dr. R. first saw him, his appetite and digestion did not seem to be impaired; slept well at night, and the bowels were regular. On examination, it was found that the pectoralis major muscle was ossified at its superior part, and extended in the direction of the clavicle to the arm, the bony deposits forming high and irregular elevations. The sterno-cleido mastoideus was ossified from the sternum to its middle portion, with several elevations. The back exhibited the greatest quantity of ossific matter, having a tubercular appearance. The scapula was fixed to the ribs, and studded with bony excrescences. All the

muscles going to the scapula appeared more or less affected, viz. the trapezius, rhomboideus, subscapularis, &c. The latissimus dorsi formed a large bony plate, from its origin to the angle of the scapula: at this part it had united to the ribs, forming a large tubercle. The longissimus dorsi was in a similar condition, extending upwards along the spine, resembling a splint, and to this may be attributed the entire loss of motion in the lumbar vertebræ.

The treatment was various, and may be considered a series of experiments to check the predisposition to the formation of bone.

His general health at this time not being materially affected, recourse was had to alteratives, consisting of the different preparations of mercury with sarsaparilla. Having used these for a length of time without benefit, the acids were employed without effect, viz. the nitric, muriatic, and sulphuric; the carbonate and phosphate of iron were administered with the same result; the iodine was also given, but without advantage.

Finding at the expiration of three months that no change for the better had taken place, and that the bony depositions had increased, all active treatment was now abandoned, and he was directed to live principally on salted provisions: the object was to produce a state of his system resembling that of scurvy, as it is known that bony depositions do not take place in this disease, and that fractures, which have been united for several years, are sometimes separated in the scorbutic diathesis.* Until this time he had been an office patient, but, from some cause unknown, he omitted to call for several months.

In March, 1833, he was visited at his residence: he was much changed; his general health had suffered; had lost his high spirits, and was very irritable; had a diarrhœa; was greatly emaciated; the ossific depositions had, in some respects, changed their situations; the sterno-cleido mastoideus muscle had become free, and the head returned to its erect position; many of the tubercles of the back had been absorbed, and others formed in different places. Bony depositions had taken place also in the muscles about the trochanter major, particularly on the right side. He was compelled to lie in bed, for the least movement produced excruciating pain. A large collection of matter formed in the thigh near the joint, which, when discharged, afforded some relief; but the constant pressure on the bony tubercles on the back caused extensive sloughing, and, after three weeks of great agony, he expired.

The body was partially examined twelve hours after death. The glands of the mesentery were enlarged; no ossific matter in the vascular system, but it seemed to be confined entirely to the muscular tissue. The parts within the abdomen and thorax appeared to be healthy. The pectoralis major and minor muscles were united into one, and attached to the ribs by solid bone. During this part of the dissection a large abscess was opened in each side, contain-

* Lord Anson's Voyage around the World.

ing about six ounces of pus; the tendinous parts of the muscles were not affected. The muscles of the back were all more or less in the same condition. Specimens of the latissimus dorsi, longissimus dorsi, subscapularis, and pectoralis muscles, are preserved in the museum of Dr. Rogers. In several instances spicula of bone projected from the muscles one or two inches; and no doubt, from the irritation they occasioned, abscesses were formed.—*Ibid.*

HYDATIDS OF THE KIDNEYS, PASSED BY THE URETHRA.

Elijah Jones, æt. twenty-seven, a comb-maker, of pale complexion and slender form, applied to Dr. Duncan on the 13th May. He brought with him several portions of a membranous looking substance, having a pearly, semi-opaque, pulpy appearance, and which he said he had passed with his urine three days previously. He stated that he made water rather oftener than usual, and sometimes with difficulty; and that he had a constant shooting pain in the perinæum, which was increased after micturition. He had also occasionally a sense of "weakness" in the right lumbar region. Urine of natural appearance; and functions natural.

On examining the substances above mentioned, one was discovered of a globular shape, and about one and a quarter inches in circumference, evidently an hydatid, of the genus Acephalocyst. It was filled with a transparent fluid, having floating in it another very small hydatid, which gravitated in the surrounding fluid. The remainder of the substances consisted of the coats of seven or eight hydatids which had burst, and which, when filled with water, varied in bulk from the size of a pea to that of a pigeon's egg.

He stated that, seven months ago, he got a "bad cold," and suffered from pain above the right hip, and in the perinæum; and that, five months ago, a blister was applied, which removed the pain above the ilium, but that he still feels occasional uneasiness there. About a month ago, he passed several hydatids, which caused some obstruction to the flow of urine, but no more appeared until three days ago, although during the last month he has had constant pain in the perinæum, apparently near the neck of the bladder.

He was ordered to take diluted muriatic acid, twelve minims three times a day.

16th. Another hydatid has been passed (burst). The pain is nearer the end of the penis.

24th and 25th. Two more hydatids passed, which obstructed the urine for some time. No pain in the perinæum now; it is generally felt six or seven hours before the hydatid is expelled.

June 3. No more hydatids have appeared. Complains only of weakness in the back and hip.

The above case is interesting, from the extreme rarity of its occurrence. Dr. Craigie says, that "the uterus is the only cavity, with mucous surface, in which inspection shows that hydatids have been found;" and there can be no doubt that, in this case, they

were formed in the kidneys, and probably increased in size after their descent into the bladder.

The following account of the post-mortem appearances in one of the few instances of the kind on record, is taken from the Philosophical Transactions for 1687. Dr. Tyson, in stating what was observed in the bladder, says, "therein, upon apertion, we discovered a very strange sort of cystes or bags, of the exact figure of eggs, of several dimensions, some larger than goose-eggs, others as big as hen-eggs, to the number of twelve in all; and about eight of them whole and repleat with a limpid serum; all of them loose and free, without the least adhæsion, either to one another or to the coat of the bladder; nor could we imagine that this miserable patient could possibly make any water but what happened upon the breach of some of these watery tumors, when the bladder was crouded beyond its dimensions. The vreters were of the largeness of the small gutts in children, so that they could easily admit two fingers into their cavity. One of the vesiculæ being opened, had a large cluster of small ova as big as grapes, all repleat with liquor. All the rest contained nothing but serum." Two small ova were observed at the entrance of each ureter, having descended from the kidneys.—*The Liverpool Medical Journal, July.*

CASE OF AMAUROSIS CURED BY STRYCHNINE.

Edward Sale, æt. twenty-eight, a stonemason, applied to Mr. Neill, at this Institution, April 17th. Complained of diminished vision in the left eye, with confusion from diplopia and muscæ-volitantes; pain over the brow, and much occasional pain of the head; the pupil is dilated, but slightly moveable.—Pil. Hyd. gr. iv. night and morning, and the drop of the Vin. Opii to be applied in the morning.

26th. Mouth sore; great pain of head. To be cupped to ℥xiv. on the nape of the neck, and have Sulph. Magnesia one oz. and one gr. of the Tartarised Antimony.

29th. Head relieved, but vision not at all improved. A blister to be applied to the nape of the neck.

May 1st. Half grain of strychnine dusted over the blistered surface.

3d. Thinks his sight was better after the application. One gr. applied.

4th. A sensation of bitterness in the mouth, and since two hours after the last application has had a feeling of suffocation, as if from sulphur, but vision improved. One gr. dusted on.

5th. The left eye is quite well; but the dimness has attacked the right one; with it he perceives objects double. One gr.

6th. One gr. repeated.

7th. Double vision gone.

8th. One gr., then discontinue.

15th. Discharged cured.—*Ibid., August.*

MISCELLANEOUS.

PHYSIOLOGY OF THE FŒTUS.

It is of the utmost importance to bear in mind the great distinction which exists between the independence of the fœtus, *quoad* life, and its dependence, *quoad* nutrition, in respect to the mother. The former state is secured by a total separation of the two circulations (maternal and fœtal); the latter by the close reciprocal contact of the organs of those circulations. Thence it is that we find the fœtus to live on, notwithstanding that its connexion with the mother has been partially, and sometimes even wholly severed; while, on the other hand, we cannot help admitting that, albeit this independence, the influence of the mother over the fabric of her offspring is unquestionable.

Here are two important positions. I have mentioned my experiments on the intact ova of the genus cat, to illustrate the first of them; and Dr. Prevost has since come to my assistance, with as strong a case in further support of it. (*Mémoires de la Societé de Physique de Genève*, t. iv. part 1.) This gentleman having observed an ovum still alive in the uterus of a ewe, which was a short time advanced in gestation, removed it, and placed it upon a warm glass plate exposed to the rays of the sun, and attentively examined it with the microscope. The beatings of the heart became more lively. He noticed the blood arise to the surface of the chorion from the fœtus, there ramify plentifully, and, by anastomosing vessels, return to two of the larger trunks, which were the veins of the embryo. He concluded, therefore, that the ovum was an isolated substance.

In proof of the accuracy of the second position we have equally strong evidence, founded on experiments. Magendie introduced camphor into the veins of a pregnant bitch, and he found that the blood of the fœtus had, at the expiration of a quarter of an hour, acquired distinctly the smell of that drug. (*Physiology*, 2d edit., 1825.) Quadrupeds carrying young were made to take with their food four ounces of madder-root. The colouring matter of that substance was found to have passed from the mother to the fœtus; as all the serum of the blood of the latter, the urine, the liquor amnii, the teeth, and the bones, were tinged with it. (*Dr. Mussy*, 1829.*

In 1827 I undertook, at the request of Sir E. Home, a set of experiments on the human subject, with a view to ascertain the truth of my second position. Six gravid patients of one of the lying-in institutions under my direction, who required the constant use of aperient medicines, were instructed, towards the close of their time of gestation, to take at night, for a period which averaged about a week, from ten to fifteen grains of rhubarb in powder.

* American Journal of the Medical Sciences, November, 1829.

After two or three days the effect was visible in the colour and smell of the urine of the patients previous to their confinement, and, in one of them, in the colour and smell of the transpiration also. During the labour, care was taken to preserve part of the amnionic fluid in a cup, the umbilical vessels were suffered to bleed on the side of the child after their recision, and the blood set apart so as to separate the serum, which was obtained in small quantity. Lastly, the first urine of the child was collected in sufficient portions. Each of these secretions appeared distinctly tinged by the yellow root, and bore the smell of it. When carbonate of magnesia was mixed with the fluids, their colour became lateritious, and a reddish sediment was thrown down, evincing the presence of the drug which the mother had ingested. (*MS. Notes.*) —*Dr. Granville's Graphic Illustrations of Abortion and the Diseases of Menstruation.*

QUAIN'S ANATOMICAL PLATES.

We fear that it will be long before this useful work is finished, for the last Number on our table (XV.) is dated July 1. The period of five years, two months, and a fortnight, which we formerly assigned to the completion of the work, must therefore be still further extended. Our younger readers, (for it is to them alone that we venture to address advice of this kind,) when they shall have risen to the rank of professors and authors, will, we trust, abstain from this modern error of publishing books in infinitesimal fractions; for it is a system pregnant with disappointment and mortification to author, bookseller, and reader. When a sufficient portion of the plates shall be before us, we shall not fail to give a faithful account of them.

A STURDY HYPOCHONDRIAC.

I finish with a short story, which may seem ridiculous, but it is true, and shows the whimsicalness (if I may use the expression,) of the disease. A certain fellow of a college, by too much indulging a sedentary life, was so severely afflicted with this disorder, that he was at length obliged to take to his bed; and his hypochondriacism gradually rose to that pitch, that he declared himself at the point of death. In that fit he ordered his passing knell to be rung in a church not far from his chambers; which was accordingly done, but in so bungling a manner, in his opinion, (for he had been a famous ringer in his younger days,) that, in a violent passion, he jumped out of bed, ran to the church, chid the sexton, and told him he would show him the true way of ringing. Whereupon he grasped the rope, and fell to work with such vehemence, that he soon wrought himself into a muck sweat; then returned to bed, in order to die contented. But he was disappointed, for the exercise restored him to life and health. Thus, as Hippocrates formerly observed, contraries are remedies of contraries.—*Mead, of the Hypochondriacal Disease.* (Works, p. 557. Ed. 1762.)

INFLUENCE OF THE MOON.

A more uncommon effect of this attractive power is related by the learned Kirckringius. He knew a young gentlewoman whose beauty depended upon the lunar force; insomuch that at full moon she was plump and handsome, but in the decrease of the planet so wan and ill-favoured, that she was ashamed to go abroad, till the return of the new moon gradually gave fulness to her face, and attraction to her charms. (*Observ. Anatomic.* 92.) If this seems strange, it is indeed no more than an influence of the same kind with that which the moon has always been observed to have upon shellfish, and some other living creatures; for, as the old Latin poet Lucilius says,

> Luna alit ostrea, et implet echinos, muribu' fibras
> Et pecui addit. (*Apud A. Gellium*, lib. xx. c. 8.)

And after him Manilius:

> Si submersa fretis, concharum et carcere clausa,
> Ad lunæ motum variant animalia corpus.
> (*Astronomia*, lib. ii. ver. 93.)

Mead; Influence of Sun and Moon upon Human Bodies. (Works, p. 186. Ed. 1762.)

GINSENG.

The Ginseng, *Panex quinquefolium*, has from immemorial ages been extolled in China as a universal medicine, or panacea, whence its present generic name, which is a compound of παν ακος, and signifies a remedy for all things. But, notwithstanding its foreign name, it is very little used in Europe; perhaps, its high-sounding title, having led to undue expectations, may have caused it to fall into unmerited neglect; for it does seem, when fresh, to be an agreeable stimulant and tonic. Père Jartroux says, that the most celebrated physicians of China have written volumes on the *Gen-seng*, which they affirm to be able to ward off or to remove fatigue, to invigorate the enfeebled frame, to restore the exhausted animal powers, to make old people young, and, in a word, to render man immortal; (this saving clause being however added,) "if anything on earth can do so." Hence the name *Gen-seng*, *Jin-chen*, or *Nind-sin*, which signifies "wonder of the world," or the "dose for immortality." Osbeck says, the Chinese take it every night and morning in their tea or soup, and that he never looked into the apothecaries' shops but they were always selling ginseng. The plant is a native of North America, as well as of Chinese Tartary: it grows chiefly in desert places difficult of access, or, at least, the venders tell strange tales of dangers encountered by those who collect the root, perhaps with the design of enhancing its value; and it has been known to cost its weight in gold.—*Burnett's Outlines of Botany.*

The body of the mummy being washed, according to Herodotus, after its immersion in the solution of natron, and thus all superfluous salt likely to attract moisture removed, the bandages are to be applied. All mummies, however, were not bandaged. Many had only the covering of a mat, which surrounded them. Denon states that he saw bodies without bandages in the Necropolis of Thebes, and Belzoni saw the bodies of two females lying on the ground in a corner of a chamber in one of the tombs in the valley of Biban el Molonk without any bandages; they were well preserved, their hair long and flowing in tresses. The quantity of bandages on some mummies have been computed to consist of not less than one thousand ells. Abd'Allatif says that in some mummies more than one thousand yards have been used, and that the Bedouins were in the habit of taking it away to make vestments, or to sell for the manufacture of paper for the grocers. The bandages on Mr. Davidson's mummy weighed twenty-nine pounds and a half. The mummy of Horseisi thirty-five pounds and a half. Herodotus states that it was profane for the Egyptians either to be buried in woollen garments, or to use them in their temples. "Les Prêtres ne pouvoient porter ni des habits de laine, ni des souliers de cuir; parceque la laine engendre la vermine, et que le cuir vient d'une bête morte."

The bandages generally employed in the enveloping of the mummies have been supposed to be of cotton. Jomard says that in the catacombs at Philæ linen was clearly to be detected; it was of a coarse description, and he conceives answered for the poorer class of people. Rouyer also noticed a difference in the texture of the bandages. Jomard has gone more particularly into the manufacture of it. * * *

Dr. Ure has been so good as to make known to me that which I conceive to be the most satisfactory test of the absolute nature of flax and cotton, and in the course of his microscopic researches on the structure of textile fibres he has succeeded in determining their distinctive characters. From a most precise and accurate examination of these substances he has been able to draw the following statement: "The filaments of flax have a glassy lustre when viewed by daylight in a good microscope, and a cylindrical form, which is very rarely flattened. Their diameter is about the two thousandth part of an inch. They break transversely with a smooth surface, like a tube of glass cut with a file. A line of light distinguishes their axis, with a deep shading on one side only, or on both sides, according to the direction in which the incident rays fall on the filaments.

"The filaments of cotton are almost never true cylinders, but are more or less flattened and tortuous; so that when viewed under the microscope they appear in one part like a riband from the one thousandth to the twelve hundreth part of an inch broad, and in another like a sharp edge or narrow line. They have a pearly

translucency in the middle space, with a dark narrow border at each side, like a hem. When broken across, the fracture is fibrous or pointed. Mummy-cloth tried by these criteria in the microscope appear to be composed both in its warp and woof-yarns of flax, and not of cotton. A great variety of the swathing fillets have been examined with an excellent achromatic microscope, and they have all evinced the absence of cotton filaments."—*Pettigrew's History of Egyptian Mummies.*

MANUFACTURE OF MUMMIES.

Frequent deceptions have been practised in the manufacture of mummies, as we have seen in a previous chapter. I purchased three mummies at the sale of the museum of the late Mr. Heaviside, to whom they had been presented as Egyptian. I have opened two of them, one apparently that of an infant of very tender age, the other that of a child about six or seven years. The former consisted literally of saw-dust, bundles of rags of various descriptions, and a portion of stick to serve the place of the spine. There were some of the vertebræ of a cat mixed up with the dust. The bandages enclosing this rubbish were of the true Egyptian character, and had, doubtless, been taken off from other and real mummies in the country. The face was formed of linen covered with plaster of Paris, and carefully made out. The second specimen was of a similar manufacture, the face of the same description, but the contents of the head consisted of the bones of a human skull about the age of eight years, which led me in the first instance to think that it had been a genuine mummy; but, upon examination, I found three temporal bones, which was conclusive on the matter. Around the body of this figure were the proper kind of bandages, and some linen with hieroglyphics painted upon it. The contents consisted of bones of various kinds, some belonging to a human fœtus, others of a more advanced age, and some bones of the monkey, and the entire hand of a small species of this animal. M. Jomard mentions the making up of mummies similar to these.—*Ibid.*

AN AUTOPSY BY STEAM.

One of the steam-carriages on the New Road, we observe, has been styled "The Autopsy;" an ominous name, some medical men may think, having notions of death and dissection in their head the moment they hear of it; and some may even fancy it absurd. But we do not agree with them; for autopsy is surely just as good a name for a steam-coach as for the thing it has latterly been applied to in medicine. It properly means what one has seen with one's own eyes, just as autograph does what one has written with one's own hand: and how is it, in any one respect, more applicable to a post-mortem than to a steam-coach? Whenever, in future, we see autopsy prefixed to the report of a post-mortem examination, we shall scarcely be able to divest our minds of the steam-coach, with its hurry, noise, and smoke. We wish the worthy steam proprie-

tors would borrow a few more hard and unmeaning words from us; for, thanks to the medico-pedantic spirit prevailing in some quarters, we have latterly had a heavy overflow of them.—*Med. Gazette.*

COTTON MILLS.

I wish to give my evidence; I wish to say, that as I use up in my concern one nineteenth part of the cotton consumed in Great Britain, that I think it is right that I should declare my opinion about a proposed alteration in the law.

First of all, with regard to the beating of children in mills, my rules are these, and I am very strict about them: it is forbidden; but children must be corrected to a certain extent; we will not turn floggers, and when children require severe correction we turn them away, first speaking to the parents several times, in order that they may correct them if they think proper; we allow no beating with straps or ropes, and if a child is beaten, we have the child, the spinner, and overlooker up face to face; but the only trouble that I have about beating in my mills is with the spinners; I cannot always prevent them from doing it to the extent that I wish, for children require correction every now and then, and the difficulty is to keep it from being excessive. If the child has been improperly dealt with, I propose to the spinner either to pay a fine for the benefit of the child, or I threaten to send for a warrant, and have him up before a magistrate. I have had three cases of this kind in about six months. I have a great number of hands in my employ, about 1,500; I cannot and do not know them all. It never can be the interest of a master that the children should be beaten. The other day there were three children ran away; the mother of one of them brought him back again and asked us to beat him; that I would not permit; she asked us to take him again; at last I consented, and then she beat him; he was a card-room child.

Now, as regards temperature, I really do not know what the temperature of my mills is. It is our own interest to prevent the mills from being too hot, because it costs us money to heat them. The spinners may open the windows when they like in the spinning-rooms, and shut them when they like; the temperature need not be more than moderate; in the card-rooms we send in no steam at all.

Now my opinion is, that whatever bill is passed, it should be a tight one, and such as can never be evaded; it should be equal and efficient; and for this it must be a restriction on the moving power; then if that is not granted, we ought to have a public officer, a warden, and he must enforce the law at his discretion, so as to place all on the same footing as to the hours they work. I think that water-mills should not have any privileges of working up time beyond those which steam mills have; and I would restrict every mill whatever to this, that it should never work more than twelve hours a day; in other words, that there should be no fetching-up of lost time at all, except on the day on which the loss is made.

Regarding the character of females engaged in cotton-mills. My father was a medical man, and he made me study medicine for

three years, and I am fond of the subject of medicine. I cannot say conscientiously that I think that the females are at all worse in their conduct than those engaged in other occupations, save and except, that I think that where a great number of them get together in cotton mills they are not so good as when they are more separated; if there is any difference, it proceeds rather from the business requiring them to be congregated, than from laxity of discipline or other incentives to bad conduct, or anything in the trade itself; the children and the adults are blanched by the confinement in-doors in artificial temperature, but their health is quite as good as the average in other trades.—*Factories' Enquiry. Evidence of John Bolling, esq., in Part I. Supplementary Report.*

[This overgrown spinner's calculating humanity, his hypothesis that "it never can be the interest of a master that the children should be beaten," will remind our readers of the West India planters' cant, who used to protest that it never could be their interest that the negroes should be cruelly treated; yet, when it came to counting, and their paternal chastisements were arithmetically estimated, 150,000 lashes were found to be laid on, in one year, in one colony (Demerara). In the next page, we find Jonathan Ambray, operative spinner, giving an account of the cruelties to which he was subjected at various mills; and, after detailing the shameful mnnner in which he was treated at Mr. Peter Marsland's, in Stockport, he adds, "Mr. Marsland knew nothing of all this, but he pressed for a quantity of work, which could not be got without hands using some sort of severity." (P. 175.) To be sure; the mill-owner, like the slave-holder, does not say, kick me those children, flog me those blacks, but contents himself with demanding an almost impossible quantity of yarn, (as the kindred spirit does* of sugar,) which comes to the same thing. *Qui facit per alium, facit per se*, says common sense.

We hope, too, that there are but few practitioners of physic so fascinated by manufacturers' smiles, or so demoralized by manufacturers' gold, as to pretend to believe that persons blanched by the confinement in-doors in artificial temperature are in good health.—Ed. *Med. Quart. Rev.*]

THE STUDIES OF A PHYSICIAN.

His first care will be to make himself fully acquainted with the curious structure of the human frame; the functions of every part in a state of health, and its deviations from that sane and healthy condition under diseases; the symptoms of which he must next learn to discriminate with the nicest care. After this, he will inform himself profoundly of the various remedies of our art, whether they be supplied by the botanist or the chemist, or come from whatever other source; and, lastly, with the appropriate application of medicine to particular disease. I forbear to enter more minutely into

* This was written before the 1st of August. We trust we may now say *did*, instead of *does*.

the order in which lectures should be attended. Every medical school has its own arrangements.

But it may not be unnecessary to guard the student against being seduced to pay a disproportionate attention to any one branch of the course. To become exclusively the botanist or chemist, or even the anatomist, where the one great object is the cure of diseases, will narrow both his resources and his mind, and will make him incur the risk of failure in the end. Philosophy, to an intellect now so well prepared to investigate its hidden truths, and to make discoveries in the ample field of general science, presents, it must be admitted, most seductive charms. But the example of Hercules, in the interesting story of his choice, must govern the student's conduct; and he will do well to remember the rebuke of Menedemus in the play, "Chreme! tantumne in re tuâ otii datur, aliena ut cures, eaque ad te quæ nihil attinent?"

No: the cure of diseases, I repeat it, is the physician's object, and he must not allow anything to divert his eye from that great mark. Botany and chemistry, enchanting as they are, only furnish tools to the hand of the workman. They are but subsidiary instruments, wherewith to execute, not to form great designs.

Nor is it safe to attach himself to the consideration of some one particular disease. If exclusive and particular attention be given to one malady, with the ambition of acquiring early fame by it, suspicion will arise that this physician's mind is less comprehensive than is necessary to take in all the objects within the horizon of science. Nor is it less impolitic and prejudicial in another point of view; for if any one case turn out ill in the hands of such a person, his good name will be put into jeopardy immediately, on the conclusion (lame and impotent it may be,) that if he could not cure a disease to which he had paid such extraordinary attention, how should he master another which had not duly engaged his mind?

Nor must he addict himself to any particular system, nor swear by the opinions of any master. He must exercise his own judgment, and be ready to profit of occasions, "scire uti foro," according to the Roman proverb; and to accommodate himself to circumstances as they arise, either by the adoption of a new treatment by new remedies, or by the use of accredited ones in new and unusual doses, remembering another remark of that great master of human nature, Terence: "Nunquam ita quicquam bene subductâ ratione ad vitam fuit, quin res, ætas, usus semper aliquid apportent novi, aliquid moneant, ut illa quæ scire te credas, ea quæ putaris prima, in exercendo ut repudias." (Vide *Adelphi.*)—*Sir Henry Halford on the Education and Conduct of a Physician.*

OCULISTS IN THE SEVENTEENTH CENTURY.

It is gratifying to find that the same Richard Banister, of whom I have been speaking, and who wrote really a very good book on Diseases of the Eye,—it is, I say, pleasing to find such an individual zealous in the exposure of all unprofessional practices, and

apparently as tenacious of his professional dignity and privileges as a M.R.C.S. of the present day. He has devoted a long section of his book to the exposure of what he terms "proud quacksalving mountebankes, that would undertake all cures, and performe few;" and intimates that "such are they that promise to make blind people see, deafe people heare, and to cure the stone and rupture by cutting;" and thus expresses his virtuous indignation against this cunning fraternity of knaves: "In the methodicall practice and cure of blind people, by couching of cataracts, our English oculists haue always had an especiall care, according to arts, to couch them within doores, out of the open aire, to preuent further danger. Yet some of these mountebanks take their patients into open markets, and there, for vaine-glories sake, make them see, hurting the patient, only to make the people wonder at their rare skill. Some others make scaffolds, on purpose to execute their skill vpon, as the Frenchmen, and the Irishman did in the Strand, making a trumpet to be blowne before they went about their work. But these were not long suffered to vse these lewd courses, before they were called before the company of chirurgiens: being sharply reprooued, soone left the city, and their abusiue practice."—*Middlemore's Introductory Lecture on Diseases of the Eye.*

THE PULSE IN HORSES.

The state of the pulse is highly important in almost all diseases. Naturally, it beats about forty times in a minute. A few beats either below or above this standard need not be noticed, as it will vary even in health in different horses; but when it comes to ascend to fifty, and to mount beyond this, it furnishes reason to suspect that the operations of the body are in some way or other disturbed. As regards its frequency, and in reference to the natural standard of forty, the pulse may be slow, or it may be quick. I have found the pulse myself as low as twenty-four: I have heard Mr. Sewell say, he has met with it not more than fourteen.—*Percivall's Hippopathology.*

TEMPERAMENT.

In the writings of Galen there is a treatise expressly composed to prove that the characters of men depend upon their temperaments. But it is in the works of modern writers that we find this doctrine most fully developed, and made a foundation for a division of human characters. According to Hoffmann, the choleric temperament, by peculiarity of organization, disposes men to precipitate and impetuous conduct, to anger, audacity, impatience, temerity, quarrels, sedition, and the like. On the other hand, the slow progress of blood through the vessels of the meninges, which is the result of its crassitude in melancholics, renders such persons timid, slow in business, anxious, suspicious, with difficulty of forming or uttering opinions. The sanguine, by a happier temperament, are rendered cheerful and free from care. A too abundant

serosity causes the phlegmatic to be lazy, somnolent, and torpid. Certain temperaments qualify men for particular situations in life. Melancholic men, says Hoffmann, should be the king's ministers and counsellors; choleric persons should be appointed generals, foreign ambassadors, orators, conductors of all business requiring energy and despatch. Sanguine men are fit for courtiers; but individuals who have the misfortune to be of the phlegmatic temperament, being quite incompetent to any elevated condition, must be made common soldiers or labourers, and condemned to the lowest employments.* The same writer applies the doctrine of temperaments to nations, and explains by it their peculiarities. It is wonderful how ready a belief was given to notions so ill founded, and to what an extent they were carried. The very learned Abbate Hervas finds a sufficient reason in the difference of temperaments for the conquests which northern nations have so often made in southern countries.† The English, however, says this sensible but occasionally quaint writer, though belonging to the stock of colder climates, have become "*dal troppo bevere liquori gagliardi*,"—in temperature unlike the other inhabitants of the north.

It is extremely improbable that an opinion should have held its ground for so many ages among men of observation, especially on a subject requiring no abstruse research, without some foundation at least in fact. The doctrine of temperaments is true to a certain extent, and has ever been confirmed by an appeal to experience. In order to be convinced of this, let any person compare individuals who display the characters of the sanguine temperament in a high degree, with others who have strongly marked signs of the melancholic. There is no doubt that among the first will be found many in proportion who have a lively and cheerful temper, great sensibility, excitable if not strong passions; and, among the latter, persons who are, if not sullen and dejected, (for such qualities are morbid extremes,) yet calm and disposed to seriousness and reflection, rather than to mirth and gaiety; at the same time tenacious of impressions once excited in their minds, and capable of fixed and steady attention. These characteristic differences may be referred to greater or less degrees of sensibility, or to a more or less excitable condition of the nervous system, depending perhaps, in the first place, on the circulation of blood, the apparatus for which is (as we learn from the greater vigour with which the function is performed,) more fully developed in the sanguine than in the melancholic. No facts are more familiar in physiology than the inti-

* Hoffmann, de Temperamento Fundamento Morborum, § 10.

† The work of Hervas, in nineteen quarto volumes, contains an epitome of human knowledge. It is entitled "Idea del universo, che contiene la Storia della Vita del Uomo, Elementi cosmografici, Viaggio estatico al Mondo planetario, e Storia della Terra." (Cesena, 1780.) Natural philosophy, physiology, anatomy, and other physical sciences; history, politics, statistics, are treated of in turn, with a prodigious extent of information. The last volumes of the work consist of treatises on philology, and contain much original information on the history of languages not elsewhere to be found.

mate connexion between organic sensibility and a free circulation, or than the increase or diminution of feeling which results from warmth and increased vascular action, and from coldness and torpor, and the retirement of blood from the surface of the body and the organs of sense. States of the mind are so connected with affections of the body, that it is impossible for any person who considers these and the many other analogous facts which present themselves, to doubt that with each temperament particular mental qualities must be associated, although it is manifest that many writers have indulged their fancy on this subject, and have gone into more full and minute details than experience will establish.—*Dr. Prichard, in the Cyclopædia of Medicine, Part XXI.*

SARRACENNIA.

The several species of Sarracennia already known, which do not exceed six, with two or three varieties, are all natives of the bogs and swamps of North America. Of their properties there is nothing decidedly ascertained, and they are chiefly interesting from bearing the curious pitcher-like organs already described, which contain water, to which, in dry weather, it is affirmed, birds and other animals resort to assuage their thirst. The lids are said to close over the mouths of the urns in dry weather, to prevent the evaporation of the water, which is probably designed to furnish the plant with supplies when the marshes are exhausted. These pitchers also contain large numbers of dead flies and other insects, which, when putrefying, give out an intolerable odor, that renders the plants offensive; but the decomposition of the animal matter affords a supply of rich and very nutritious food, probably essential to the well-being of the Sarracenniæ, as they are furnished with such curious organs to entrap and retain it; organs which have been supposed to be amongst the earliest adumbrations of a stomach.—*Burnett's Outlines of Botany.*

DEFECTS IN MEDICAL EDUCATION.

1st. The *competency of the teachers* is subjected to no test or proof; and the establishment of schools, and the appointment of teachers, are left to the caprice or predilections of the treasurers and governors of hospitals, or are the results of private speculation and individual self-interest.

2dly. Relatively to the *general practitioner*, the great majority of the profession, the utterly *inadequate period* assigned for the acquisition of the competent skill and knowledge, when in two years the students are expected to obtain all the requisites for safe practisers of a most complex and difficult art.

3dly. The *negligence* too often permitted in enforcing even a decorous, much less a close and unremitting attendance during their studies.

4thly. The *insufficiency of the examinations* of which a diploma or licence is to be the reward, as a test of the competency of the candidate; this too being the only pledge to the public that the candidate for practice is duly qualified.

No objection will, we apprehend, be offered to this view, from a consideration of the education appropriate to each class or branch of the profession, since the negligences and defects are in their consequences common to all. It applies especially to the most numerous class, the general practitioners, in respect of whom we might to the above list of defects add the injurious enforcing of apprenticeships, that most grievous obstacle to a liberal and truly professional education; the removal of which, together with the final separation of the medical practitioner, of whatever degree or title, from the trader in drugs and servile compounder of recipes and prescriptions, is to be earnestly wished, alike for the patient's sake and the practitioner's,—by all who do not advocate the retention of names under a total change and revolution of the persons and circumstances. — *Green's Suggestions respecting Medical Reform.*

MEDICAL RESPONSIBILITY IN FRANCE.

The Visigoths had a law, that if a physician were called in to a case, and took charge of it, he was bound to effect a cure. If the patient died, the physician was immediately delivered up to the friends of the deceased, that they might do what they liked with him. Some of the French journalists complain piteously that the laws affecting the profession in France, at the present day, are not less severe. A case lately occurred at Evreux, in which a M. Thouret-Noroy, in consequence of alleged malapraxis, by accidentally injuring the brachial artery, so as to render amputation necessary, was mulcted in heavy damages; and, having appealed to a higher tribunal, had four hundred francs more laid on him, by way of interest on his former fine.—*Medical Gazette.*

A CASE OF RABIES IN THE HORSE.

By Mr. C. Marshall, v.s., London.

On Thursday evening, the 17th of April, 1834, a message was sent to me late in the evening by Mr. Reynolds (the owner of the animal), that the old horse was very ill, and had something sticking in his throat. I was from home, and could not attend until Friday morning about seven o'clock. I found the horse foaming, breathing very laboriously, his tail erect, screaming dreadfully at short intervals, striking the ground with his fore feet, and perspiring most profusely. He would get into the manger, and strike his head against the wall, cringing and drawing himself up as though there was some obstruction in the œsophagus. He was continually biting the top of the stall, and when I approached him he tried to run at me. I considered him to be rabid, and advised Mr. Reynolds to have him destroyed. The pistols were got ready for his destruction; but, before we could use them, he broke the top of the manger, and came out of the stall with it hanging to the halter. He made immediately towards us, but, as we succeeded in getting out of his way, he turned into the next stall, and died instantly.

I inquired if they had any idea of his having been bitten by a dog, but they had not; I also inquired if they had noticed any

thing unusual about the horse previously to the attack. They informed me that his spirits had been better than usual, that he appeared stronger, and that a lameness under which he laboured had left him for three or four days. He was at work within four hours of his seizure.

I examined him immediately after death, and found the upper and back part of his tongue, epiglottis, and the membrane lining the windpipe, in a high state of inflammation; the lungs also much gorged with blood. The brain, stomach, and every part of the viscera, were in perfect health.—*The Veterinarian, June.*

[Mr. W. Youatt afterwards gives a case in a spaniel, with the following post-mortem appearances: "Fauces much inflamed, extending over the membrane covering the dorsum of the epiglottis. Stomach very much inflamed, and throughout. Much dark-coloured slimy fluid in the stomach." We think the spinal chord ought to have been examined in both cases.—Ed. *Med. Quart. Rev.*]

THE MANDRAKE.

Atropa Mandragora. Mandrake.—*Fl. Græc.* vol. iii. tab. 232. Μανδραγόρας.—*Diosc.* lib. iv. cap. 76, and lib. vi. cap. 16; also of *Theoph.* lib. ix. cap. 10. Μανδραγουρα hodie, et γοργογάνι quandoque apud Atticos. *Sibth.* Dioscorides relates that it was also called Κιρκαία, *Circæa*, because its root was used as a philter or love potion, ἐπειδὴ δοκει ἡ ῥιζα φίλτρων ἔιναι ποιητική. And Theophrastus says, that the root was of use, προς ὕπνον καὶ φίλτρα. For the same purpose mandrakes are mentioned in the book of *Genesis*, chap. xxx. v. 14—16. This plant even now possesses somewhat of its most ancient right in modern Greece:—Radicis frustula in sacculis gesta, pro *amuleto, amatorio* hodiè, apud juvenes Atticos in usû sunt. (*Fl. Græc.* p. 27.) And Maundrell states (p. 61), that the "women of Samaria are wont to apply it at this day, out of an opinion of its prolific virtue." The mandrake was properly called by Pythagoras ἀνθρωπόμορφος, from its root resembling the form of a man. See the figure in the *Flora Græca.* —*Hooker's Journal of Botany.*

BURIAL IN HONEY.

Josephus records that the Jewish king Aristobulus, whom Pompey's partisans destroyed by poison, lay buried in honey till Antony sent him to the royal cemetery in Judæa.* The Assyrians placed the bodies of their dead in honey to preserve them from corruption. The Romans also used honey for the same purpose.† Abd'Allatif relates‡ an anecdote of a man who had found a sealed cruise, and, having opened it, he discovered it to contain honey, which he began to eat, until one of his companions observed a hair upon his finger, when the vessel was more closely examined, and a little child, all perfect, was withdrawn from it. The body was well preserved, and furnished with rich jewels and ornaments.

* Antiquitat. lib. xiv. c. 7.
† Montfaucon Antiquité Expliquée, tom. v. part ii., pp. 185, 186. ‡ p. 199.

INTELLIGENCE.

A PART of the evidence of the Physicians examined by the Committee appointed to inquire into the State of the Medical Profession is now before us, and we think it probable that our readers will be gratified by some extracts. When the whole of the evidence is printed, we shall endeavour to give an abstract of it.

INCOME OF THE COLLEGE OF PHYSICIANS.

267. By a return laid on the table of this Committee from the College of Physicians, it appears that the income of the college for the year ending July 1831, was 1,099*l.* 17*s.* 9*d.*; for the year ending July 1832, 1,203*l.* 18*s.* 11*d.*; and for the year ending July 1833, 1,072*l.* 14*s.* 1*d.*; in the three instances, including all the sums receivable by the college on every different account. The same return states the expenditure of the college for the three consecutive years. Will you state to the Committee what is the pecuniary interest which the individual fellows of the college have, or can have, in the funds of the institution to which they belong?—They can have none whatever. It is rather a matter of expense than otherwise to the fellows.

268. What is the highest salary receivable by any fellow of the college from the funds of the institution?—The highest that is received is on a particular lecture; I think that is 32*l.* a year; the Lumlian lecturer gets 32*l.* a year. That was a benefaction and a stipulation, certain conditions stipulated by the person who left it for that purpose, to have a lecture given.

269. From the return which has been transmitted from the college, it appears that, in the two first years, the larger part of the stated income of the college has arisen from the rents of lands and houses; and in the third year, the proportion of 437*l.* out of 1,072*l.* From what sources is the permanent income derived, to be described as rents of lands and houses?—There are two small estates, one left by Dr. Harvey, the discoverer of the circulation of the blood, and one by Dr. Hamey, and a house, inhabited by Linane. In the general deterioration in the value of land, the rent has fallen very considerably.

270. Both of those are benefactions from former fellows of the college?—Yes.

271. Of the funds so left to the college by former fellows, increased as they may be by the addition of fellows each year, you have stated that the largest sum received by any fellow is the sum of 32*l.* Can you state to the Committee what is the number of fellows who receive any pecuniary benefit from the college, and what is the average of the sums which such fellows receive from the college?—The utmost number of those who receive any thing from the college at all, is eleven; and the average of their receipt is 22*l.*

272. The funds of the college, of which a statement has been submitted to the Committee, contain sundry items for the admission of fellows: the sums by which the college is supported are partly derived from the contributions of the existing members?—Exactly so.

273. No object, therefore, of a pecuniary nature can be supposed to weigh with the members of the college?—Probably not; as it is a fact, that the members of the college have contributed 8,000*l.* towards the building their present college.

274. You have stated that the funds of the body are derived from the benefactions of former fellows, or contributions of living fellows in a great measure?—Precisely so.

275. With the proportion in the first year of 180*l.* 10*s.*, in the second year of 252*l.* 14*s.*, and in the third year of 324*l.* 14*s.* for the admission of licentiates, are the Committee to understand that the fees for admission of licentiates include the fees paid by those who are admitted to the two English Universities, as well as the candidates who are educated elsewhere, and who are equally eligible to practise physic on the payment of such fee and the obtaining of such licence?—There is a difference between what a fellow pays and what a licentiate pays.

275. What do the censors receive for the discharge of their duty?—20*l.* a year a-piece.

277. In the return made by the college as to the patronage which the college exercises, there is no notice taken of their power, in case of a vacancy, to recommend a physician to St. Bartholomew's Hospital, on Dr. Hamey's foundation: is that power still exercised by the College?—It is still exercised.

278. That is an accidental omission?—It is.

279. You have stated that the college is not able to exclude irregular practitioners from practice, and that the college have abandoned their attempts to put down such practitioners by legal proceedings?—Not altogether; for it is within three years a prosecution was instituted which cost the college 200*l.*

280. It failed?—Yes; for the defendant pleaded, at last, that he had been only practising as a surgeon.—*Sir Henry Halford's Evidence.*

DISQUALIFICATIONS FOR THE FELLOWSHIP.

1018. Ought the fellows and licentiates of the college, in your opinion, to be allowed to practise midwifery?—The licentiates practise midwifery, the fellows do not.

1019. Is the restriction proper?—It has always been my opinion that it is not proper; but the opinion of others who have had a vast deal more experience in the profession than myself, is opposed to that.

1020. It appears that, according to the present bye-laws, the following persons are disqualified from becoming candidates or fellows of the college: first, any one that has used any nostrum in

curing diseases for gain?—Certainly; a fellow who employs a nostrum is liable to expulsion.

1021. Second, any one who has ever gained a living by practising as an apothecary?—That law has been modified: there is such a law, but there is an exception made in the law by introducing the words, "sine gravi aliqua de causâ," which takes all the violence out of it. This qualification existed in the Universities, and it was intended to prevent a man practising as an apothecary in the University from having his name upon the boards of a college, and proceeding to take a doctor's degree; and in London the same thing might prevail. A man might be keeping a shop and attending patients, and at the end of a short time, by means of a qualification, he would become a physician. I think that is a sort of underselling which is injurious to the profession, and injurious to education.

1022. The same law extends to a person who has gained a living by practising midwifery: is that a restriction you approve of?—It is not.

1023. Fourth, any one who has gained a living by selling any merchandize; the words are, "aut mercibus quibusvis vendendis victum quæsitaverit." What interpretation do you put upon them."—A dealer.

1024. A shopkeeper or a petty dealer?—That is my idea.

1025. You do not think that a merchant, who thought proper afterwards to enter medicine, might under this statute be disqualified?—I have no idea of it; but I do not contemplate such a case.

1026. May not possibly the word "merces" bear the interpretation of apothecaries' wares?---Very probably.

1027. Is that the interpretation you would be disposed to give to it?---To speak the truth, I did not know that that portion of the law existed.

1028. After a person has been admitted a candidate, or a fellow, does he not absolutely forfeit his seat, if he shall gain a living by practising as an apothecary or midwife, or "mercibus quibusvis vendendis?"---A man may be elected a fellow who has practised pharmacy; a man may be elected a fellow who has practised midwifery; but he must cease to practise them upon being elected a fellow or a candidate.

1029. Or else there is an absolute forfeiture?---Yes.

1030. Then if he has been guilty, after being elected candidate or fellow, of selling any nostrum, he is liable to be expelled from the college, if the majority of the fellows assembled in the comitia majora think proper to decide so by ballot?---Clearly.

1031. And if he has been convicted criminis alicujus gravioris ac publici, he is in the same manner liable to be expelled by ballot at the comitia majora?—Clearly.

1032. It appears that in the case of his practising as an apothecary or a midwife, or selling the merces aliquas, he absolutely forfeits his seat; whereas, if he sells a nostrum, or is convicted of

some grievous crime, the college deliberate upon his offence; there is therefore a heavier visitation upon him for practising as an apothecary or midwife, than for being found guilty criminis alicujus gravioris ac publici: does not that seem to be an anomaly in the statutes?—I have already mentioned that, with reference to midwifery, in my opinion the law is injurious; but, with regard to the other, it appears to me that the statute means to say, that if he shall have been convicted of some crime, yet still a possibility might arise on the part of the college that they might think he had been improperly convicted of such a crime.

1033. To your knowledge, do any candidate or inceptor candidates now practise midwifery?—I think there is an inceptor candidate practising midwifery.

1034. Under the statute, the inceptor candidates are not subject to any penalty?—I believe not; but I apprehend it would be construed as applicable to an inceptor candidate. It might be an objection upon a ballot: it was an objection in Dr. Lett's case, if I remember right.—*Dr. Seymour's Evidence.*

METEOROLOGICAL REGISTER,

FROM JUNE 1 TO AUGUST 31.

By Messrs. HARRIS and Co., Mathematical Instrument Makers, 50, High Holborn.

	Thermometer.		Barometer.		De Luc's Hygrometer.		Winds.		Atmospheric Variations.		
1834.	*max.*	*min.*	*max.*	*min.*	*max.*	*min.*			9 *a. m.*	2 *p.m.*	10 *p.m.*
June 1 to 7	75	45	30.04	29.48	61	53	NNE	SSW	fine	cloudy	rain
14	74	51	29.65	.41	70	58	SSW	SE	fine	cloudy	rain
21	84	54	.86	.42	70	60	SSW	WSW	fine	rain	fine
30	74	53	30.95	.79	64	59	WSW	SW	cloudy	fine	cloudy
July 1 to 7	75	57	.97	.63	85	65	NE	SSW	cloudy	rain	cloudy
14	76	58	.82	.58	79	62	SSW	SW	showery	cloudy	fine
21	82	58	.94	.40	90	62	WSW	SE	fine	cloudy	rain
31	78	55	.75	.52	98	65	E	ESE	cloudy	fine	rain
Aug. 1 to 7	74	59	.67	.58	82	72	S	N	fine	cloudy	rain
14	78	58	.82	.75	82	64	SW	S	fine	fine	fine
21	74	62	.92	.48	72	65	NNE	NW	fine	fine	fine
30	67	49	.65	.37	77	63	SSE	S	cloudy	fine	rain

The quantity of Rain fallen in June, 1 inch and 33-100ths.
— — — July, 3 inches and 46-100ths.
— — — August, 1 inch and 96-100ths.

NOTICES.

We have received "Observations on the Functional Affections of the Spinal Cord," by DR. *and* MR. GRIFFIN, *and* DR. HASTINGS' *"Account of the Natural History of Worcestershire:" we shall review them in our next.*

We are much obliged to MR. VALENTINE *for his suggestions, and shall take them into consideration.*

We regret that we cannot insert DR. BALFOUR'S *Paper.*

The Essay signed IGNIS FATUUS *is ingenious, but unsuited to a Medical Journal: it shall be left for the author at our publisher's.*

THE

MEDICAL QUARTERLY REVIEW.

REVIEWS.

Observations on Functional Affections of the Spinal Cord and Ganglionic System of Nerves. By WILLIAM GRIFFIN, M.D., and DANIEL GRIFFIN, M.R.C.S.—London, 1834. 8vo. pp. 247.

AMONG the papers which appeared from time to time in our excellent predecessor, the London Medical and Physical Journal, there were few more calculated to excite attention, or repay perusal, than those of Dr. Griffin, on the Functional Affections of the Spinal Cord. There was one point in those essays which we never lost sight of in our subsequent practice, namely, that in hysteria there is a tender spot in the spine, and counter-irritation directed thither will often act like a charm, and dispel at once whole trains of morbid action. This axiom has been the lode-star which has guided us in many a dark and dubious case; and it was therefore with singular pleasure that we heard that these papers, collected and continued, now formed a volume, and that we were thus about to reap the fruits of several additional years' experience. The first of these essays appeared in 1829; a fact which we merely mention, lest some one should accuse the authors before us of copying books of which their own writings were the archetype.

Introductory Observations form the subject of Chapter 1st; and the very first ones seem to us so just in substance, as well as so pleasing in manner, that we cannot refrain from transferring them to our pages.

"Although the attention of the medical profession has been, within these few years, so very much directed to affections of the spinal cord, it would seem, on inquiry, that little really new has been added to our previous acquisitions on the subject. Referring to many valuable opinions of German and French writers, fallen into undeserved neglect, and comparing them with inferences now almost obtruding themselves on general notice, we shall be apt to

imagine there has been, in this country at least, an unaccountable carelessness of observation; or be led to very unsatisfactory reflections on the impenetrable obscurity in which all disorders of the nervous system would seem to be involved. Perhaps it is because of the little fruit gathered by long toil, that some are inclined to consider the labour misapplied; and while they are satisfied to treat, under the appellation of nervous or hysterical, whole trains of complaints which have little in common but that of their being ill understood, venture to censure the persevering efforts of those, who, if they have been as unsuccessful, have at least the merit of not being so hopeless, in the inquiry. It is gratifying to observe that the rapid progress which modern physiology is making, daily exposes the futility of opinions which measure the value of application only by its ill success in particular instances, and offers new proof that discoveries in obscure sciences depend almost as much on the expenditure of time and thought in their pursuit, as on the strength of the intellect which may make them.

"But, exclusive of these considerations, and even of the temptation to new exertion in the late extraordinary discoveries elicited by the labours of Magendie, Le Gallois, Wilson Philip, and Charles Bell, the subject of spinal disease holds out a most imperative inducement, in the perplexed state of our diagnosis through a vast range of complaints, and in the acknowledged mistakes which we every day see made in the practice of well-informed members of the profession. We need only refer to the periodicals of the day, which teem with cases of, as they are called, strange, anomalous, proteiform maladies, the mocking-birds of nosology, or imitators of every known disease, accompanied with cautions on the danger of confounding them with their prototypes: or to the admitted difficulty in the treatises on nervous and hysteric diseases by the most distinguished practitioners of the day, of offering any marked symptoms by which they could always be clearly distinguished.* Indeed, the actual existence of these singular and apparently func-

"* Dr. Hamilton, in his Treatise on Diseases of Women and Children, says, 'On some occasions, hysterics put on the appearance of several disorders, such as melancholy, epilepsy, palsy, inflammation of the lungs or bowels, gravel, &c. It requires in these cases not only the *most unremitting attention*, but also the *utmost practical discernment*, to distinguish the true disease from that which it resembles.

'When the symptoms are not uniformly and regularly those which occur in the ordinary cases of the disease imitated; when there suddenly seems great danger, without those previous changes in the progress of the complaint which are usually met with; when there is either a natural state of the pulse, with alarming symptoms, or a very frequent irregular pulse, without any affection of the breathing or shrinking of the features, there is reason to suspect hysterics as the true disorder. *Cases from time to time occur where it is impossible to ascertain the real nature of the affection, till towards its termination.* The fact, too, that in every acute disease of women which requires copious evacuations, or which debilitates the system, hysterics are apt to occur in the progress to recovery, adds much to the difficulty of judging precisely in any given case.'

"Dr. Gregory, in his Practice of Physic, after mentioning the frequent resemblance and connexion between hysteria and epilepsy, and the difficulty of

tional disorders, which assume the symptoms of all others, and continue unrelieved by the remedies applicable to any; which look like inflammations, and are rendered worse by bloodletting; or simulate intense spasmodic attacks, and bid defiance to opiates; and which yet, after resisting all possible treatment, eventually, and perhaps suddenly, disappear of themselves; would, in a merely therapeutic view, appear strange, and deserving of inquiry.

"In the classification of diseases, the great division into those of the vascular and nervous system, the pyrexiæ and neuroses of Cullen, was at once obvious to the nosologist; and again, the distinction of nervous complaints, as they developed themselves in any one tissue or organ, or another, and invariably presented the same characters, seemed easy of attainment; but there came to be a great difficulty about that vast number of the latter which are so variable in their seat and appearance, and so untraceable in their origin, as apparently to preclude all proper arrangement. They were necessarily thrown together as a sort of anomalous class, like the Cryptogamia in botany, awaiting the result of future discovery for more appropriate distribution. But surely, if it had been considered that all nervous disorders must eventually resolve themselves into affections of the three great centres of nervous influence, the cerebral, the spinal, and ganglionic masses, much of this perplexity might have been avoided. We have, it may be presumed, now made sufficient progress in the pathology and diagnosis of diseases of the brain to estimate with some accuracy the characters which indicate their origin, and may generally, even in those that most nearly resemble spinal or other affections, draw correct inferences from the history of the case and the intensity of particular symptoms. Of those of which there is much doubt, or which evidently do not belong to the brain, we can observe how far they correspond with the usual or known symptoms of spinal disorder, organic or functional; and, if there be some found bearing no analogy to either the one or the other, the deduction seems clear, that they depend on some disordered or diseased state of the ganglionic system. However hypothetical a division of this kind may appear in diseases of the nervous tissues, which are so delusive and difficult of arrangement, and after death present so few appearances to direct the reasonings of the pathologist; however frequently erroneous its application may prove, it must be true in principle, and, when once held in view, cannot but give more of method and object to our investigations, and greater rationality to our treatment." (P. 1.)

distinguishing one from the other, says, 'But it is not only from epilepsy that hysteria is difficultly distinguished. There is hardly a disease in the whole nosology, of which it has not imitated the symptoms, and that with surprising accuracy. I have seen hysteria accompanied by constant vomiting; by a complete ischuria renalis; by the most obstinate colic; by all the symptoms of genuine asthma. Authors have described in like manner a hysterical jaundice, a hysterical mania, a hysterical diabetes. These circumstances require to be borne in mind with reference to prognosis.'"

Our authors observe, that when a subject is universally admitted to be perplexing, any name or phrase is accepted, to relieve us from the imputation of total ignorance. "To this alone can be attributed the ready acceptance of the words imitative, proteian [Protean], anomalous, &c., as applied to hysteric and nervous diseases, as if there existed in the animal economy some evil influence, without home or habit, or relation, capable of increasing or interrupting any of its functions, or assuming any of its morbid actions, yet free and independent of all organic change. The convenience of referring to such influence all the morbid phenomena which are difficult of explanation, bears a just proportion to its mysterious nature: but surely we might as well speak of labour imitating cramp, as of hysteria imitating croup,—the one a spasmodic affection of the gastrocnemii muscles, occasioned by pressure or irritation of the sacral nerves; the other a spasmodic affection of the muscles of the larynx, occasioned by irritation of the cervical." (P. 5.)

The comparison at the end of the passage just quoted is more sprightly than accurate; for we may suppose the spasm of the gastrocnemii to be identical, whether produced by pressure on the sacral nerves during parturition, or by any other cause; whereas, in the case of hysteria imitating croup, there is an essential difference between the original and the copy; for in croup there is a real inflammation and a false membrane as its product; but hysteria, however stridulous may be the voice, however *croupy* the breathing, leaves no such wreck behind. Yet the subsequent question is just and ingenious. "If we were to inquire, in a case of labour, what is this spasmodic and painful affection of the gastrocnemii? and it was answered, It is not idiopathic cramp, but an affection exactly resembling it, dependent on the parturient state,—one, in fact, of the many anomalous complaints which labour is found to imitate,—would it be conceived in the slightest degree satisfactory?" (P. 6, *note.)*

The following remarkable case, which is very interesting in itself, becomes doubly so to every reader of this work, from its having been the first which especially directed the attention of our authors to the disorders of the nervous system.

"A young lady, aged twenty-one, who had always before enjoyed good health, received a slight blow on the chest from her mother, during her convulsive struggles while dying of apoplexy. She spit up a little blood at the time, and felt pain for some days: after this it suddenly removed to the abdomen, affecting the left side, about the situation of the descending colon, and was accompanied by frequent pulse, tenderness, and the most incessant vo-

miting. The pain was abated by bleeding, blistering, and aperients; but nothing could allay the vomiting, which was brought on by the smallest quantity of any thing, solid or liquid, taken into the stomach. This came to be attended with flitting pains in the head, with throbbing of the temples, and intolerance of light, attributed to the straining, the continuance of which made it difficult to move the bowels. Even when medicine did operate, it gave no relief.

"She remained many days in this state, suffering much from want of rest and the distressing retching; after which she was attacked with frequent oppression, occurring at intervals through the day, and usually terminating in fits of insensibility. In these she usually lay for ten or fifteen minutes, with her hands fast clenched, or sometimes shutting and opening them alternately with great rapidity. There was considerable rigidity of the tendons of the wrist, while the fit lasted; and the first symptom of amendment was always a gradual relaxation and opening of the fingers, when she fetched a long deep sigh, and recovered.

"These oppressions proved as intractable as the vomiting, and were very distressing. Repeated blistering, ether, assafœtida, opium, and other antispasmodics, were had recourse to without relief, except of the most temporary kind. At the end of three weeks, however, the more severe symptoms of the complaint, without any very obvious cause, and after resisting every kind of treatment, began gradually to decline: the oppressions, throbbing at the temples, fits of insensibility and vomiting, manifestly abated; and the digestive organs, the state of which had never been lost sight of, improved rapidly under mild aperients and bitters. In short, she soon after recovered a sufficient degree of health to permit her going to a party, and even joining in the amusements.

"This reprieve was but of very short continuance. A return of the oppression brought with it cough, pain in the chest and left side; the former slowly disappearing as the latter symptoms advanced and became more formidable. The cough was loud, dry, and convulsive, and became at last so incessant, that she had no intermission of the fits by day or by night. The convulsive expirations followed one another with such rapidity, that one could only conceive the suffering by imagining the fits of a severe chincough following one another without interval. To heighten the distress, it increased considerably the pain in the chest and sides, and the respiratory muscles became so sore and tender, from the eternal convulsive action, that she could scarcely bear to have a finger touch them. After much time had passed in vain attempts to remove or alleviate it, she became affected with swelling and pain in the anterior part of the right lobe of the liver, which increased rapidly, and formed a round, circumscribed, shining tumor, bearing all the appearance of an abscess. This was very painful, and the torture produced by the constant coughing was extreme." (P. 7.)

A consultation was now held, and blue pill prescribed. Profuse salivation was produced, and the patient experienced temporary relief; but new symptoms continually supervened, and the case was considered hopeless. But a correct diagnosis was at last made.

"On an accidental visit of her medical attendant at the close of the year 1828, the connexion between several of the pains of which she complained and the distribution of the spinal nerves appeared so striking, that an examination of the spine was made. There was no deformity, unevenness, or prominence of the vertebræ, but extreme tenderness of the whole column. Pressure on any of the spinous processes excited instant convulsive fits of coughing, and pain at the corresponding point anteriorly, or oppression. The slightest curvature in any direction was intensely painful; attempting to turn in the bed during the examination (which, however, she could never either accomplish or permit,) occasioned a sensation as if her back was breaking; raising the head from the pillow, and bending the neck forward, brought on a burning pain at the middle dorsal vertebræ, which shot down to the extremity of the spine, and thence to the limbs, knees, and toes, followed by a sort of general cramp. It seemed extraordinary how little the patient directed attention to the back in so intense a case of spinal disease: she frequently complained of pain there; but, as it was never constant, like those felt at the extremities of the nerves, and was only excited by pressure or motion of the spine, and was then generally accompanied by, or occasioned, extreme sickness of stomach, retching, and eventual insensibility, it claimed little notice in the train of symptoms.

"The complaint now clearly developed itself. The various affections to which she had been so long a sufferer were obviously attributable to some disease of the medullary column. The distressing headach, rushing of blood to the head, ringing in the ears, throbbing at the temples, and fits of insensibility; the sensation of acute pain, or of the pricking of pins and needles, shooting forward through the face and jaws, in the course of the branches of the fifth pair of nerves, or lower down in front of the larynx; the difficulty of swallowing; the shrill croupy breathing; the pain and cramp of the stomach or chest; the oppression, and the dry, loud, convulsive cough, were all readily referred to disease, or irritation of the cervical portion of the spinal cord. The extreme soreness and pain of chest and sides; the pain at the upper part of the sternum, shooting down the arms to the fingers, and producing distressing tingling; the occasional numbness of the arms; the symptoms of cardiac and pulmonic disease, appeared to depend upon some affection of the upper dorsal and lower cervical; and the abdominal pain, tenderness, spasms, pseudo-inflammatory attacks, and those of dysury, or total suppression of urine, or painful affections of the limbs, were at once traced to some altered state of the

lumbar and lower dorsal portion. All the complicated, and it would appear whimsical, attacks of this strange malady seemed now simple and necessary results, and their alternations with one another merely indicated the shifting of the diseased action, to new points of the vertebral chain." (P. 10.)

The spinal tenderness now increased to such an extent, that, when the patient was moved, to have her bed made, "she was accustomed to throw all the extensor spinal muscles into action, and, by a violent effort, bring the whole spine into a state of rigid extension, to preclude the possibility of the slightest motion." (P. 12.) An issue was now inserted on each side of the second cervical vertebra, which relieved the pain of the forehead, face, and scalp. Fresh symptoms again appeared.

"Towards the close of February 1829, while drinking in the evening, she felt a sensation as if something gave way in her chest, as if the band from the upper part of the sternum, before spoken of, had snapt. She was instantly attacked with oppression, a sense of burning and pain in the throat and chest, croupy breathing, total loss of speech, and blindness of the left eye, with numbness and paralysis of the left arm; she had also a sense of numbness extending from the point in the chest where she felt the band snap, across to the shoulder, and down the left arm to the fingers, some difficulty of swallowing, and violent pain, straining, or retching, when the smallest quantity of food or drink reached the stomach. There was some swelling and excessive tenderness of stomach, with violent cramp at intervals, which extended down to the limbs and knees. The secretion of urine was suppressed, no more than half an ounce having passed in twenty-four hours, and that thick and black. There was no tenderness or fulness in the pubic region.

"After the lapse of some days, during which croton oil and diuretics had been freely used, the eye partly recovered its power, and the action of the kidneys was restored. Blisters to the throat and neck were of little advantage; but, on applying one to the occiput, some degree of voice was manifestly recovered, and the power of swallowing perfectly; the fingers of the paralysed arm also seemed to acquire a little motion. In July, a very decided improvement had taken place. The arm had attained much strength; and she was able to speak in a low whisper, though with pain and difficulty. It should be observed, that the power of articulating was never lost, so that, even while partly dumb, she could often make herself understood by a distinct, voiceless articulation of the words." (P. 13.)

A great amendment has taken place of late years: the patient is now cheerful, speaks perfectly well, and entertains hopes of recovery.

The introductory observations conclude with an abstract

of what is to follow, which we shall present to our readers; for, as we intend to give them the essence of the whole banquet, it is but right that they should see the bill of fare.

"As, in the present state of our knowledge, strict distinctions, founded on the supposed nature of various spinal affections, must be liable to much error, it seems proper to offer such only as the symptoms would obviously indicate, without assuming that they are in all instances founded on any specific difference in the nature of the complaint. The following may be said to include all which have fallen within our experience.

"1st. Cases of irritation of the spinal cord, with tenderness at one or more points of the spine.

"2d. Cases with symptoms resembling the foregoing, but unattended by spinal tenderness.

"3d Cases of acute spinal inflammation, attended by pains of a rheumatic character, and by many of the symptoms of general irritation of the cord; but chiefly marked by high fever, excruciating pain and tenderness in some part of the back, occurring in paroxysms on the slightest motion, and often occasioning or ending in paralysis.

"4th. Cases of caries of the vertebral bones and distortion, which have been so ably treated of by many eminent writers, it is merely necessary to name, as much rarer diseases than any of the foregoing, but having very many symptoms in common with them, and affording frequent grounds for apprehension and error, when the diagnosis is not attentively studied.

"5th. The same may be said of those organic diseases of the spinal cord whose pathology Dr. Abercrombie has taken such pains to illustrate. We have met with very few of them in the course of our practice, and those were such as offered little that was new or interesting on the subject." (P. 25.)

The second chapter treats of *Irritation of the Cervical Portion of the Cord*, and the first section in it details numerous instances of affections of the sensitive system, proceeding from this cause. Thus, our authors tell us that

"Acute and chronic headach, browach, aching of the cheeks and face, pains in the breast or side, or sternum, or at the shoulder or down either arm, may be mentioned first, as among the most common symptoms of cervical irritation, both in the simple and complex cases. They are continually met with, as well as the subsequent ones of affections of the senses, in cases of organic disease of the cord, though then usually in connexion with others of a more formidable nature. The following are taken almost indifferently from our case-book.

"VIII. A young gentleman, aged twenty, complained of intense pain in the crown of the head and forehead, with excessive soreness of the scalp and feeling of general illness; is subject to attacks of the kind, and usually relieved by purgatives and lying down.

There was great tenderness of the five upper cervical vertebræ, pressure on any of them occasioning the pain in the vertex and brow. Purgatives and rest were again successful in relieving him; the application of leeches and a blister to the nape of the neck, to remove the tenderness, were then recommended. As long as this symptom remains, however effectual the relief, the complaint can only be considered as suspended.

"IX. James O'Brien, aged fourteen years, applied at the dispensary, complaining of pain and soreness in the crown and forehead, especially on stooping, sometimes very distressing, and attended with deafness. There was tenderness of all the cervical vertebra; pressure on the first or second excited pain in the vertex and brow. Was ill one year. Recovered by the use of purgatives, and of blisters to the nape of the neck.

"X. Ann Lynch, aged nineteen years, troubled with distressing headach, especially of the forehead, with sickness of stomach and thirst. Pulse ninety-five, tongue white, bowels confined; catamenia regular. Had been ill six days. Pressure on the first or second cervical, or behind the mastoid process, excited the pain severely at the brow. Was relieved by an emetic, followed by purgatives and a blister to the neck.

"XI. Mary O'Brien, aged forty years, ill three years, complains of pain in the head, particularly severe over the brows and at the temples, and occasionally confining her to bed for days. She is very weak and nervous, has no appetite, and is worse after eating. Is occasionally attacked with pain of stomach. On examination, there was found extreme tenderness of all the cervical vertebræ; pressure on any of them, or behind the mastoid process, exciting the pain severely at the brow and temples. There was also soreness of the seventh or eighth dorsal vertebra, pressure on which occasioned pain at the ensiform cartilage. In this case there was so much general debility, and so many points of the spine were affected for a length of time, that a rapid recovery was not to be anticipated. She did well after some weeks, by the strictest attention to the digestive organs, a course of tonics, and occasional small blisters to the spine.

"XII. Mrs. M., aged forty years, a nurse, complained of headach, soreness of stomach, and soreness and pain of chest, with stiffness at the right side of the neck. This stiffness increased suddenly at times, seizing the muscles like cramp, and followed by hoarseness and dimness of sight. Was debilitated, and in bad health. There was great tenderness on pressure at the middle cervical and seventh dorsal vertebræ. This patient was treated like the foregoing, and was also slow in recovering.

"The soreness of stomach was in all probability referrible to the tenderness at the seventh dorsal vertebra, and not to irritation at the trunk of the par vagum. It is then usually accompanied by sickness and loss of appetite.

"XIII. Catherine Deely, aged thirty years, six weeks ill, com-

plained of constant distressing headach, with pain in the stomach and nausea after eating. Bowels are in a natural state, but sometimes griped; catamenia regular. Pressure on the dentata excited the pain in the forehead, and on the ninth dorsal, at the stomach. Recovered under the use of mild aperients, acids, and counter-irritation.

"XIV. Anne Day, aged thirty years, complained of headach, soreness of the whole scalp, frequent faceach, affecting the branches of the fifth pair of nerves; pain and tenderness down the neck and left arm, which rendered her unable to work; and pain between the shoulders at the left side of the spine. There was tenderness of all the cervical vertebræ, pressure on any of them occasioning the corresponding pains.

"XV. ———, a smith, aged thirty years, complained of pain at the outer part of the elbow between the external condyle and olecranon, which after a few days removed to the outer part of the arm, a little below the insertion of the deltoid muscle; there was neither heat nor swelling, but there was some tenderness in the affected spot; the pain was very distressing, often disabling him from working. There was acute tenderness at the two or three upper dorsal vertebræ." (P. 29.)

We know not whether it is from their property of soothing the irritation of the cervical part of the spine, but certain it is that blisters applied to the nape of the neck are among the best, if not the very best, remedies in obstinate headachs, which have set both purgatives and stimulants at defiance. Heberden mentions as the best remedies, a blister to the head, cupping near the occiput to the amount of six ounces once a month, and a pill consisting of one grain of aloes and four of calumba, taken at bedtime. (*De capitis dolore. Comment.* p. 87.)

A little further on we have a case of hemeralopia, proceeding from the same cause, and yielding to similar treatment.

"XIX. John Hayes, aged fifteen years, complains that, as soon as night falls, he invariably becomes blind: he cannot see the furniture or people about the room, when they are perfectly visible to every one else. The candle or fire-light appears a broad red haze, just distinguishable from darkness, but making nothing perceptible. He can perceive any dark object between him and the light, and no more. Has been affected in this way now about a fortnight, and had a similar complaint a year ago, which continued a good while. There is great tenderness evinced on pressing the second cervical vertebra. He perfectly recovered in less than forty-eight hours, by a small bleeding, an active calomel purgative, and a blister to the nape of the neck; and has since continued well." (P. 33.)

Several cases are then detailed of disordered vision; but, as

their progress and event are not given, we shall pass them over, and quote one which is placed here, though it properly belongs to the chapter on general irritation.

"Margaret Doherty has been for many years suffering with intermittent ophthalmy and headach; the former always improving, or becoming worse, as the pain of head was lesser or greater. There was a granular state of the lids, with vascularity and muddiness of the cornea. She complained of pains in the neck and chest, and sometimes in all her limbs; general weakness, tremor, and numbness of the arms and legs. Her arms are often seized with sudden numbness and loss of power, so that she is in danger of dropping anything that happened to be in her hands. She was also subject to extreme coldness of the legs and thighs, and occasionally to faintings. There was general tenderness of the spinal column.

"All local treatment of the eyes was in this case wholly unavailing, but they gradually recovered by the use of general tonics and attention to the bowels. Whenever the head became worse than usual, nothing did so much good as large doses of the carbonate of iron. The eyes were always immediately benefited by it, and just in the proportion in which the pain of the head was diminished."* (P. 41.)

After some sensible remarks on the functions of the par vagum, which our authors suppose to possess common sensibility, several cases are given, in which vomiting appeared to depend on tenderness of the cervical vertebræ. In the first case, Michael Guerin, aged seventeen, was violently struck on the back part of the neck, about the fourth cervical vertebræ. He was seized with vomiting, attended by little or no nausea: this lasted four or five weeks, and then gradually abated.

Loss of appetite, as Messrs. Griffin justly observe, is so usual a symptom in all serious diseases, that it would be unsatisfactory to state cases of it, on the supposition that it depended on disturbance of the functions of the eighth pair; but this cannot be said, they alledge, of hunger or thirst, "which, occurring in the course of any disease, previous to convalescence, must be looked upon as symptomatic of some peculiar state of the cerebral substance at the origin of the par vagum." (P. 52.) Of course, as far as regards thirst, this passage must be understood with some qualification; for

"* To what are we to attribute the violent remittent ophthalmy described by Dr. Curry, some years since, in the third volume of the Medico-Chirurgical Transactions, as affecting himself? It resisted bleeding, blistering, purgatives, bark, the solution of arsenic, and all the usual plans of treatment; but got well at once by large and regularly-repeated doses of opium."

our authors cannot mean the thirst which ordinarily accompanies the pyrexiæ, but either one attended with hunger, or else a desire for stimulating rather than refrigerating liquids. Thus, in a remarkable case which they relate, of a young lady suffering under extensive spinal irritation,

"Some ale was brought to her, which she drank without stopping. She drank a whole bottle of Clonmel ale in a few minutes, besides wine, which she asked for repeatedly. She rested tolerably well that night. The next day, Thursday, she chose to get up and come down to the drawing room, where she lay on the sofa. She seemed weak, and complained much of her sides, particularly the left. She ate very heartily, however, and took two glasses of wine before dinner. At dinner she ate broiled mutton, drank a bottle of ale, and said that nothing but wine and ale could satisfy her." (P. 53.)

The remarks of Messrs. Griffin on this case are practical and useful.

"To understand this case fully, it should be mentioned that this young lady had, in her general state of health, a very slight appetite, and was never accustomed to more than the smallest quantity of wine or ale at any time. It was singular to see the usual order of things so completely reversed when she became ill; for, instead of losing her appetite, as others would have done, her hunger grew ravenous, and her thirst insatiable. This state we believe is connected with a feeling of nervous sinking, which is in some measure relieved by any thing, whether solid or liquid, taken into the stomach. It does not arise from direct debility, and would be best relieved by an opiate, followed by some aperient. It would not, however, be altogether safe to refuse giving some proportion of the stimulant, the little effect it has on the pulse or head being a tolerable proof that there is some need for it." (P. 54.)

The following is a good instance of this unnatural thirst, divorced from the fever which is its usual attendant.

"We shall never forget a case of sudden, unquenchable thirst, which we once witnessed in a child who was ill with irritation of spine; four or five of the lower dorsal vertebræ being swelled and tender, and occasioning the usual symptoms of tightness, pains in the bowels, and general delicacy. Having got some antimonial preparation to relieve a cough at the close of a severe illness, vomiting occurred, and she was soon after seized with spasmodic yawnings and craving thirst. No patient in the most burning fever ever seized the bowl with such wild eagerness of look, or drank with such unquenchable desire. Draught after draught was swallowed with rapidity, and still the eye glanced about with almost frantic impatience for more! more! At length she got some antispasmodic, ether and ammonia we believe, and became somewhat quieter, and in half an hour was perfectly relieved. During the attack the pulse was too quick to be counted. The child was not

in the slightest degree feverish when it came on, which was quite suddenly, after the sickness of stomach and retching." (P. 55.)

Our authors at one time conjectured that a constant gastrodynia was a neuralgia of a dorsal nerve; while deep-seated spasmodic pain depended perhaps on a morbid state of the par vagum, and therefore was more frequently attended by nausea: but these suppositions have not been confirmed by their subsequent experience. They observe, that, "from the tables given at the close, one would be rather led to believe that the sickness of stomach depended on the cervical irritation,—the pain on the dorsal. In thirty cases of the former, there "was pain of stomach in only two. In forty-six of the latter, it was present in thirty-four." (P. 56, *note.*)

Our readers have probably begun to conjecture that we intend this to be a very long review, or rather analysis, of the instructive work before us; and they have guessed aright: but still, *est modus in rebus*, we must not reprint the whole book, and we shall therefore pass over the remainder of the section, merely mentioning that delirium, ocular spectra, and fits of insensibility, are also enumerated among the symptoms produced by irritation of the cervical part of the spine, and cured by appropriate treatment.

The second section is on *Affections of the Vascular System connected with Cervical Irritation;* and the following cases exemplify the important fact, how accurately functional disorder of the heart's action may simulate some of the most distressing symptoms of organic lesion.

"James Casey, a smith, had part of his ear bitten off in a quarrel. The inflammation and soreness were so great, that he could not sit up in bed; and, though a strong man, generally fainted when the sore was dressing. This did not excite much surprise at first, as it was attributed to the tenderness of the wound in a peculiarly sensitive habit; but when it began to heal, and all extraordinary soreness had worn away, it seemed very remarkable that he should still continue subject to sudden sinkings or lownesses, closely approaching to syncope. There appeared an extravagant disproportion between the apparent debility or nervous depression, and the trifling nature of the wound. When the lowness came on, he was always terrified by the apprehension of dying, and was obliged instantly to have recourse to wine and stimulants for relief; which, as he had no thirst nor heat of skin, were not forbidden. From the resemblance which these fits bore to the sinkings which are sometimes observed, in hysterical habits, in females after delivery, irritation of the cervical portion of the spinal marrow was suspected. On examination, there was found very great tenderness at the third and fourth cervical vertebræ, particularly acute at the right side. As the wound was now healed, and the disposition

to fainting was much less frequent, it was thought unnecessary to institute any local treatment; attention to the bowels, and the volatile tincture of valerian, with camphor mixture, completed the cure.

"Mrs. ——, a lady, aged forty-eight, was awoke in the night by a sensation of weight and constriction across the chest; pain at the ensiform cartilage, and violent palpitation, followed by fits of sinking or fainting, with apprehension of dying. The palpitation was always brought on to a distressing degree when she chanced to turn on her left side. These symptoms continued to recur for some days, but were very much relieved by mild purgatives and antispasmodics; she was, however, now seized with acute pains in the neck, arms, chest, and sides: and, on examination, there was found tenderness of the first and second cervical vertebræ, and of the seventh or eighth dorsal. All these symptoms readily disappeared, on the application of a blister to the latter place; and her usual health was restored by a continuation of the antispasmodics, with tonics. The attack seems to have originated in fright and mental anxiety, and was readily reinduced, though in a slighter degree, by any new distress, for several months afterwards.

"Although we suppose, in these cases, that the primary disease exists in the cord, the ganglia are necessarily implicated. It is on them, and through them, the spinal irritation exerts its influence; and we may have the upper or lower ganglia affected, according as the irritation shifts its place in the spine. As an instance of this, we have been, within these few days, sent for by the lady whose case is just detailed, and found her labouring under a new train of symptoms. She had been seized, two or three times during the last week, with a sudden rush of blood to the head, which seemed to commence at the clavicles, and pass up in the course of the carotids. There was a momentary faintness, or tendency to insensibility, with loss of power of the arms; and she complained of occasional pain at the crown of the head and brow, sometimes occurring suddenly, and attended by stiffness and tenderness of the muscles at the back of the neck, especially at the right side; she had also slight cough, and an internal soreness of the chest, which she compared to the sensation experienced when a blister is taken off. She has had also a return of the palpitations at night. There can be no doubt of these symptoms yielding to the usual treatment." (P. 76.)

Our authors conclude this section by observing that, before the time of Corvisart, organic diseases of the heart were generally overlooked, and believed to be very uncommon; even obvious cases being treated as nervous disorders. Pathological anatomy produced a total revolution in medical opinion, and the opposite error was then committed of taking functional diseases for organic, and frightening dyspeptic patients with the supposition that their palpitations proceeded

from structural and incurable disease. This error is again disappearing, and we must therefore be cautious how we fall into the old one again, and overlook organic disease, as our medical ancestors too often did. The symptomatic diseases of the heart are infinitely the most numerous, but the structural ones are by no means rare.

The third section treats of *Affections of the Respiratory System connected with Cervical Irritation.* The most common symptom belonging to this subdivision is a dry cough. The first case is one of a young lady, aged seventeen, suffering from a short slight cough, with a pulse of 120, a hectic tint on the cheek, and tenderness at the lower part of the sternum. "There was tenderness of all the cervical, and of the four upper dorsal vertebræ; pressure on any one of which instantly brought on coughing." (P. 87.) Ten leeches and long narrow blisters, applied to the tender vertebræ, formed the most efficacious part of the treatment, and the patient was cured in two or three weeks, the cough abating as the tenderness disappeared.

In the next case, a young lady, of the same age, became affected with great pain in the right side, great tenderness on pressure, sickness, and feverishness. "On examination of the spine, great tenderness of the second cervical was discovered: pressure there occasioning acute pain in the vertex and brow; pressure on the lower cervical and upper dorsal excited pain there, and loud coughing; at the seventh or eighth, the same symptom, with pain of chest; and at the four last dorsal, as well as at the margin of the ribs, as far forward as the ensiform cartilage, there was extreme pain on pressure." (P. 88.)

A variety of treatment was resorted to with temporary benefit, but there were two relapses. Of the last set of remedies employed, the most beneficial consisted of stimulating liniments applied to the spine. The patient declared that they did her more good than all that had been made use of from the beginning. Our authors proceed to say,

"The hard, barking cough, which Dr. Clarke describes as affecting young females, and which yields to sudden effusion of cold water, after foiling every other remedy, was, we should suppose, a mere symptom of spinal irritation. Tenderness of the vertebræ would have been discovered had any examination been made; nor, indeed, can we imagine a disorder of any other nature likely to be so suddenly and so perfectly relieved. The cough remaining after the acute stage of hooping-cough is over, which is said to depend upon habit, is also perhaps dependent on an irritable state of the

cord.* Since the conjecture occurred to us, however, we have met with no instance to confirm it. In typhoid, inflammatory, and still more frequently, in intermittent fevers, cough is often a symptom of nervous disorder, and especially disorder of the upper part of the spinal cord. It is the more necessary for the practitioner to have this continually impressed on his mind, as, from its connexion in these cases with high febrile excitement, it may very readily lead him to imagine he has to contend with local inflammation." (P. 89.)

The symptom next in frequency to cough is oppression of the breathing, varying through a thousand grades, from a slight dyspnœa to the most terrific asthmatic paroxysm. It is to cases of nervous asthma, and perhaps to these alone, that galvanism, as suggested by Dr. Wilson Philip, is applicable.

The following remarkable case shows the relief obtained by applying the remedy to the origin of the disease.

"A young lady of an asthmatic constitution, and whose habit was so susceptible that town air or a close room instantly occasioned dyspnœa with piping respiration, caught a severe cold, and was in consequence attacked with a violent paroxysm, attended with considerable fever. She was found with purple cheeks and lips, supported in the bed by pillows; the chest heaving; the muscles of respiration tense and labouring; the pulse was 120, small and compressible. On examination, slight tenderness was discovered at the two or three upper cervical vertebræ. Together with other remedies usual in asthmatic cases, a blister was applied to the neck, much to the surprise of the patient, who had been always before blistered on the chest. Perfect relief to all the symptoms, but especially the oppression, was obtained; and the paroxysm on the next night was scarcely observable.

"In a few weeks afterwards, she had a return of the fit in a more violent degree, and applied two large blisters in succession to the chest, at her own counsel, without the slightest benefit. Her medical attendant was now sent for, and found her, if possible, in a much worse state than on the former occasion. A blister was again applied to the neck, and a mild diaphoretic mixture, with hyosciamus, ordered. Though not effecting so complete a resolution of the paroxysm as in the former instance, it produced a surprising mitigation of the disorder. The young lady and her friends were particularly struck with the obvious relief which the remedy procured.

* "The tussis spasmodica, which Underwood describes as affecting infants, remaining dry and hoarse under the use of pectoral remedies, but soon relieved by opiates or cicuta, is evidently of this nature. Perhaps the same may be inferred of the cough described by Dr. Gregory, of London, as dependent on an irritable state of the mucous membrane, which he describes as not benefited by any remedies which he has been able to devise, except change of air."

"It must be evident that leeching, blistering, or friction with liniments at the origin of the nerves, can only be of use in the special instance of nervous disturbance; and perhaps we might say, generally, only where spinal tenderness is to be met with." (P. 91.)

A great part of this section is occupied with a refutation of Dr. Cheyne's opinions on croup. He believed that there was but one kind, for, from the supposed identity of the symptoms in the spurious and the inflammatory croup, he conceived them to be but varieties of the same disease, and advised that we should act as if the spasmodic kind did not exist. But the truth is, that in the nervous croup there is an intermission in the symptoms, which is of itself sufficient to establish a most important distinction. We must refer our readers to the work itself for Dr. Griffin's judicious answers to the questions on croup addressed by Dr. Cheyne to Dr. Kellie; and shall pass on to the following interesting and well-written remarks.

"Dr. J. Clarke believes that this, and indeed all other convulsive affections of children, depend upon some organic affection of the brain. He details the post-mortem appearances of a few cases in illustration, and says that 'all the arguments founded on the doctrine of sympathy and irritability are drawn *ab ignoto;* and it seems much more conformable to reason and observation to infer that such convulsive affections arise from some derangement of organization, however temporary, than to resort for an explanation of them to imaginary causes, and such as offer to the mind no satisfactory conclusions.'

"In reply to this reasoning, it may be remarked, that our knowledge both of the physiology of the brain and spinal marrow, and the pathology of its many diseases, is far too obscure to allow of our drawing any inferences not warranted by established facts. It is surely more philosophical to infer change of structure only where we find it, and to suppose some other state capable of disordering the functions of parts, where we do not find it, especially when such conclusions seem strikingly confirmed by a fact that might almost suggest itself,—the slowness, the imperfection, or impossibility of cure in the former; the suddenness, and perfection, and facility, with which it is often accomplished in the latter. No one is so ridiculous as to suppose that no change takes place in functional disorder; but it would certainly seem that, in such as are said to depend on irritation, no change of structure takes place, no deranged organization. A person ascending in a balloon, at a certain height becomes oppressed in consequence of the rarity of the air, not from any change or breach in the mechanism of his frame, but because of the altered relation between that frame and the atmosphere.

"We have felt it necessary to dwell a little on this subject, from

a conviction of the great importance, in all disorders of the system, of distinguishing the organic from the functional. We are quite of Dr. Underwood's opinion, that, even when convulsive affections prove suddenly fatal, they are most commonly sympathetic, or dependent on irritation; and in believing this, we are treasuring up for ourselves new hopes for our remedies, and increased zeal in their application." (P. 103.)

This section concludes with some observations on hydrophobia, which our authors believe to be a disease whose seat is in the upper part of the spinal marrow, and particularly that portion of it which is allotted to the function of respiration.

The fourth and last section of this chapter treats of *Affections of the Motor System connected with Cervical Irritation.*

The most interesting portion of it consists of several cases of epilepsy cured by treatment directed to the spine. The result of the first case was so encouraging, that Dr. Griffin sent a message to a young girl who had been attending at the dispensary, with the same disorder, but had been dismissed uncured two years before. On her return, she stated that she had now had three fits a week for four years and a half. In this, as in the former instance, there was cervical and dorsal tenderness. "A pint of blood was taken from the temporal artery, calomel and saline purgatives were administered, and a blister was applied to the nape of the neck. She was instantly relieved, and from that time to the present (several years) has not had a single fit. Whenever any threatening symptoms occurred, similar treatment was immediately pursued." (P. 111.)

Another case is then given, in which similar treatment was successful; but Dr. Griffin adds, that he has since met with epileptic patients, chiefly men, in whom no tenderness of the spine could be discovered, and with whom every variety of treatment was unsuccessful.

The third chapter treats of *Affections produced by Irritation of the Dorsal Portion of the Cord.* This chapter is a short one, as, much that might have found a place in it has been anticipated, the dorsal vertebræ having been often implicated in the cervical cases. The following are some of the more interesting cases under this head.

"A lady of delicate constitution had been for a considerable time, as she was informed by her medical attendant, labouring under an affection of liver. She had constant troublesome pain and soreness in the right side, beneath the short ribs, and sometimes up between the shoulders; there was slight disorder of the

digestive organs. She applied to us, for the purpose of being put under the influence of mercury; but, on examining the spine, we found considerable tenderness about the ninth or tenth dorsal vertebra, which there was reason to suppose occasioned the affection of side, as the patient's countenance indicated no very serious disease. She was therefore ordered mild purgatives, and a blister to the tender vertebra. The complaint, which had annoyed her for months, was thus, to her great astonishment, perfectly cured in a few days.

"It is always useful, in these doubtful cases, to examine the opposite side, in which it will be often found symptoms precisely similar exist,—a tolerable assurance that they are, in neither one nor the other, connected with the state of the liver." (P. 124.)

"Catherine Williams, aged twenty-five, was seized with sudden violent pain at the pit of the stomach, succeeded by a feeling of lowness, and at last by stupor, loss of speech and motion. She became better towards night, but had a return of the attack in the morning. The lowness and stupor eventually came on in fits, preceded, not by the pain of stomach, but by general shiverings. In these fits she lay, with her eyes closed, moaning, and sensible to every thing about her when roused or excited, but incapable of speaking. The pupils of the eyes were not dilated. Whenever she took drink, she was attacked with hiccup and flatulent eructations to a distressing degree. Her skin was cool; tongue clean; pulse ninety, but variable; catamenia regular. There was no tenderness of the cervical vertebræ; but she complained, when pressure was made about the eighth or ninth dorsal. After free purgation, she slept well; but the fits recurred on the succeeding morning, with cramps or contraction of the fingers of the right hand. As the purgatives gave no permanent relief, a blister was ordered for the tender part of the back. She neglected to have it applied, however, and passed another day in the same state as the preceding. She then submitted to the blister, and had a rapid amendment. The aperients were continued throughout the treatment.

"We remember to have seen a case precisely like this, occasioned by general nervous irritation, in advanced pregnancy. The fits of insensibility were put an end to, by the fright at an attempt to bleed her, which, however, she did not permit; and the other symptoms were relieved by aperients and antispasmodics.

"We shall only offer one case more, in illustration of these dorsal affections; which, if it is to be looked on simply as an instance of irritation, should impress us with the necessity of examining the vertebral column in all chronic as well as acute abdominal pains.

"Michael O'Donnel, aged forty-five years, had been affected for three years with pain at the right side, about the situation of the colon, but confined to a very small spot. It intermitted very little

during this period; and occasioned much flatulence, loss of appetite, and emaciation. On examining the spine, pressure on the ninth dorsal vertebra brought on the pain in the colon, and eructations; the pulse was natural, and the tongue whitish. We find no record of the progress of the case." (P. 126.)

The fourth chapter treats of *Affections produced by Irritation of the Lumbar Portion of the Cord.*

It has often been justly remarked, that the progress of knowledge, while it increases the number of things to be learned, and thus makes their acquisition in one respect more difficult, on the other hand, by simplifying and classing, and showing that facts long thought to be distant from one another as pole from pole, have in reality a secret link between them, renders recollection as well as analysis more easy. And thus many of the neuralgiæ, the hysterical knee, the irritable uterus, the pseudo-hepatitis, the croup which requires neither leeches nor calomel, not only arise from one common source, but may be detected in the same manner. These reflections naturally pass through the mind of him who peruses the following passage, where the illustrious names of Abernethy, Brodie, and Gooch are appended to discoveries which formerly were isolated, but are now connected by a link alike true in theory and serviceable in practice.

"If functional affections become more interesting as they bear a closer resemblance to organic diseases, there are very many belonging to the lumbar portion of the cord which claim particular attention. They were in fact continually confounded in general practice, before the late discoveries in physiology, although a few eminent men began at an earlier period to detect and distinguish them. Mr. Abernethy, very many years since, pointed out the existence of a disease, simulating an affection of the vertebral bones, and yet not of that nature, but, as he believed, a nervous disorder dependent upon disturbance of the digestive organs. Mr. Brodie, as has been already mentioned, published cases resembling caries of the hip-joint or ulceration of the cartilages, in which no such complaint existed. He considered them as hysterical affections. Dr. Gooch gave interesting accounts of painful complaints of the uterus, unconnected with structural or inflammatory disease of that viscus. These, with numerous other disorders, are now so well known as to form a class of neuralgic affections; but they are still for the most part looked upon either as idiopathic, or as symptomatic of irritation in some distant organ, and are seldom attributed to the source we are endeavouring to trace their connexion to,—disturbance of the spinal marrow.

"We may consider these disorders, like those of the cervical or dorsal portion of the cord, as consisting in preternaturally increased sensibility or action, or in a diminution or loss of either. Among

the former, we have pains in the sides or abdominal parietes, colic, pain in the kidney or bladder, or uterus or ovarium, or in the spermatic cord or testes, pains in the joints or muscles resembling rheumatism, or ulceration of the cartilages of the knee or hip-joint. Again, we have cramps in the bowels or legs, or feet, or we have diarrhœa, leucorrhœa, or menorrhagia. Among the complaints marked by loss of sensibility or power, is a sense of weight or fulness of the abdomen, with flatulence, and perhaps obvious distention. This would seem to depend on loss of sensibility in the intestines themselves, and is generally connected with obstinate costiveness. It is the state sometimes induced by the administration of the carbonate of lead. There is another of the same nature in which the spinal nerves are those chiefly affected, denoted by diminished sensibility of the abdominal muscles. Such is the case with persons who feel as if their bowels were falling out, or with those who feel like the gentleman described by Mr. Abernethy, as if they had no bowels. We have also in the same class defective or suppressed secretions, and partial or total paralysis of particular muscles or organs." (P. 166.)

The following cases are important as well as curious, and the reflections to which they give rise are stamped with the practical good sense which distinguishes the work before us.

"M. H., aged eighteen, ill one year with pain over the crista of the left ileum, extending forward to the umbilicus; it was only occasionally distressing to her, and was always relieved by lying down. The menses have been suppressed since she first complained. There was tenderness of the middle lumbar vertebræ.

"Mrs. L., aged fifty years, complained of extreme pain and soreness over the whole abdomen; exquisitely acute at the right side of the umbilicus. The pain came on in violent paroxysms; there was no thirst or feverishness; pulse eighty, and feeble. On examining the spine, we found acute tenderness of all the lumbar vertebræ, especially the lower ones. On pressing them even lightly with the finger, she screamed aloud, and implored us not to touch that part again, as she could not bear it. She speedily recovered by the employment of purgatives and fomentations, and the application of a blister to the spine.

"Instances of these abdominal pains, dependent upon spinal disorder, might be multiplied without end. It is indeed scarcely probable that they could be absent in any case in which the lumbar portion of the cord, or its membranes, are severely affected. This is exceedingly well illustrated in rheumatic complaints of the spine, where neither the nature nor the seat of the complaint can be matter of any doubt. A gentleman stooping in dressing himself, to draw on his stocking, was seized with pain about the ninth dorsal vertebra, as if his back was broken, or the spinal column was dislocated at that point; he had some difficulty in getting to bed, and could not draw a full breath, on account of violent pain

at the insertions of the diaphragm; the pain afterwards extended down the spine, affecting the lowest dorsal or upper lumbar vertebræ, but the chief suffering was from pain at the right side, close to the umbilicus, and a little lower. This continued in a very acute degree, even after the pain of back and difficulty of inspiration yielded to bloodletting, anodyne liniments, and the volatile tincture of guaiacum. Though the patient was a medical man, and was aware the abdominal pain was superficial, arising from the morbid action at the origin of one of the spinal nerves, he had much ado at times to convince himself it was not deep-seated and in the bowels, like colic. In fact he could not do so, if it was not for the undisturbed state of the digestive functions, and that the colic or pain was instantly brought on in a violent degree by the slightest unwary turn or twist of the spine. It was the last symptom of the rheumatic attack which yielded; and this naturally led him to consider, if the complaint had set in precisely in the form which it assumed towards its termination, how puzzled, and probably deceived, he would have been.

"Dr. Pemberton, many years since, in treating of inflammatory affections of the kidneys, spoke of the sympathetic soreness in the abdomen, with which they were often attended, as likely to lead to a misconception of the seat of disease; but it is obvious from what has been said, that both abdominal soreness and pain in the situation of the kidney might exist, without the presence of any serious disease either there or in the abdomen, if the cord be in a state of disorder; and we venture to assert, no practitioner can, in any doubtful or obscure case, assure himself from the danger of mistake, who neglects an examination of the vertebral column.

"Though these sympathetic pains are usually superficial, and seated in the abdominal parietes, it seems probable that true colic (a true spasmodic affection of the intestines, through the medium of the ganglia of the sympathetic,) might be occasioned by irritation of the spinal cord. This has been the opinion of many of the continental writers with respect to Colica pictonum, but strong analogies may be drawn from the affections incident to spinal irritation, which would lead us to conclude that other morbid states of the spinal marrow, beside that apparently induced by lead, may excite spasmodic stricture of the bowel. We recollect to have met with a very violent case of colic following an injury of the lower dorsal or upper lumbar vertebræ, by a fall. It was relieved by a large bleeding and by blistering the spine. As the man had, however, been affected with colic at former times, when no such injury had been received, a satisfactory inference could not be drawn from the facts stated.

"Accompanying these painful affections of the abdomen, especially when they assume the form of griping, we frequently have diarrhœa; as in preternatural excitement of the kidneys we have a superabundant flow of water from the bladder. That diarrhœa may be brought on by an excited state of the cord, we have ample

proof, in its occurrence among a successive medley of complaints, in cases where there was no disease anywhere but in the spine,—those of general irritation. We recollect a remarkable instance of protracted spinal disorder, in which pain and tenderness in the lumbar vertebræ alternated with a similar state of some of the lower dorsal or upper cervical. There was a corresponding change in the patient's complaints, from menorrhagia or diarrhœa, with tenesmus, to sickness and pain of stomach, and eventually to distressing toothach. The following is the only uncomplicated case among our notes, and seems well marked.

"Margaret O'Donnel, aged thirty years, was attacked suddenly, last week, with diarrhœa and frequent pains in the bowels. She had been previously in good health. There was tenderness of the first or second lumbar vertebræ. *Pressure on them brings on the pain in the bowels which usually attends the fit of diarrhœa.*" (P. 130.)

The other affections depending on lumbar irritation detailed in this chapter are, cholera, symptoms of gravel, irritable bladder, irritable testis, constipation, suppression of urine, and paralysis of the lower extremities.

In a very remarkable case of suppression of urine, arising from a fall on the spine, two or three drachms were drawn off by the catheter on the seventh day after the accident, and six ounces on the tenth; the urine had not been otherwise evacuated, yet the patient recovered. (P. 142.)

In the fifth chapter, *General Irritation of the Spinal Cord* is discussed.

Perhaps the most interesting cases in the work are those in which pressure of a particular spot in the spinal column brought on a fit of insensibility, or a thrill more unbearable than pain. As, for instance,

"Anne Hannan, aged twenty-two years, complained of pains in all her limbs and joints, pain at the sternum and sides, pain round the hips, and in the whole length of the back, from the neck down. Her complaints were relieved by lying down, but were increased excessively at night, although lying in the horizontal posture. The catamenia, which had been suppressed for twelve months, returned since her illness. Her appetite was bad, and she complained much of debility. There was great tenderness of all the dorsal and lumbar vertebræ, but none of the cervical. Pressure at the upper dorsal occasioned pain at the middle of the sternum; from the third or fourth down to the sacrum it excited pain, not at the corresponding points as usual, but at the ensiform cartilage. Pain was even brought on in this situation by pressure behind the trochanter, or on the muscles of the thigh, or on the knee-joint, or if she chanced to tread on uneven ground, or a pebble came beneath her foot in walking.

"To ascertain whether the seventh or eighth dorsal vertebra was as usual more affected than other parts of the spine, we were induced to make rather firm pressure there; when she suddenly tumbled forward in a fit of insensibility, and would have struck her face against the floor, had she not been caught by a person who stood near her.

"A lady, aged thirty years, complained of pain affecting the left side of the face, temple, and neck, which she supposed to be something of tic douloureux, and which had annoyed her for two or three years. She had been occasionally subject, during the same period, to pain of side, to leucorrhœa, dysmenorrhœa, dysury, with bearing-down pains and incontinence of water. On examining the spine, which she had no conception was at all affected, considerable tenderness was found about the seventh dorsal vertebra, and at all the lumbar; but, on touching the second upper vertebral bone, which, from the symptoms affecting the face and neck, there was reason to suppose was also tender, she sprung up with frightful suddenness, as if a needle had been driven through the cord, and then as instantaneously fell back in a state approaching to insensibility. Out of this stupor she sprang twice with the same electric suddenness, and as often fell back powerless, her countenance during the moment evincing the utmost terror and agitation, and her respiration becoming heaving and oppressed. As soon as she could speak, (which was at first in a broken, affrighted manner,) she said that, the instant her neck was pressed, her arms, and all parts of her person above the ensiform cartilage, felt as if suddenly numbed or paralyzed. There was a numbness and sensation as from the pricking of pins and needles, tingling through her face, jaws, temples, and arms, to the tips of her fingers. She had never experienced such a sensation before, and would on no account permit her neck to be touched again. As a proof of the functional nature of this lady's complaint, we may mention that, although she adopted no regular plan of treatment, and did little for herself, her health did not become worse, and she afterwards married and had a family.

"A young gentleman described himself as suffering for some years with chronic liver complaint. He had constant but variable pain in the right side, with general delicacy of health, and had taken blue pill and other medicines without relief. He had, however, derived considerable benefit from drinking the Liston Varna waters, which are strongly chalybeate. Some days since, he was seized with vertigo and loss of sight for a few minutes, accompanied by a thrilling sensation down the arms, and followed by a slight attack of feverishness. It was relieved by purgatives.

"Having strong doubts as to whether his liver was diseased, the right side was particularly examined. He complained of pain there, but there was neither hardness nor soreness. On examining the spinal column, although there did not appear to be any tenderness, the sensation of pressure was excessively disagreeable to

him through its whole course. When the finger rested on one of the dorsal vertebræ, he grew pale and terrified, and would have fainted, if the pressure had been continued. He felt no pain, but a sudden indescribable sensation or thrill through every nerve in his frame, which was inconceivably horrid. He shuddered at the idea of permitting a repetition of the pressure, and had an unpleasant feeling about the part for the remainder of the day. When a few weeks had elapsed, however, he allowed another examination, and with precisely the same results." (P. 148.)

In one very curious case, where there was tenderness of the whole spine, the sensibility of the skin was universally diminished, and the patient complained that "he felt as if he had a cover all over his body." He also had a sense of weight along the spine, with numbness of the feet and hands; and "suffered from pyrosis, gastrodynia, headach, oppression [of the breathing], and weakness."

The chapter concludes with several "instances of metastasis," or cases in which the disordered action was transferred from one part to another, as the spinal tenderness shifted its situation. One lady, aged forty, who suffered from an infinite and most perplexing variety of uneasy sensations, was at one time tormented with an insatiable desire of having everything done with prodigious celerity. Dr. Darwin, had he lived in these days, would have put down in his Mat. Med. for such cases "travelling on a railroad."

The sixth chapter, on *Spinal Irritation resembling Inflammatory or Febrile Attacks,* is very short, but very important. Dr. Griffin says,

"A case which occurred in the clinical ward of the Edinburgh Infirmary, during our attendance there, gave a particular interest to our inquiries into the nature of complaints which simulate inflammation. A young woman was brought into the ward with, it was supposed, inflammation of bowels. She was bled very largely, and had, I believe, large doses of opium, with but little alleviation of the symptoms. On the second or third day, however, globus hystericus and other nervous symptoms supervened, which induced the attending physician to adopt an immediate change of treatment. In his subsequent clinical lecture, he stated, that hysteria sometimes so perfectly imitated an attack of inflammation, that it was absolutely impossible to distinguish between them. He recommended it therefore as the safest rule, in all doubtful cases, to consider and treat them as inflammatory, until some symptoms occurred which clearly marked them as hysterical. Of the prudence of this recommendation, under such circumstances of admitted difficulty, there could be no question; but the difficulty itself is, after all, not the less discreditable to our pretensions in

diagnosis, and the alternative is certainly not always free from danger. It unfortunately happens that temporary relief generally follows even the free use of the lancet in hysterical or nervous affections, although the complaint is eventually rendered more obstinate, and the disposition to relapse is increased by it. But, in the broken, delicate habits in which such disorders frequently occur, it must be obvious the evil consequences cannot always be limited to a mere aggravation of the malady. Indeed, all physicians of experience will readily acknowledge that large depletion, in these cases at least, must frequently lead to irreparable mischief. The lady (Case ii.) nearly lost her life by the repeated abstraction of blood and by purgatives; and there is a case precisely similar, related by M. Jolly, in his Essay on Visceral Neuralgiæ.' The patient had a succession of attacks, resembling gastritis, hepatitis, nephritis, hysteritis, &c., each of which gave way for two or three days to the usual depletory measures; but the intervals of relief were short and imperfect. When at length reduced to the most extreme state of weakness and emaciation, the sulphate of quinine was administered in large doses, and the recurrence of the paroxysm prevented." (P. 160.)

We recollect a case which was sent into St. George's Hospital, during our attendance there, by a distinguished physician, on the supposition that it was one of acute hepatitis, but it turned out to be merely hysteria, in a girl of a sanguine temperament. Dr. Griffin acknowledges the possibility of transmission of irritation from an inflamed part, but thinks it rare: his remarks however on this and a kindred difficulty are so good, that we will not deprive our readers of the benefit of seeing them in his own words.

"The transmission of irritation from parts in a state of high inflammation is however, we believe, rare; while its transmission from a part in a state of irritation is of daily occurrence. Hence it is, that, in inflammation of the jaw from accidental inflammation, we rarely have constitutional symptoms; but in dentition, which is a state of irritation and not inflammation, we have vomiting, purging, cough, croup, convulsion, &c. Hence, in gonorrhœa, all the symptoms are confined to the neighbourhood of the inflamed membrane; but in the introduction of a bougie, which occasions irritation only, we have perhaps rigors or syncope. The same is true of the intestines. Violent inflammation occasions symptoms directly related to the parts inflamed; but the irritation of a worm excites frightful convulsions. Were we to attempt any explanation of these extraordinary facts, we might say, that the intensity of action and sensation in an inflamed part engages the nervous influence too powerfully to admit of distant minor effects; while the peculiar and less engrossing disturbance, the mode of sensation, if it be such, which constitutes irritation, is merely sufficient to act as an excitant to the central nervous masses. They seem, in short, to

depend on the same law in the system, to which Dr. Whytt and Professor Alison have referred sympathetic actions, and on the admission of which we can understand why irritating the fauces with a feather, or the mucous membrane of the nose with mustard, should excite nausea, retching, or sneezing, when painful inflammation of these parts cannot produce such effects.

"There may perhaps be another source of fallacy in forming a diagnosis, besides the occurrence of spinal tenderness as a consequence of inflammation in peculiar habits,—the possibility of its existence previous to the inflammation. This may merit consideration, but is not of very great importance: since, as we have heretofore mentioned, pure inflammation is not at all common in those nervous or hysterical habits in which spinal disorders so readily occur." (P. 162.)

Of the pseudo-inflammatory attacks detailed in this chapter, one was hepatic, three uterine, and one enteritic. They are instructive, but so much has been written on this subject of late years, that we shall abstain from quoting any of them.

The seventh chapter exhibits these important affections in a totally different point of view; for it treats of *Cases resembling those of Spinal Irritation, but unattended by Spinal Tenderness, and perhaps referable to Irritation of the Ganglia of the Sympathetic Nerve.* Our authors here give a few cases, being all that they have met with, among so many of the neuralgiæ, unaccompanied by tenderness of the spine. In the first case, a woman, aged thirty, after the subsidence of an attack of cough, sore-throat, and feverishness, was seized, first, with a general œdema, loss of appetite, thirst, nausea, and a burning pain in the stomach and abdomen, without tenderness on pressure; afterwards, with ischuria, dysphagia, and globus hystericus. Purgatives afforded most relief, and she was cured in four weeks.

In another case, Dr. Griffin was called to see a young woman, who was supposed to be dying, but who was in reality in an hysterical fit. She likewise had some difficulty in swallowing, but no tenderness of the vertebral column.

The following instance is given as one of an obscure affection of the cord.

"Mrs. ————, was seized with violent pain about the sacrum, hips, and thighs, and subsequently in the calves of the legs and toes. It was of so distressing a nature that she could not rest a moment with it, but was compelled to be up and walking the house the whole night. The pain was not present at the same moment in all these parts. At one time it continued in the hips and thighs for some hours, at another in the legs or toes; the parts which were freed from the pain for the time feeling weary and sore. It came on generally about three o'clock in the day, continued se-

verely for the night, and abated towards morning. She made use of the carbonate of iron, sulphate of quinine, henbane, purgatives, liniments, and fomentations, without advantage. The warm bath gave some relief, and opium usually procured some sleep; but neither remedy prevented the recurrence of the pain on the succeeding day. A large blister was at length applied to the sacrum, and on the next day there was no return of the pain; but, singular to say, at the usual hour of its attack, her legs were affected with an uncontrollable restlessness, and she was forced to keep up a continual sort of kicking motion with them as she sat in her chair. This, however, eventually subsided. There was not the least tenderness discovered either in the spinal chain or sacrum throughout the attack." (P. 178.)

This is obviously one of the most doubtful cases, and there seems to be but little reason for referring the symptoms to the cord; for as the spinal marrow, exclusively of its relations with the brain, has also a sort of independent existence of its own, so it seems not improbable that the nerves may have a like privilege, and that this was a genuine case of idiopathic neuralgia.

In speaking of *Cases of Acute Spinal Inflammation,* the subject of the eighth chapter, Dr. Griffin supposes them to have a "rheumatic origin." He does not mean by this that they occur in rheumatic subjects, but that they are cured (at least the cases which have occurred to him,) by less depletion than a pure inflammation of such an important organ would require. Perhaps a comparison to rheumatism may be objected to, as the pathology of that disease is quite unknown, and it is therefore explaining *obscurum per obscurius.* But Dr. Griffin's practical directions are equally valuable, whether we call this myelitis an erysipelatous or a rheumatic inflammation: he has found, he tells us, not only that these cases require less bleeding than ordinary inflammation does, but that they are benefited by the use of colchicum.

We now come to *a Tabular View of* 148 *Cases of Spinal Irritation, including all its forms.* This extends over sixteen pages, and forms a valuable abstract of the whole book. Appended to it is a summary, which contains in a condensed form so many important facts, and will supply every diligent practitioner with so many materials for thinking, and so much stimulus to observation, that we should be inexcusable if we did not quote it.

"Cases.	Prominent Symptoms.
A. 28 Cases of cervical tenderness.	Headach, nausea or vomiting, faceach, fits of insensibility, cough, affections of the upper extremities.
8 Men.	
8 Married women.	In 2 cases only, pain of stomach.
12 Unmarried.	In 5, nausea or vomiting.
B. 46 Cases of cervical and dorsal tenderness.	In addition to the foregoing symptoms, pain of stomach and sides, pyrosis, palpitation, oppression.
7 Men.	In 34 cases, pain of stomach.
15 Married women.	In 10, nausea or vomiting.
24 Unmarried.	
C. 23 Cases of dorsal tenderness.	Pain in the stomach and side, cough, oppression, fits of syncope, hiccup, eructations.
4 Men.	
6 Married women.	In 1 case only, nausea or vomiting.
13 Unmarried.	In almost all, pain of stomach.
D. 15 Cases of dorsal and lumbar.	Pains in the abdomen, loins, hips, lower extremities, dysury, ischury, in addition to the symptoms attendant on tenderness of the dorsal.
1 Man.	
11 Married women.	In one case only, nausea.
3 Unmarried.	
E. 13 Cases of lumbar tenderness.	Pains in the lower part of the abdomen, dysury, ischury, pains in the testes or lower extremities, or disposition to paralysis.
	In one case only, spasms of stomach and retching.
F. 23 Cases, all the spine.	Combines the symptoms of all the foregoing cases.
4 Men.	
4 Married women.	
15 Unmarried.	
G. 5 Cases, no tenderness of spine.	Cases resembling the foregoing.

"In all, making 148 cases; 26 of which were males, 49 married women, and 73 girls."

These tables are excellent examples of what M. Louis calls the numerical method, on the importance of which he justly insists, as the chief or only method by which medicine can ever hope to aspire to the rank of a science. When facts are thus accumulated, and placed in juxta-position, it only remains for the enlightened physician to draw his inferences, and this Dr. Griffin has done with his usual ability.

An ingenious author observes, that the great Montaigne, in the abundance of his riches, frequently throws away in a parenthesis some remark, of which a more meagre writer would have made an essay, or perhaps a book; and thus Dr. Griffin, among the *Concluding Observations* which form the subject of his ninth chapter, has given in a note a case which many a distressed bookmaker would have expanded into a treatise on the therapeutic effects of fright. The remarks by which it is introduced are so candid and philosophical, that we shall cite more than the bare case.

"When typhus fever was very prevalent in this country, some years ago, we had opportunities of trying all the popular remedies for cutting it short in its earliest as well as its confirmed stage,—emetics, diaphoretics, purgatives, cold bathing, &c., but we could never convince ourselves that any particular plan of treatment was capable of arresting the complaint. Under all of these remedies patients occasionally got immediately well; but a vast majority of cases wholly resisted their influence. As we could attribute this failure to no observable difference, either in the treatment or the

period of time at which it was employed, and as it seemed somewhat unsatisfactory to assume that remedies, which were inefficacious in ninety-seven cases out of a hundred, were yet successful in the remaining three, we necessarily concluded that those three were not instances of contagious fever at all.

"The only circumstance which would, notwithstanding these facts, induce us to believe fever might be interrupted or arrested in its course, like ague, by the influence of medicine, is our having witnessed the actual accomplishment of such a cure by a fit of terror.

"A girl of the name of Dalton, was visited, in the neighbourhood of Pallas-Kenry, as a dispensary patient, and being found in bad typhus fever, was transmitted to the Limerick Fever Hospital. In a week afterwards her brother took ill in the same house, and, after some days' illness, was visited from the dispensary. He was found confined to his bed with all the symptoms of confirmed typhus, and was also sent to Limerick. On getting out of the car, at the gate of the hospital, he was assisted up stairs by the nurses, but in his way was met by some persons who were descending with a coffin on their shoulders. The sick man inquired whose body they were removing, when one of the bearers inadvertently answered: 'A girl of the Daltons.' The brother, horror-struck, sprung from between his conductors, dashed down the stairs, passed the gate of the hospital, and never ceased running until he reached his cabin in Pallas-Kenry, a distance of about twelve miles. He flung himself on the bed immediately, fell into a sound sleep, and awoke in the morning free from illness." (P. 211.)

Our readers, if they are as much pleased with this work as we are, will be glad to find that we have not yet come to an end, and that, although Chap. ix. was headed "Concluding Observations," we still have some more last words, in the shape of Chap. x. on *Treatment*.

"The following distinction of cases," says our author, "which differs little from that given by Dr. Brown, of Glasgow, will be found to answer all useful purposes in practice.

"Cases of pain affecting a single nerve, with tenderness at a corresponding part of the spinal column, and little or no constitutional disturbance.

"Cases of a more complex nature, with tenderness of the spinal column to a greater extent, and continued symptoms of disorder in the digestive or uterine, or sometimes in the cerebral functions.

"Cases of a similar description, but in which the disturbance of function in the different organs appears subsequently to other manifestations of the disease, or exist evidently as a secondary affection. These are chiefly the instances in which we observe a frequent metastasis of the diseased action from one set of organs to another." (P. 223.)

In the first class, the chief remedies are blistering and

leeching the tender spot, and the internal use of narcotics, such as belladonna, or tonics, particularly the carbonate of iron and sulphate of quinine. Those who rely on local remedies alone will often be disappointed. Gastrodynia, when it seems to depend on the presence of acrid juices, or a morbid sensibility of the mucous membrane, is sometimes benefited by the use of the carbonate of iron, and compound powder of jalap. The oxide of bismuth, small doses of opium and kino, and the acetate of lead, given, as Mr. Gardiner recommends, with dilute acetic acid, in doses of two or three grains three times a day, have all sometimes been advantageous.

"But all these remedies have seemed very inferior in efficacy to a popular one among the poor in this country, which we have fallen upon by accident, the super-sulphate of alumen. We first saw it used in the case of a patient afflicted with pain of stomach, sometimes occurring in violent paroxysms, and accompanied by vomiting and pyrosis. There was great tenderness at the pit of the stomach, and in the right hypochondrium. The complaint had subsisted long, and he had been under a variety of treatment with little benefit. It was, in fact, eventually supposed to depend on serious organic disease of the liver and of the stomach. About this time, however, he was prevailed on, by a friend of his, to take an ounce of alum in a dose. It acted as a purgative, and gave such immediate relief, that he was induced to repeat it. The benefit he again experienced was very considerable; and, by persevering in the remedy, a cure was eventually effected. He has since, at long intervals, had a disposition to a return of the complaint, but not to any distressing degree. Latterly, he has been in the habit of substituting for the alum, half a wineglassful of vinegar when threatened with an attack, and with equal success. This latter is also a popular remedy; but probably his chief reason for resorting to it, was the disagreeableness and difficulty of swallowing such large doses of alum.

"We some time afterwards met with another case, in which the alum effected a cure. A woman, who had been long suffering with pain of stomach and pyrosis, took a tablespoonful of it powdered and mixed with sugar, twice a-day. She made use of it only two or three days, when she had the greatest relief, and had no return of the attack for months. We believe a tablespoonful is the dose usually prescribed among the poor; but so large a quantity, if generally ordered, would, we should imagine, be occasionally attended with unpleasant effects. Fortunately, it is effective in much smaller doses. We have been in the habit of prescribing it in the proportion of a teaspoonful of the powder twice a day, with two aloetic pills every night, and have been perfectly astonished at the great relief it has given; acting in some instances like a charm on a state of disorder which has resisted other remedies for years. It is, how-

ever, perfectly useless in the very minute doses in which it is commonly prescribed.

"The success with which these and other similar medicines are occasionally exhibited in cases of gastrodynia and pyrosis, accompanied by tenderness in the epigastrium, gives us a tolerable assurance that they are not always, nor even commonly, dependent on any inflammatory state of the mucous membrane. They are evidently connected with disordered functions of the nerves, which, though sometimes arising from a cause acting within the stomach itself, is more frequently attributable to irritation at the dorsal portion of the spinal cord." (P. 228.)

Dr. Griffin does not seem to make any distinction in the treatment of the second and third class; his remarks apply to both. Purgatives, leeches, blisters, and narcotics, are the chief remedies. The extract of belladonna mixed with soap plaster, is a good external application. Friction along the spine is frequently useful; issues are rarely so, and sometimes keep up the irritation they are intended to remove. We recollect that Sir Henry Halford mentions, in his Essays, a young lady, in whom epilepsy was caused by an issue. Dr. Darwin, who was consulted in the case, with the practical tact of a first-rate physician, found out the cause, eliminated the pea, and cured the case, literally, at a blow.

The recumbent posture is rarely beneficial, and often absolutely injurious, but is sometimes rendered necessary for a few hours in the day, by acute pain in the side or stomach. But reclination, however necessary, must never be constant; gentle exercise should gradually be resumed, for the morbid sensibility is kept up by perfect rest.

We have thus conducted our readers through each chapter of this admirable treatise; and we have no doubt that the ample extracts we have given will enable them to form a just opinion of its merits, and that they will coincide with us in considering it a book of great practical value. It is true that the diagnosis as well as the treatment of these spinal affections is very simple; but so are all the best points in medicine. How easy is the diagnosis of an ague, how obvious the sulphate of quinine! That is to say, when industry and talent have shown the path, it is easy to follow in it.

We could almost find it in our hearts to scold the publishers for the shabby guise in which they have brought out this book: do they not know that

Gratior est virtus veniens in corpore pulchro?

They will tell us in reply, that good wine needs no bush; and we must confess that a more sparkling or invigorating draught has rarely been presented to us.

A Treatise on Lesser Surgery, or the Minor Surgical Operations. By Bourgery, d.m.p. *Translated from the French, with Notes, and an Appendix*, by W. C. Roberts and J. B. Kissam. —New York, 1834. 8vo. pp. 404.

He is greatly mistaken who supposes that the practice of our profession consists chiefly of interesting or important cases, or who imagines that even the most eminent surgeons are consulted only upon compound fractures and injuries of the head; or that they drive away from performing the operation of lithotomy to a trephining or an amputation: nevertheless, this is a very common error among its junior members. Dazzled by the brilliancy of a capital operation, or seduced by the ingenuity displayed by his teacher in investigating a complicated case, the student of surgery not unfrequently neglects those of daily occurrence, to devote his exclusive attention to what he deems nobler objects of study. Hence the young practitioner is often at a loss upon the most simple points, and his deficiency is apparent when called upon to perform some of those minor operations which are usually entrusted to the general practitioner, or the surgical debutant. Now it must be remembered that life itself may depend upon the dexterity which is shown on these occasions; and, in cases of less importance, a failure in what is thought so simple, makes a most unfavourable impression on the patient's mind; and thus, a man, otherwise of great merit, may be involved in disgrace, lose the opportunity of calling his other and better talents into requisition, and have his best prospects in life clouded, if not altogether destroyed. Or, if he be intended to follow the higher walks of the profession, his attention is no less imperatively required to the minutiæ of his art: for who would trust a surgeon to tie the carotid who was unable to draw blood from the temporal, or to operate for stone when unskilful in the use of the catheter?

Estimating thus highly the importance of minor surgery, it behoves us to inquire how far the present work is calculated to assist the student in this department of his pursuits. We are afraid, but little; not because the author has hurried over his work, nor because he has omitted those minute details which are the cream of his subject, for on these points there remains nothing to be wished for; but because the description of manipulation is extremely difficult to be understood, and, even if perfectly executed, is obviously inferior, as a practical lesson, to witnessing a single performance of the operation in a dexterous manner. For instance, how inefficient would the following description of the mode of

bleeding prove to a pupil, though we have no hesitation in saying that, as a description, it is excellent.

"*The Instruments.* The name of the instrument with which bleeding is practised is a lancet, of which three sorts exist, distinguished from each other by the angle made by the point. The obtuse-pointed are called the barleycorn; which form an angle of fifty degrees, and are advisable when a vein is superficial, and we mean to make a large orifice for the issue of the blood. The second kind are called oat-pointed: the angle which the point forms is from thirty-five to forty degrees; they are useful when the vein lies deep; but then, after having made the incision, we must raise the handle of the instrument, to enlarge the wound in the skin, and of the vein itself outwardly. The third kind, the serpent-tongued, are very acute angled, and but little used.

"*The Arrangements.* Bleeding is performed according to general rules. The patient will either sit upon his chair, or will lie upon the edge of his bed. We then proceed to search for the veins in the part wherein we are to bleed, and select always those which are superficial, large, not movable, and not too close to arteries or nerves. Before operating, we are to ascertain the situation of the arteries by the touch, which detects them by their pulsations. In order to distend the veins and make them prominent, the part just above, or below that selected, should be compressed: by the finger, if it is the jugular vein, or if in a limb, by a bandage. We ought not to apply our compression in the latter way so tightly as to impede the circulation through the arteries. We assist in filling the veins by a depending situation of the limb, and by immersing it in tepid water; not, however, to be long continued, lest it might produce redness of the skin, and tumefaction of the cellular tissue, which would render the veins less perceptible. The patient is then directed to cause the muscles below the ligature to contract, and, with the hand applied flatly upon and transversely to the limb, we make graduated pressure, and gently crowd the blood from the branches towards its principal trunk. We generally succeed in a few moments in causing the repletion of the veins; but, if not, we should continue it for half an hour at least before it is abandoned." (P. 158.)

"*Requisite Apparatus.* The things necessary in performing venesection are: first, two good lancets, an obtuse one, and an oat-pointed one, so as to be prepared for any sized vein or situation which we may encounter; secondly, a candle, to afford light, if we are in a dark place; thirdly, a sheet, to spread over the patient, and protect his bed; fourthly, two single-headed roller bandages: one to compress the spot above the vein, before the puncture, and the other to apply over the dressings afterward; fifthly, a compress folded several times, to lay upon the orifice; sixthly, a probe and a pair of dissecting forceps, to remove or put aside globules of fat, should any make their appearance; seventhly, some tepid water, to

wash the limb; eighthly, a bottle of eau de Cologne, or of any other volatile stimulating substance, to be used in case of faintness; ninthly, and lastly, two persons as assistants, one of whom will hold the light, and the other the basin.

"*The Operation.* Every thing being now ready, the operator opens the blade of his lancet at an angle of sixty degrees, and places the end of the handle between his teeth, having the shoulder of the instrument turned towards the operating hand; for, as a general rule, we must, except in the case of the arm, bleed from the left side with the right hand, and from the right side with the left hand. He applies the bandage, made of worn linen, by taking two moderately tight circular turns around the limb, at the distance of about two fingers above the place to be opened, and ties it in a bow. One hand is employed in supporting the limb which it grasps, and in stretching the integuments, by means of the fingers on the one side, and of the thenar eminence and thumb on the other, so as to apply the integuments against the corresponding surface of the vein. This tension must be exercised equally on either side, that the same point in the integuments may be over the vein afterward as before they were stretched: if this caution be not attended to, when the skin is let go, after the operation, parallelism is destroyed, and blood is infiltrated into the cellular tissue. Meanwhile, the other hand, by gentle pressure from the branches towards the trunk, drives the blood upwards; the thumb is then lowered to about two inches below the ligature, compresses the vein, now distended with blood, and holds it firm and immovable. The surgeon takes the lancet in his operating hand, holding it betwixt the thumb on one side, and the fore and middle fingers on the other, the ring and little fingers acting as a fulcrum outwardly: by executing a flexory movement, he brings the heel of the instrument into the hollow of his hand, presents the point to the vessel, and then, by a sudden and quick movement of extension, pierces directly to the vein; and, if the lancet be very sharp, or the vessel deep seated, he enlarges the orifice, by elevating its anterior edge and drawing it towards him.

"We very often meet with timid patients, who draw away the limb at the moment when we are prepared to execute the operation. A case like this demands great dexterity on the part of the surgeon, who must endeavour to secure the limb immovably, and, if he cannot succeed in this, must follow the motions of his patient, and avail himself of the first interval of quiet quickly to effect the puncture. The blood spurts out as we withdraw the instrument, and is received in a basin placed for the purpose. It is easy with a little practice to calculate the quantity which issues, which is expressed by the term *palette*, which holds about three ounces. At no bleeding is less than one of these *palettes* detracted, and I have often seen a large bleeding weigh a pound, which is about five *palettes*. When we conjecture that enough blood has been drawn, the thumb of the hand which supports the limb is placed over the

orifice, and with the other the ligature is removed; next, we wash the limb with a little tepid water; lay our small square compress, steeped in a solution of salt, over the wound; and secure it by turns of a figure of 8 bandage, with a single-headed roller band." (P. 160.)

Independently of the difficulty of understanding the description of the mode of using the fingers, (though, on reflection, we acknowledge its excellence,) there is one point on which we differ from the author. We object to his method of enlarging the orifice: he employs the lancet as a bistoury, (an error which is very commonly made, but which gives considerable pain,) whereas it is distinctly a puncturing instrument; and, if its point be directed obliquely upwards in the course of the vein, the surgeon may open it as freely as he will, and yet never depart from the proper use of the instrument.

We transcribe also the section upon *Arteriotomy*, as it is short, and gives a good specimen of the manner in which these minor operations are described; and also of the notes affixed to the work by the translators.

"*Arteriotomy.* The necessary conditions for the performance of this operation are, that the artery shall be superficial, of small calibre, and lie over a bone which will allow us to compress it. Several arteries, the temporal, occipital, radial, tibialis anticus where it crosses the instep, &c., answer to these requisites, but, notwithstanding, the operation is performed almost exclusively upon the superficial temporal. It is resorted to in active ophthalmia, but more particularly in apoplexy, phrenitis, and whenever there exists too considerable an afflux of blood towards the brain.

"*Surgical Anatomy.* The superficial temporal artery is the termination of the external carotid. After it leaves the level of the outer angle of the eye, it is situated between the integuments and the temporal muscle. It gives off two branches; the one, posterior, which mounts perpendicularly over the parietal bones, and upon the sinciput anastomoses with that of the opposite side; the other, anterior or frontal, which ascends on the sides of the forehead, and joins its fellow of the other side in an arch. It is this latter anterior branch which is generally opened in arteriotomy.

"*Instruments.* Before we proceed to make a section of the temporal artery, we are to provide ourselves with a bistoury or scalpel, a lancet being likely, from its delicacy of structure, to be broken against the bones of the skull; two graduated compresses, and two bands, one a single-headed roller, the other a double-headed roller, with tails of unequal length, and about six yards long.

"*The Operation.* We first assure ourselves, by the touch, of the position of the artery, which is detected by its pulsations. The

thumb and forefinger of the left hand press the vessel against the subjacent bone; in the space between them we introduce the scalpel, the handle of which we hold in our right hand, whilst the forefinger, extended upon the back of the blade, governs and directs its motions. We offer its point to one side of the artery, lower the bistoury, pressing it quite against the bone, and draw it towards ourself, so as to cut the artery crosswise. A red stream, flowing in jerks, which are synchronous with the beatings of the heart, announces the section of the vessel. When it is judged that a sufficient quantity has been detracted, we arrest the flow by making pressure with the finger below the incision, and between it and the heart. We wash the part, substitute one of the graduated compresses for the finger, and lay the other compress over and near to the wound, to guard against recurrent hæmorrhage by anastomosis from the upper end of the vessel. A few tight casts of a bandage generally suffice to control the bleeding. If, however, blood is still discharged, the *packer's knot* bandage must be put on in the following way:

"We apply the flat of the bandage over the graduated compresses; then carry the two heads on the anterior and posterior surfaces of the head; cross them upon the opposite temple, and bring them again over upon the wound. When there, we change hands; the two tails, being one above the other, are strongly drawn downwards, so as to bear upon the compresses, and caused to describe the quarter of a circle by a rapid motion made with both hands in an opposite direction; the one becomes uppermost, and the other the lowest. We then take turns of the bandage vertically around the head, one above the sinciput, the other under the jaw; cross them behind, bring them up again upon the compresses, where, by a fresh knot, their vertical direction is again altered to a horizontal one, and so on until the short head is exhausted; the bandage is then completed by securing the whole by a few circular casts of the remaining globe. In order to guard against a return of the hemorrhage, several days must be allowed to pass over before the dressings are removed.*" (P. 171.)

We must own, if we were to give a description of the method of opening the temporal artery in this country, we should differ considerably from the author. He recommends a transverse section of the artery as a means of bleeding the

* "We supply, by a translation of some parts of the article Arteriotomy, by M. Jules Cloquet, in the new edition of the Dict. de Médecine, Paris, 1833, a few remarks, which will complete the practical usefulness of this section. The posterior auricular artery is also sometimes the seat of operation. The patient either lies upon one side, or, when it is practicable, sits up in a low chair, resting his head, bent to one side, upon the chest of an assistant. The place which had better be punctured is situated at an inch above the zygomatic arch of the temporal and malar bones. An incision three or four lines in length is sufficient for the purpose.

"Small aneurismal tumours sometimes appear afterwards at the seat of injury, but will often spontaneously disperse.—*Trans.*"

patient, but we have long been in the habit of regarding it as a means of arresting the hemorrhage, by permitting the contraction of the circular fibres. The plan which we have been accustomed to adopt, is to make a section of the skin at right angles to the artery, either with a scalpel, or the cutting edge of the lancet, until the vessel is exposed, and then to puncture it longitudinally: by this method the contraction of the circular fibres is rendered useful in separating the edges of the wound. There is another method which we have seen frequently employed, which consists in simply making a very small puncture in the artery, and afterwards applying a cupping-glass. This, though it is perhaps the most painful plan, is attended with one advantage, viz. that the puncture, being exceedingly small, is seldom, if ever, followed by aneurism. Cases will moreover occur where the application of the packer's bandage is productive of pain and inconvenience: in such instances, and in others where it is difficult to stop the bleeding, we should recommend the transverse section of the artery.

In the passages already quoted we have perhaps selected the most objectionable in the book, because they attempt to describe manipulation; but the following observations upon *Leeches*, and their mode of application, are so perfect, that we should find great difficulty in adding anything to them.

"Leeches are kept for use in bottles filled with pure water. The fluid ought frequently to be renewed, twice a week in winter, and in summer every day; neither ought its temperature to be too high or too low; a heat of about fifteen or twenty degrees centigrade best agrees with them. The number of leeches to be put into the bottle must also be proportionate to the quantity of water it will hold: experience has shown that twelve or fifteen of these animals require about a quart of water.

"To succeed in the application of leeches, we must not be indifferent in their selection. Generally those of middle size should be chosen, for it is often difficult to make large ones fix, or they will fall off without having produced any effect: on the other hand, the bite of a very small one is not followed by a sufficient discharge of blood. Another criterion in the choice of a leech is the glossiness of its skin, the strength, swiftness, and flexibility of its movements; and it is seldom that other than a satisfactory issue results from the employment of those thus distinguished.

* * *

"Leeches take hold always most quickly of the parts upon which the skin is thin, soft, and lax; and, on the contrary, do not bite at all upon skin which is rough and dry, or covered with a thick and scaly epidermis. For this reason, the skin ought to be placed in a fit condition for their reception, which is done by

shaving it, washing it with tepid water, with or without sugar, to moisten and clean it from impurities, and afterwards rubbing it, to produce a determination of blood.*

"*The Application of Leeches.* There are several ways of effecting this object. If one or two only are to be put on, it is sufficient to hold the leech by its hinder end, between the thumb and forefinger, offering its head to the part upon which we wish it to bite. But it is very difficult in this way to make the leech fasten exactly upon the spot we intend: it generally writhes, and essays to get free, or else applies its oval sucker to the fingers which hold it. A long time often elapses before a single leech can thus be made to fasten; and, in consequence of the pressure which it receives, and the fatigue it experiences, its skin dries, it becomes feeble, and rolls itself up into a ball. Several are thus lost unnecessarily, and all the while the affected part is exposed to the cold, which may be attended with serious consequences to the patient. It is therefore, in every case, much better to adopt the following measures, which are particularly suitable when a large number of leeches are to be applied. A number, say six or eight, are collected together in a wineglass, the bottom of which is covered with a piece of paper or a linen rag, to prevent them from sticking; we then turn the glass down upon the skin, on which they soon fasten in a body. The rag should always project beyond the edges of the wineglass, and, when it is reversed, by pulling on the ends of the linen, the leeches are seen lying upon the skin. The number of leeches applied at a single time varies according to the age and strength of the subject, and to the kind, extent, and severity of the inflammation. As many as sixty, and even more, are placed upon the abdomen of an adult, in an acute peritonitis. When, on the contrary, a mere local congestion is to be combated, and particularly in children, one or two leeches may suffice. When put on in such small numbers as this, it is sometimes necessary to make the leech fix upon a part situated in a deep cavity, as the gums, tonsils, lining membrane of the eyelids, neck of the uterus, &c. The necessity for circumscribing the point of suction has given rise to the idea of enclosing the leech, with its mouth placed outwardly, in a hollow tube, open at both ends. A needle-case, or rolled-up card, will answer for this purpose. The cephalic end of the animal is applied upon the spot which is to be relieved; when it has fastened, we set the leech free by pushing on its posterior disk, and drawing off the sheath. Loefler's instrument is constructed upon this principle. Bruninghausen has contrived a similar one, which consists of a glass tube, in which the leech is

* "To the above-mentioned means of making the animal fasten may be added, 1st. Bathing the part with sweetened milk. 2d. Scratching it with a lancet. 3d. Rubbing it with a piece of raw meat, which is sometimes promptly successful. 4th. Allowing the leeches to crawl upon a linen cloth for a few minutes before they are applied. 5th. In winter, letting them swim a little while in warm water beforehand.—*Trans.*"

enclosed, and from which it is expelled by a piston. MM. Brewer and Delaroche caused a hole to be made through the piston, so as to allow of the passage of air. It may be inquired, what advantage is derived from this modification; but to the inventor of the new instrument called the *leech-fixer (pose-sangsues)*, at least, it has not appeared unimportant." (P. 174.)

We here omit the description of the leech-fixer, and the observations of the author on the cause of its success, which he seems disposed to attribute to galvanism. It is so seldom that leeches fail to bite, when proper precautions are taken, that the invention of such an instrument must be looked upon as a work of supererogation. To proceed with their mode of suction.

"The mouth of a leech is of a triangular shape, and has three little jaws or semilunar teeth. These teeth are nothing less than papillæ, armed, according to Dom Allou, with two rows of sixty denticuli each, which, for the three jaws, will make the whole number of little teeth three hundred and sixty. The leech, when it is about to bite, protrudes the semilunar bodies in which the denticuli are, and rounds its head into a disk, which it applies flatly upon the skin, making a vacuum by suction. These motions are produced by the muscles which are attached to the jaws and œsophagus, and by an orbicular one which appertains to the oral sucker. The bite lasts for several minutes, and produces itching, and sometimes very acute pain. A vermicular motion of the leech, by which the rings of its body, from its head to the sucker at its tail, are contracted, announces the commencement of its action. This does not generally go further than the rete mucosum; though it is not uncommon for it to penetrate quite through the cutis. In half or three quarters of an hour the animals have swallowed as much blood as they are capable of containing; they then fall off of themselves, leaving as many triangular orifices, which continue to bleed after their removal. When of a great number of leeches which have been applied a very few only still adhere, it is better to take them off, for they can produce no further effect, and, by remaining suspended by their suckers, they painfully pull upon the seat of injury. This advice will be yet more judicious, when the patient has assumed an inconvenient posture, or there is danger from exposing the part to the cold air. But leeches to be removed must not be torn away, as that might cause the laceration of the small wounds, and subsequently their suppuration; there is a much more simple way, which makes them easily let go; it is to sprinkle upon their heads and backs a little salt, snuff, or lunar caustic, or to pour upon them a little of any irritating solution whatever.

"The quantity detracted by each leech has been estimated at two or three drachms. This approximation is very near the truth, inasmuch as it includes both the blood swallowed by the worm, and that

which afterwards escapes from its puncture. It is the opinion of M. Moquin Tandon, that a leech is capable of drawing a quantity of blood which is equal in weight to its own. This assertion has been modified by M. Vernière. According to his experiments, the hirudo officinalis of the smallest size absorbs twice and a half its own weight, or fifty grains; a middle-sized one, twice its weight, or eighty grains: and lastly, the largest sized leech absorbs its own weight, or eighty grains; the medium term of these measurements giving seventy grains, or about a drachm of blood, drawn in by every leech during the period of its suction.

"The quantity of fluid furnished by the bites after the fall of the leeches has also been made the subject of calculation. Some of these wounds bleed for so long a time and in such abundance, that we are obliged to arrest the hæmorrhage; others, again, yield not more than a few drops of blood. In order to estimate the average quantity, the fairest way would be to consider each wound as affording a discharge of blood which is one and a half times the quantity absorbed by the animal itself, or a drachm and a half. Adding this sum to the other, two drachms and a half will represent the weight of blood obtained by every leech, which for every three would be about one ounce. Whence it appears, that to abstract a quantity of blood equal to a venesection amounting to three palettes, we must apply twenty-five or thirty leeches to the patient." (P. 177.)

Then follow some directions as to the method of preventing too great a flow of blood; and the author appears to rely upon compression and styptics. Another excellent means might be added with advantage, viz. the passing a very small thread through the edges of the wound, and thus closing it by a suture. We have employed this plan several times, and have never known it to fail.

From the above quotations, our readers will be able to judge both of the design and execution of the work: it only remains for us to name the various subjects introduced by the author into his book, as, from its elementary nature, it is obviously unfit for any lengthened notice in a Review principally intended for practitioners.

The first section is devoted to the consideration of *Surgical Dressings*, and includes a description of the instruments, compresses, bandages, plasters, splints, &c. used upon such occasions, and a detailed account of the method of employing them.

The second section, on *Topical Medical Applications*, contains chapters on poultices, both emollient and irritating; on baths, general and local, simple and medicated; on fumigations, cerates, and plasters: their composition, mode of

employment, and the cases in which they are severally applicable, are stated with perspicuity and brevity.

The third section, which is headed *on Bandages*, but which is rather on *bandaging*, (bandages having been before described,) teaches the various methods of applying them, according to the object in view. It also includes a short account of the various kinds of trusses, which might have been enlarged with advantage.

The next section embraces the *Cutaneous Irritations* and *Artificial Ulcerations*, and the various means of producing them; as caustics, both liquid and solid, setons, the actual cautery, arsenic, blisters, and blistering ointments.

From the fifth section, on the *Simple Operations*, we have already made large quotations. Besides the different methods of drawing blood, it contains rules for making incisions of all kinds, for paracentesis abdominis, for piercing ladies' ears, (an operation in this country performed by the jeweller,) for vaccination, catheterism in the male and female, and the reduction of herniæ. These latter are usually described in elementary works and lectures on surgery, and in many quite as well as by the author.

The book concludes with sections on *Wounds*, *Abscesses*, and *Hemorrhages*, which can scarcely be deemed to belong to minor surgery, but which are nevertheless well treated, as far as the limits and nature of the work permit.

The translators have added an Appendix, which supplies a few omissions of the author, and which does credit to their industry and research. The following passage, which we quote, states a fact that should be known to every practitioner accustomed to perform venesection.

"The blood gushes from a divided artery in a full, rapid, and impetuous stream, which, although alternately elevated and depressed, is nevertheless *continuous*. The blood is of a scarlet hue, unless it issue along with venous blood, which being black, may mask its colour; though, upon close inspection, the separate streams may be detected. If pressure above the wound arrest the flow, the diagnosis is complete. Let it not however be supposed that to these signs any infallibility is to be attached. No jerky stream occurs where the exit of the blood is broken upon the sides of the wound. *A jet of scarlet blood, flowing in jerks, may issue when a vein alone is opened; and uniformly black blood may be poured from an arterial orifice.* In phlebotomy during fever great alarm might very naturally be excited lest the brachial artery had been opened, from the jerky stream and colour of the blood, the result of accelerated circulation, did we not make pressure below the orifice, by which it would, if venous, at once be arrested." (*Appendix*, xxvii.)

We have already expressed our opinion as to the design of the work: in many instances it attempts to teach what can only be taught by actual practice; but, upon other points, it contains much information which cannot be found elsewhere, and which will be useful both to the student, and to such practitioners as have not had the advantage of a very perfect education.

Traité des Hemorrhagies Internes de l'Uterus, &c. Par A. C. Baudelocque, Docteur de la Faculté de Médicine de Paris, &c. *Ouvrage qui a remporté le Prix proposé par la Faculté de Médecine de Paris, en* 1819.—Bruxelles, 1832. 12mo. pp. 274.

A Treatise on Internal Uterine Hemorrhage.
By A. C. Baudelocque.

This work is strictly practical, consisting principally of cases, with illustrative remarks. It advances small claims to originality, since the cases are for the most part derived from the writings of others; they are, however, most judiciously chosen, and well connected by the observations of the author. The subject of abortion is necessarily involved, as a frequent consequence of internal uterine hemorrhage during gestation, and every point connected with it is elucidated by a variety of examples, with excellent practical remarks. This work is one of the best we have read on the causes and treatment of abortion.

The first chapter is perhaps the most interesting in the book, and relates to the several situations in which extravasation may occur.

I. *During the Period of Pregnancy.*

1. Blood may be effused between the uterus and epichorion, and, by detaching the ovum from its connexions, induce abortion. This is the most frequent cause of abortion in the earlier periods of gestation. In the following case this accident supervened on mechanical injury.

A woman in the third month of pregnancy received a blow on the abdomen; this was soon followed by a slight hemorrhage, which was easily arrested. Six weeks after she experienced pain in the region of the kidneys, with a disagreeable sense of weight, for which bleeding from the arm and absolute rest were prescribed. Towards the end of the fifth month labour-pains came on, and an oval black mass, of the size of a fist, was expelled, in the centre of which was found an ovum, containing the waters, and a very small fœtus in a putrid state. Seven distinct layers of blood were observed,

differing in consistence, colour, and texture. (*Morlanne, Journal d'Accouchemens*, No. 12, p. 400.)

In this case the state of development of the fœtus indicates that it died at the period of the injury. The seven distinct layers of blood show that the hemorrhage took place at successive periods. The fact of the fœtus remaining in the uterus for two months, though in a decomposed state, is worthy of remark; and the case demonstrates that, when hemorrhage has occurred at an early period of pregnancy, we should not consider it certain that the child survives, until its movements become evident.

2. Between the epichorion and chorion.

Case. The Countess ——, twenty-eight years of age, having been married six years, had a miscarriage, soon after which she again became pregnant. The day on which the menses should in ordinary course have appeared she experienced severe colic pains, which continued from seven to eight weeks, notwithstanding a state of complete repose. Frictions with ice on the lumbar and sacral regions were employed without success.

Five days after the third menstrual term, bloodletting from the arm was practised, since the pains were now attended with hemorrhage. Abortion occurred at the end of forty-eight hours.

M. Deneux examined the ovum, and found beneath the epichorion a layer of coagulated blood, of a very high colour, a line and a half thick at the sides, and five or six at the two ends. The embryo was of the size of a fly: it was thought to have died six weeks after conception. (*Journ. cité*, tome lxviii. p. 355.)

When the colic pains occurred, says M. Baudelocque, an effusion of blood must have taken place round the ovum, and at this time the fœtus ceased to live, as is proved by its state of development. The pains, occasioned at first by the menstrual turgescence, were afterwards continued by the distension caused by the effused blood, which was perhaps already extravasated at their commencement. It is difficult to conceive with what intention the frictions with ice were used; there was doubtless an error in the diagnosis.

3. Between the chorion and the amnios.

Of this no detailed cases are given; the author merely mentions that Professor Deneux has shown him several very distinct examples, and that Dr. de Kergaradec found a fibrinous concretion between the chorion and amnios, towards the insertion of the cord into the placenta.

4. Between the placenta and the uterus.

A case is related in which this took place, and appeared to be attributable to sexual intercourse during the gravid state, which M. Baudelocque considers as a frequent cause of abortion.

The following is a fatal example of a similar effusion.

A woman, thirty-six years of age, the mother of several children, was troubled, in the eighth month of pregnancy, with violent cough and fever, which lasted several days. Labour-pains supervened; and a midwife, having been in attendance for twelve hours, observed the patient fall into an alarming state of syncope. M. Delaforterie was sent for, but the patient died before his arrival. He performed the Cæsarean operation. On opening the fundus of the uterus, a pint and a half of black uncoagulated blood gushed out: this had been contained in a cavity formed between the placenta and the fundus of the uterus, the margin of the placenta having retained its natural adhesion, while the middle part was detached. The child was extracted alive, but soon died. No trace of blood, or mucus tinged with it, was found in the vagina; and the orifice of the vagina was little dilated.

It is probable that the fits of coughing had ruptured some of the vessels passing between the uterus and placenta. The pains must have been occasioned by the distension of the womb, since the state of the os uteri and vagina shows that real labour had not commenced. The child's being alive proves that the blood came from the vessels of the uterus, and not those of the placenta, and also that its effusion was recent.

5. Between the uterus, the placenta, and the external surface of the tunica decidua and chorion. This, however, is only a combination of two varieties already illustrated.

6. In the substance of the placenta.—This, M. Baudelocque observes, is of very frequent occurrence in the early periods of gestation; it also happens, however, in more advanced periods. The cases adduced in illustration are too long to be here inserted.

7. Between the umbilical vessels and the membranes which surround them.—The blood may be either in a single clot, or infiltrated.

Case. A woman, nearly at her full time, was naturally delivered of a dead child, around whose neck the cord was six times twisted. The cord was fifty-two inches in length. At the distance of a foot from the umbilicus a coagulum of blood was found, eight or ten lines long, between the membranes and the umbilical vessels: this blood had been effused

from a rupture in the umbilical vein, which was varicose in several places.

This case M. Baudelocque believes to be unique: it is related as illustrating a singular cause of the death of the child. De Lamotte, Levret, and Baudelocque (senior), have recorded examples of effusion into the cavity of the amnios, in which the blood proceeded from the umbilical vessels.

7. In the cavity of the amnios.

M. Contèle gives a case in which pregnancy was mistaken for dropsy, and paracentesis was performed. This however is out of place in the consideration of uterine hemorrhage as a morbid state: bleeding from a wound may occur anywhere.

8. In the cavity of the peritoneum, which may take place at any period of gestation.

CASE. A woman, who had not menstruated for six weeks, had a fall upon her knees. Some hours after colic pains commenced, and continued with violence for twenty hours, at the end of which time the menses appeared, and the pains somewhat abated. On the third day M. Littre was called: he found the patient pale, and covered with a cold clammy sweat. The abdomen was distended, the respiration difficult, the pulse small and intermittent. She complained particularly of a sense of constriction above the diaphragm, and an acute pain in the left iliac region. She soon died. A fœtus, about an inch long, was found in the abdomen, and more than four pints of blood, which had been effused from a rent in the left Fallopian tube.

II. *During Labour.*

During the process of parturition blood may be effused,

1. Between the uterus and the external surface of the placenta and membranes.

Albinus relates a case very similar to that of M. Delaforterie above cited, except that the hemorrhage occurred during actual labour; the margin of the placenta retained its adhesion, while the middle portion was separated. The event was fatal; but Albinus remarks that the patient might have been saved, had the nature of the case been understood, by rupturing the membranes, and delivering immediately. "Servare potuisset protinus rumpendo membranas infantem continentes, ut humor amnii efflueret, protrahendoque infantem cum secundinis, et si quid intus præterea concreti sanguinis remanisset. Quum enim placenta abscessit, fluit sanguis e vasis patentibus, quamdiu uterus distentus; vacuefactus autem adstringit se: sic sanguis fere conquiescit. (*Annot. Acad.* lib. i., cap. 10. p. 36.)

The practice in such a case, observes M. Baudelocque, is traced by Albinus with the hand of a master; the words *vacuefactus adstringit se: sic sanguis conquiescit*, contain the most important precept in the treatment of uterine hemorrhage, whether during gestation, labour, or the period succeeding to it.

2. In the substance of the uterus and in the abdomen.

Schmucker, in his Mélanges de Chirurgie, cites an example of a woman who became gravid six months after a Cæsarian operation, from which she had perfectly recovered. This woman was brought to bed at the full time, and almost without pain, of a dead child. Six hours after she complained of great debility, fell into a state of syncope, and died. On dissection, a mass of coagulated blood was found under the peritoneal tunic of the uterus, which distended this membrane into a kind of sac, having its parietes traversed by varicose vessels, which opened on its internal surface. A hole was found in the sac, through which blood had escaped into the abdominal cavity. The cicatrix resulting from the operation she had formerly undergone was firm and uninjured.

This fact, says M. Baudelocque, has no fellow in the history of the science. The state of the parts bears some analogy to that described in the interstitial pregnancies on which M. Breschet has written so curious a memoir. In both instances there is a cavity in the uterine parietes, dilated vessels, and an aperture communicating with the peritoneal cavity.

3. In the cavity of the amnios.—Cases of this kind are related by Levret and Baudelocque, senior, but their nature is disputed by others. For these examples we must refer to M. Baudelocque's essay.

In the second chapter the *causes* of internal uterine hemorrhage are fully and judiciously discussed. When, however, the various situations in which extravasation may take place are ascertained, the connexions of the blood-vessels duly considered, and the local and constitutional effects of the gravid state properly understood, the causes of hemorrhage may be arrived at by easy deductions; we shall therefore content ourselves with recommending this chapter to the attention of the reader, and pass on to the third, which treats of the

Symptoms of Internal Uterine Hæmorrhage.

These differ in the earlier and latter periods of pregnancy. In the earlier periods the accident is frequently preceded by restlessness, dull pains in the pelvis, sense of weight about the rectum, and ardor urinæ. Pain in the region of the kid-

neys, severe griping and feeling of tension in the hypogastrium, soon succeed. The occurrence of the hemorrhage is often immediately preceded by a great increase of pain; sometimes the exact time of its commencement cannot be ascertained. In all the cases on record, the colic and renal pains, and the sense of weight about the rectum, have been observed to continue obstinately till the moment of abortion. The precursory symptoms are those of sanguineous congestion in the uterus; it is only the *obstinate continuance* of colic and renal pains that is diagnostic of the effusion of blood: where such pains arise merely from congestion they may be overcome.

General symptoms sometimes accompany the local, such as lassitude, headach, slight shiverings; the pulse is sometimes strong and hard, at others small, but incompressible; the countenance is animated, the eyes sparkling, and the general heat increased; the respiration is sometimes embarrassed, and the symptoms altogether are those of febrile excitement. In some cases the constitutional symptoms present themselves first: a state of general plethora is followed by congestion in the uterus, which terminates in the rupture of vessels, and internal or external hemorrhage. All these symptoms are most liable to occur in women who menstruate abundantly, and are subject to colic pains at the menstrual periods; such symptoms also occur more frequently at these periods than at any other.

Occasionally the symptoms of internal hemorrhage are preceded, accompanied, or followed, by external discharge of blood. In the early periods of pregnancy blood may be accumulated in the uterus, and cause the death of the child, without any symptoms which lead to a suspicion of the mischief.

At a more advanced period of gestation the extravasation of blood always causes dull and deep-seated colic pains, pain in the region of the kidneys, and tension and weight in the hypogastrium. Frequently the movements of the child, after having been very strong, cease to be perceptible, while the volume of the uterus increases, and it becomes harder and less compressible. When the loss of blood is inconsiderable, no other symptoms than those above mentioned present themselves; but, if it increases, the woman gradually loses her strength, and becomes pale; the pulse grows feeble, and the abdomen is greatly enlarged. Tinnitus aurium, and flashes of light before the eyes, with convulsions and syncope, soon terminate in death, if the patient be not relieved by the resources of art. External discharge of blood may be superadded to these symptoms. There is great variety in the

duration of the symptoms of internal hemorrhage: sometimes they are speedily terminated by abortion, at others they disappear entirely, and gestation continues; or the symptoms may recur at the end of one or two months, and finally occasion miscarriage. Most frequently, however, the renal pains and sense of weight about the rectum continue till the occurrence of abortion, which takes place at the end of eight, ten, or fifteen days, a month, two months, or more. At an early period all the symptoms are occasioned by the presence of the effused blood, for the loss is not in itself sufficient to affect the constitution. At a later period the mere presence of the blood is of small moment; the bad symptoms arise from the effects of loss of blood on the mother and child.

When internal hemorrhage occurs during labour, certain symptoms are observable, in addition to those above enumerated. Levret has remarked, that, in the intervals of the pains, the volume of the uterus progressively increases; and Leroux has detected an obscure feeling of fluctuation. There is frequently external discharge of blood; and, when the cessation of a pain allows the head to recede, clots of blood are discharged, in larger or smaller quantity. The pains also, which are always slow and feeble in such cases, become less frequent as the extravasation increases, and at last usually cease altogether; contrary to the erroneous statements of some authors, who assert that they become more violent and frequent.

The symptoms of internal hemorrhage after the expulsion of the child, though they have become familiar to practitioners only of late years, are now sufficiently so to render it unnecessary to dwell on this part of the subject; the remarks of M. Baudelocque may, nevertheless, be perused with advantage.

The third section of this chapter is devoted to diagnosis. The diagnosis of every disease springs from an accurate knowledge of its symptoms: these having been sufficiently detailed with reference to most of the varieties of internal hemorrhage, we shall confine ourselves to M. Baudelocque's observations on the diagnosis of *utero-peritoneal hemorrhage*, which is attended with more difficulty than that of most other kinds.

During pregnancy, the only indications of this accident are pain, and the ordinary symptoms attendant on large loss of blood. Violent pain in the abdomen suddenly supervenes, which is generally confined to a particular spot. The pain soon extends, and is accompanied with prostration of strength, fainting, paleness of the countenance, intermittent, and some-

times extremely rapid pulse, vomiting, and coldness of the surface; these are speedily followed by death, previously to which the pain generally ceases. The intellectual functions are usually unimpaired.

It sometimes happens, when the extravasation proceeds slowly, that the inflammation has time to extend over the peritoneum; and the symptoms of inflammation, united with those arising from loss of blood, render the diagnosis exceedingly obscure. The following case, which occurred to M. Dance, is recorded in the memoir of M. Breschet.

—— Fouchaux, a servant, thirty-four years of age, of fine stature, well formed, and of a sanguineo-nervous temperament, was admitted into the Hôtel Dieu, on the 21st July, 1825. M. Dance was then a house-pupil of this institution. This gentleman thought, from the appearance of the patient, that she was labouring under acute peritonitis. After much questioning, the following particulars were elicited from her. She had been married at the age of eighteen, and had borne three children by the time she was twenty-four, one of which only survived; the third died in the birth. She had always enjoyed good health, and all her labours had been easy. For about three months the menses had been suppressed, but she felt convinced that this circumstance was unconnected with pregnancy. She had experienced a feeling of weight in the region of the kidneys, and uneasy sensations in the hypogastrium, at each period when the menses ought to have appeared, but her general health had not suffered. On the 20th of July she rose in the morning, without any feeling of indisposition, and went about her usual avocations. At one o'clock P.M. she was sent on an errand to the Marché St. Jacques, and on her way home was suddenly seized with a violent pain around the navel, resembling colic, succeeded by syncope, which continued for an hour. She was carried to a neighbouring house, where she came to herself, but remained pale and exhausted, and the abdomen became more and more painful. During the night she suffered great anguish, and was very restless; she slept, however, at intervals. Vomiting occurred, but soon ceased, and did not return. The bowels were not opened, and the urinary secretion was suppressed. A small quantity of blood was discharged *per vaginam*. A physician who was sent for prescribed nothing but a quieting draught.

M. Dance first saw her about two in the afternoon of the 21st July. At that time her face was pale, and her physiognomy indicated abdominal disease. The eyes were dull and sunk, the lips livid, the voice feeble, the intellectual func-

tions not at all impaired. The belly was tumid, hard at its inferior part, and tender over its whole surface, but particularly in the iliac regions. The limbs were cold, the belly of natural temperature; the pulse very small, and threadlike; the tongue pale, and whitish in the centre. Much thirst; no vomiting.

M. Dance was naturally puzzled with these symptoms. The tumefaction and tenderness of the abdomen indicated acute peritonitis: but whence the immediate accession of such alarming symptoms in a young person previously in good health? Had there been a sudden perforation of the stomach or intestines, with effusion of their contents, and secondary peritonitis? The patient had shown no symptoms of disease in the alimentary canal. Was the case one of abortion, which the patient wished to conceal? The absence of the menses for three months induced a suspicion that this was the case, notwithstanding the woman's declaration that she was not pregnant; and M. Dance thought it necessary to examine. He found the body of the uterus harder and heavier than natural; the cervix was shortened, and softened at its anterior extremity; the os uteri was circular, and would admit the point of the finger. M. Dance was quite convinced that she was pregnant. He observed that there was no blood on the end of the finger when it was withdrawn. He intended to empty the bladder, with a view of examining the uterus more accurately: he deferred this, however, till his evening visit, and prescribed leeches and emollient fomentations. He had scarcely left the room when the patient expired.

On examining the body, twenty-four hours after death, numerous clots of blood were found in the abdomen, and especially in the cavity of the pelvis: about five or six pounds appeared to have been effused. Blood was also infiltrated between the layers of the mesentery, and in the subperitoneal cellular substance. The author adds, that he omits, as foreign to the illustration of his subject, the details of an interstitial conception, which was present in this case.

The fourth chapter treats of the *state of the effused blood*, as to consistence, colour, &c., and also of the *prognosis of internal hemorrhage*. The prognosis in cases of this kind will generally be sufficiently obvious, when the nature of the case is distinctly understood; we proceed therefore to the fifth and last chapter, on the *treatment*.

When hemorrhage to any considerable extent has actually occurred, the practice to be followed is pretty well agreed on among well-informed obstetricians; the prophylactic treat-

ment, however, though not less important, is less obvious; we shall therefore condense some of the author's observations on this point.

It has been already stated that internal hemorrhage during pregnancy occurs most frequently in women who have the menses abundant, and are subject to colic pains at the period of their occurrence: the precepts about to be laid down ought therefore to be particularly observed with reference to such patients.

All the causes of internal hemorrhage may be resolved into those which violently detach the placenta from the uterus, or those inducing local or general plethora, which, by over-distending the uterine vessels, occasions a rupture of them.

Pregnant women should avoid exposure to inclement weather and extreme vicissitudes of temperature, which, by exciting pulmonary catarrh and cough, become a source of great danger; and, if violent cough supervene during gestation, recourse cannot be had too early to the means of removing it.

The clothing of pregnant women should neither be too light nor too heavy; all tight pressure should be avoided. Mauriceau, Delamotte, and Baudelocque, sen., have recorded examples of uterine hemorrhage resulting from compression of the abdomen; and Madame Boivin relates the case of a woman who miscarried twice in succession, from wearing leather stockings for varicose veins in the legs. Stays should be discarded. Soft beds, and too warm bedclothes, are frequent causes of abortion, and should therefore be avoided. Warm baths are always hurtful; and Tymoni, a physician of Constantinople, assures us that the Turkish women, who are addicted to their excessive use, are very subject to all kinds of hemorrhage.

Tepid baths are useful as a means of cleanliness, but they should be avoided at the times corresponding to the menstrual periods. Cold bathing may be useful or dangerous, according to circumstances. It is injurious to women of a plethoric habit, and who menstruate abundantly; it is serviceable to women of a feeble constitution and lymphatic temperament, and those whose uterine system is inactive. A pregnant woman, however, should never use a cold bath from the first, but begin with a tepid one, and have its temperature reduced by degrees. Warm hip baths and pediluvia are to be avoided. The diet of a pregnant woman should be moderate; errors in quantity do more harm than those in quality; heating and highly-spiced dishes, however, strong wines,

alcoholic fluids, and coffee, are objectionable. It is of great importance that the bowels be kept sufficiently open, and the urine regularly evacuated. Gentle purgatives may be used, if necessary, but must be cautiously avoided at the menstrual periods, or when there are any symptoms of uterine congestion. Emetics should never be had recourse to, unless for some urgent reason, since they may excite abortion. A case of this kind is cited by our author from Smellie. Moderate exercise on foot is advisable, but all kinds of exercise attended with jolting are injurious. The bad effects of sexual intercourse and moral excitements are well known.

It sometimes happens that internal uterine hemorrhage occurs without apparent cause, or supervenes immediately upon the cause. Art in these cases is of little avail; but when symptoms of uterine congestion merely present themselves, with or without apparent cause, the prompt intervention of art may prevent further evil from ensuing. Mauriceau relates a case, in which uterine hemorrhage occurred in a woman six weeks gone with child, and continued, with rare intermissions of a few days, for three months. Nevertheless, by means of a constant recumbent position, abstinence from sexual intercourse, and two venesections, the patient reached her full time, and was delivered of a large and healthy child. (*Obs.* 612, p. 502.) Other cases are related from the same author, and the following one from Delamotte.

A large window-shutter fell on the abdomen of a woman three months gone with child, and occasioned violent pain. A slight hemorrhage occurred immediately after. This patient found, contrary to ordinary observation, that she lost more blood when in the recumbent posture than when sitting or standing. Delamotte wisely preferred the fact to the rule; he desired her to avoid the recumbent posture, but to keep perfectly still, and twice ordered her to be bled from the arm. The bad symptoms disappeared, and Delamotte heard no more of his patient till she had reached her full time, when he delivered her of a healthy boy.

M. Baudelocque observes, that bloodletting is particularly useful in internal uterine hemorrhages occasioned by violence, and that, when employed with judgment and caution, it may often be useful, and is never injurious. The following is a case illustrative of its application.

Madame C—, æt. twenty-one, of a nervous and lymphatic constitution, was accustomed to menstruate during five days, and to be afflicted during that time with colic and renal pains. She had two miscarriages in the first year after her marriage, in both instances at the twelfth menstrual period. She

became a third time pregnant three months after the second abortion. Conception took place between the 17th and 20th November, 1814, immediately after the flow of the menses. She instantly abstained from carriage-exercise, sexual intercourse, and stimulating food and drinks. On the 9th December she looked paler than usual, the eyes were hollow, and the pulse feeble; there was slight pain in the region of the kidneys, and tension of the hypogastrium. These symptoms continued for five or six days, and gradually disappeared. She kept constantly in her chamber, and was often on the sofa, till the 7th January, when she experienced some pain in the kidneys. On the 8th, the whole surface of the body was discoloured, and the roots of the nails of a violet tint; the eyes were sunk, the hands and feet cold, the hypogastrium tumid and tense, and the pulse so small as to be hardly perceptible; at intervals there were colic pains. M. Deneux ordered four ounces of blood to be drawn from the arm. The pulse immediately rose; the temperature became more equal; the pains sensibly diminished in the course of the day; and, together with the swelling of the hypogastrium, ceased entirely on the morrow. The patient continued the use of the sofa, and abstinence from sexual intercourse.

The same symptoms reappeared on the 5th February. Bleeding was prescribed, but deferred, because the patient was thought by her friends to be very weak.

On the morning of the 7th, a sense of weight about the rectum, painful micturition, pain in the hypogastric region, and oozing of blood from the vagina, were superadded to the former symptoms. The colic and renal pains were stronger and more frequent; the os uteri was tumid and painful when touched, and the parietes of the vagina were swelled, tender, and extremely hot.

M. Deneux drew a small quantity of blood (*une palette*), and prescribed complete rest, chicken-tea, infusion of linden-flowers, and emollient enemata. These measures were eminently successful; she passed a good night, and the next day was almost as well as usual. She confined herself to bed or the sofa till the 18th.

The symptoms recurred in a minor degree on the 3d March and 2d April, and were again removed by venesection. Finally, blood was again drawn on the 1st July, (this being nearly the eighth menstrual period,) for a congestion of blood in the lungs. She was safely delivered at the full time.

Madame C— has since borne two children, without any necessity for bleeding during gestation.

Too much blood should not be drawn at one venesection.

The author has observed many instances in which the too copious abstraction of blood was fatal to the child. If syncope be induced this result sometimes follows; and it is hence prudent to bleed pregnant women in a recumbent posture, in order to diminish the probability of fainting.

Ranchin, Rivière, Mauriceau, Pechlin, &c., advise that the blood should be abstracted gradually, the finger being applied at intervals over the orifice in the vein. Bleeding from the arm is to be preferred to the application of leeches in cases of uterine congestion, since the latter practice conjoins a revulsive with an evacuant effect, and determines a flow of blood to the uterine system.

The prophylactic measures against hemorrhage during labour are widely different from those above mentioned. The feeble and incontractile state of the uterus, which gives rise to this accident, is to be obviated by a generous diet during pregnancy, by the use of chalybeate tonics, by exercise, the cold bath, and even seabathing, when not otherwise contraindicated. The author has found great advantage from the exhibition of the *secale cornutum*, for the prevention of hemorrhage after the expulsion of the child. In many cases where he has administered it, he has found the lochia more scanty than usual, and their appearance delayed till several days after delivery. When there is any reason to apprehend internal hemorrhage, it is advisable to administer a small dose, as ten or twelve grains, immediately after the expulsion of the placenta. The increased hardness of the uterine tumor speedily affords evidence of the action of the remedy.

The *curative treatment* of internal hemorrhage occupies the remainder of the volume: on this, however, we shall not enter, because we have already exceeded our limits, and the subject is one very familiar to all well-informed practitioners. The reader will find some excellent observations on the use of the secale cornutum, and on the practice of plugging the vagina. This work is highly creditable to the industry and judgment of the author. Every important precept is amply illustrated by examples derived from his own observation, or the works of the best practical writers. The practitioner will find this a very valuable book of reference.

Illustrations of the Elementary Forms of Disease. By Robert Carswell, M.D., Professor of Pathological Anatomy in the University of London. Fasciculus VI. *Hemorrhage.*—London, 1834. Folio.

Our author divides hemorrhage into two great classes, namely, hemorrhage from physical lesions, and hemorrhage from vital lesions. The former again is divided into two genera,—as it may arise from solutions of continuity, or from a mechanical obstacle to the circulation; the latter into three,—as it may arise from a modification of function of the capillaries, from a diseased state of the blood, or from debility. Each of these genera, except the last, is again subdivided.

Dr. Carswell does not agree with those writers who suppose that "paralysis of the *superior* extremities depends on the effusion taking place in the *thalami*, or in the cerebral substance situated on a *level* with and *posterior* to them; and that paralysis of the *inferior* extremities depends on the effusion taking place in the *corpora striata*, or in the cerebral substance situated on a *level* with or *anterior* to them." Nor does he side with those who say "that the *loss of speech*, which not unfrequently accompanies cerebral hemorrhage, depends on the effusion occupying the *anterior lobes* of the brain, a statement which derives still less support from actual observation than the former; for *blood may be effused* in the *anterior lobes* of the brain, *without giving rise to any modification of speech whatever.*"

We must be permitted to observe, that Dr. Carswell's statement, and the one which he oppugns, are by no means irreconcileable; for it is easy to suppose that apoplectic aphonia always depends on effusion in the anterior lobes, and also that this effusion may exist without producing the aphonia. Our author thinks that

"the best established facts regarding the seat of cerebral hemorrhage, and the relation which exists between it and paralysis, are the following:

"1. That the paralysis occupies the side of the body opposite to that of the brain or cerebellum in which the effused blood is situated.

"2. That the paralysis affects only one side of the body when the effused blood is confined to one hemisphere of the brain, or one of the lateral lobes of the cerebellum.

"3. That the paralysis exists on both sides of the body when the hemorrhage has taken place in both hemispheres of the brain, or both lateral lobes of the cerebellum; into the ventricles, the pons Varolii, the medulla oblongata, and on the surface of the brain.

"4. That paralysis of both sides of the body may also take place when the hemorrhage is confined to one hemisphere of the brain, or lateral lobe of the cerebellum, but is so extensive as to produce compression of the opposite hemisphere or lobe."

Dr. Carswell observes, that "as hemorrhage of one of the lateral lobes of the cerebellum, like that of one of the hemispheres of the brain, gives rise to paralysis of the opposite side of the body, we should, *a priori*, have expected that hemorrhage of the *left* lobe, for example, of this organ, and of the *right* hemisphere of the brain, occurring together, would have given rise to general paralysis, or of both sides of the body. Such, however, as has been observed by Andral, is not the case; for the paralysis is found to exist on that side of the body only opposite to the hemisphere of the brain which is the seat of the effusion, the other side remaining unaffected by the effusion in the "cerebellum."

The following is the case to which we referred above:

"The most remarkable of these cases occurred in a stout man, a porter, of middle age, who stumbled in the street from the effects of liquor, and struck his head against the pavement. He got up immediately, and walked home. A few days after, he felt himself less capable of making considerable exertion than formerly: he could not, as before the accident, raise a heavy load, or walk steadily under a heavy burden. This state increased, but not to such a degree as to prevent him from continuing his daily occupation for three weeks, at which period he presented himself at the Hôtel Dieu of Lyons. His general health was good; his intellectual faculties were entire; he walked and expressed himself with perfect freedom; the pulse and temperature of the skin were natural. Under these circumstances the receiving physician refused to admit him. Next day he was brought to the hospital in a state of complete coma, with stertorous breathing, and general paralysis, and died during the day. We found that he had gone home, and complained to his wife that he had been refused admission to the hospital because he had no fever; and that she, in order to remove this objection, had administered to him nearly a quart of hot wine, containing a quantity of pepper. The result of the autopsy was interesting: at least six ounces of blood covered the superior half of the surface of the brain, but was separated from it by the arachnoid, between which and the dura mater it was enclosed. The blood was partly fluid and partly coagulated, red or almost black; and a false membrane, of the thickness of card-paper, lined the internal surface of the dura mater in contact with the blood, presenting in several parts of its extent numerous vessels of new formation. The only lesion observed in the brain itself was congestion of its venous system.

"These appearances afford a most satisfactory explanation of

the apparent anomaly observed in this interesting case, viz. the absence of paralysis during the existence of an extensive effusion of blood within the cranium, as well as of the cause of the general paralysis and death which supervened. The state of the blood, and the presence of a false membrane, mark the duration of the hemorrhage, and its progressive nature. The slow and gradual effusion of the blood in this case had allowed the circulation of the brain to accommodate itself to the presence of so much additional fluid, thereby obviating the effects of pressure. So long, in fact, as the quantity of the blood circulating in the brain was not increased beyond the limits within which it was compatible with the presence of the blood that was effused, none of the usual effects of compression were observed; but, so soon as the stimulating potion which the unfortunate patient swallowed had, by its effects on the general circulation, and probably also on that of the brain, occasioned an influx of blood towards this organ, compression must then have taken place, as certainly as the general paralysis by which it was almost immediately followed. The slow development of chronic abscess within the substance of the brain, and the gradual accumulation of water in its ventricles, without any accompanying increase of the parietes of the cranium, are lesions perfectly similar in their nature to the former, as regards the law of pressure in the production of paralysis, and which law may be thus generally expressed, and applied to the disturbance of any special function from this cause,—that the disturbance of the functions of an organ from pressure is in the direct ratio of the rapidity with which the compressing cause operates."

Dr. Carswell is of opinion that "the *obstruction* of natural passages by the effused blood is an occurrence which leads to no important modification of function, except in pulmonary hemorrhage." There are cases, however, on record, in which an obstruction of the urethra by a clot of blood has given rise to complete retention of urine; and such cases are the more distressing as the cause is by no means obvious. When ascertained, the obstruction is easily removed by the injection of warm water.

We must content ourselves with one more extract, on hemorrhage in the digestive organs.

"The physical characters of hemorrhage of these organs which require description are few in number, and are referable to the colour, consistence, and quantity of the effused blood. The blood effused into the stomach and intestines is seldom found to present its *natural red colour*, either when thrown out from these organs, or when contained in them after death. It has often acquired a dark purple, and still more frequently a deep brown tint, resembling bistre, or the blackness of soot. The dark brown and sooty discolourations of the blood may always be regarded as the result

of the action of an acid chemical agent, formed in the digestive organs, on the effused blood, except in those cases in which they are produced by the introduction of an acid poison. Hence we may conclude, that the diseases called *black vomit* and *melæna* are mere modifications of gastric and intestinal hemorrhage, the black colour being an accidental circumstance of no importance, and derived from the chemical action of the acid product on the blood previous to its evacuation."

The fifth figure of the fourth Plate is a very instructive one, representing the morbid anatomy of the parts which give rise to hemorrhoids. According to our author, there are two forms of this disease,—the one depending on dilatation of the veins of the rectum, and the other on a transformation of the dense cellular tissue of the margin of the anus into erectile tissue.

The plates are, as usual, models of the most finished excellence; and the text is so good, that we could wish to see it published in a separate form, for the benefit of those who may be prevented from purchasing the work as it stands, by what Walter Scott calls *impecuniosity*.

Pathological and Practical Researches on the Diseases of the Brain and the Spinal Cord. By JOHN ABERCROMBIE, M.D., Fellow of the Royal College of Physicians of Edinburgh, &c., First Physician to his Majesty in Scotland. *Third Edition, enlarged.*—Edinburgh and London, 1834. 12mo. pp. 457.

WE are by no means inclined *actum agere*, to do what has been already completely done, nor do we wish to imitate the laborious pedestrian in the algebraic problem, who carried his hundred eggs one by one to the basket, ever and anon returning for another, and painfully retracing the same ground. We therefore think it unnecessary to give an abstract, or even a general account, of the admirable work before us. Those of our readers who pursue excellence in the practice of physic with a zeal proportioned to its object must already be well acquainted with Dr. Abercrombie's work on the Brain, and we shall therefore touch on a few points only, confining ourselves entirely, or nearly so, to the new matter inserted in this edition.

For the following remarkable case of *chronic meningitis*, our author declares himself indebted to Mr. Adams, of Banchory.

"CASE VII. A gentleman of a cultivated mind, and an amateur painter by profession, about forty-five years of age, had always enjoyed good health, except that latterly he had suffered from

ulceration of the tonsils. In the spring of the year 1829, being in London, he felt languid and depressed, owing, as was imagined by himself and his friends, to too ardent application to his professional pursuits; his sight became impaired, his stomach irritable, and he had various other symptoms, which were referred to a morbid derangement of the hepatic system. After being treated for some time upon general principles, he came down to the country, towards the end of the month of June, in expectation that rural retirement would soon restore him to health. During the three succeeding months, the principal symptoms of his complaint were, a torpid state of the bowels, occasional vomiting without nausea, sometimes, though rarely, dull headach, impaired sight, false vision, and ocular spectra. The spectral illusions generally consisted of fantastic female figures dancing around him; and at one time he had the impression of being attended by one of them wherever he went. He was always sensible, however, that they were unreal appearances. He lost strength gradually, his stomach became more and more irritable, and he died on the 12th of October, excessively emaciated.

"*Inspection.* A portion of the dura mater, about three inches by two, immediately to the left of the falx, and a little anterior to its termination in the tentorium, was separated from the skull by a layer of coagulated lymph, imperfectly or not at all organized, and of a dull yellowish red appearance. This portion of the membrane was glued pretty firmly, by the same kind of matter, to the surface of the brain, there being no trace of pia mater or arachnoid visible. This part of the brain was much indurated, especially at one point anteriorly, and to the left, where the induration extended to the depth of an inch and a half; it adhered also to the falx, which was similarly diseased for nearly a square inch throughout its whole thickness; but did not adhere to the right hemisphere of the brain, or involve any part of it in the disease. The brain, in the immediate vicinity of this induration, was somewhat softened; every other part of it was sound, except that there was about a table-spoonful of serum in the ventricles, and as much about the base of the skull. The stomach was not examined.

"This case is a striking example of extensive cerebral disease with very obscure symptoms. It also tends to illustrate the nature of spectral illusions; and it is deserving of remark, as tending to illustrate the shape which these spectral appearances assumed, that about the time this gentleman became ill, his mind was intent upon making a drawing of one of the fanciful descriptions in Moore's "Epicurean," and by the writer of this report it was always supposed that the phantoms which seemed to sport before his eyes bore some resemblance to those which had formerly occupied his imagination.

"It remains to be mentioned, that no circumstance in his life was known to account for the diseased state of his brain, unless that, about three years before his death, he met with a fall upon a stair, whereby he hurt one of his knees seriously, and, as was sus-

pected by his relatives, also sustained some injury of the head. This explanation, however, is merely conjectural." (P. 46.)

Though we are no Broussaists, and are not haunted by the "spectral illusions" of gastro-enteritis, still we must regret that the stomach was not examined: it is probable that no morbid appearance would have been found there, but even this would have been valuable as a piece of negative evidence.

The following case relates to a subject of much interest.

"CASE LXXX. A boy aged twelve, the son of a medical friend, had scarlatina mildly in the spring of 1833. Nearly a month after, he was affected with slight anasarca of the face; and, after this had continued several days, he had some vomiting, and appeared languid. About a week after the appearance of the anasarca, he complained one morning of headach, and had some vomiting; pulse slow, and rather languid. About eleven o'clock in the forenoon he suddenly lost his sight, and towards the afternoon he passed into a state bordering on coma. He still complained of headach, but the pulse was not above the natural standard, soft and languid. Topical bleeding having been employed without relief, I saw him at night, and advised general bleeding to ℥xii. to be followed by active purging, and cold applications to the head. During the bleeding the pulse rose both in strength and frequency. Next morning I found him quite sensible, but entirely blind; there was still some headach, but less than formerly, and the pulse was stronger, and not frequent. He was again bled to ℥xii. and the purgatives repeated. After five or six evacuations from the bowels, his sight began to return, and in the evening was entirely restored. Next day he was free from complaint, and has ever since enjoyed good health." (P. 161.)

In speaking of tubercular disease of the cerebellum, our author says,

"I shall only add the following remarkable case, showing in a very striking manner the remissions which take place in the symptoms in diseases of this class, and the periodical character which they sometimes assume.

"CASE LXXXV. A gentleman aged thirty-four, in the year 1825 first began to be affected with occasional attacks of headach, which were usually accompanied by vertigo and dimness of sight. In 1827, the pain became more severe, and was distinctly referred to the occiput and superior part of the neck. He had generally remission of it through the day, and aggravations in the evening. In the spring of 1828, the symptoms increased in severity, but he received considerable relief from blistering. In the summer he went to the country, where his general health was much improved, and his headach greatly mitigated. He continued in this improved state till May 1829, when the attacks of headach were again ag-

gravated, accompanied by giddiness, and on one occasion he fell from his chair. In October of the same year, he began to be affected by a most distressing sensation of throbbing, referred to the back part of the head; and he was also affected with vomiting, which continued without intermission for three weeks. The paroxysms of headach were now aggravated to an intense degree of severity. They occurred chiefly in the evening, from six o'clock till midnight, but also at other times of the day. During the more severe attacks, his face was flushed, the vessels on the temples were remarkably distended, and he lay in a state nearly of unconsciousness, unable to speak, and with his hands and arms spasmodically contracted. He still had occasional vomiting and intense acidity of the stomach, and several times complained of double vision: The pulse was generally natural. His situation was now considered as nearly hopeless, and no relief was obtained from any remedies; but, after five or six weeks of intense suffering, the symptoms gradually remitted, and during several weeks in December and January he continued almost free from headach; he was able to walk out, and his general health was greatly improved. In February 1830 the symptoms again increased, but the pain was now chiefly complained of above the eyes; the remissions also were more complete, and upon the whole his sufferings were less severe than during the attack in November. In March, his complaints again subsided, and he was able to take a good deal of exercise in the open air, and to attend a good deal to his business. He had still occasional attacks of headach, but they were not severe, and his condition was considered as much more favorable than it had been for a long time. In the middle of April, the paroxysms of headach became more severe, but by no means in the degree in which they had occurred on former occasions. He was not confined; and no degree of apprehension was excited until the 24th, when in one of those paroxysms he suddenly expired.

"*Inspection.* The ventricles of the brain contained from three to four ounces of limpid fluid, but the surrounding parts were entirely healthy. Imbedded in the substance of the left lobe of the cerebellum there was a tubercular mass, the shape and size of a very small walnut. Externally it was firm, and presented the usual appearance of the scrofulous tubercle; internally it was softened, with the common appearance of unhealthy scrofulous suppuration. The substance of the cerebellum around it was entirely healthy. No other appearance of disease was discovered in the head, and the other viscera were sound." (P. 168.)

In discussing cases of this kind, the point is often mooted, why a constant source of irritation, such as a tubercle in the cerebellum, should allow of any remissions. Perhaps the reason may be, that a paroxysm of pain is not caused until a large quantity of irritability has been accumulated, and that the latter is discharged by the former; an interval of

ease succeeding, until a new accumulation has taken place. So that in this, as in many other instances, what is called the disease, is, in fact, merely Nature's method of getting rid of it.

In the third section of the Appendix to Part I. on "certain Affections of the Pericranium," Dr. Abercrombie mentions some cases related by Sir Everard Home, in which "the symptoms in general were headach, with various uneasy feelings in the head, and a painful tenderness of the scalp at a particular spot, with some degree of swelling or thickening of the integuments at the place." (P. 192.) On this subject our author has inserted the following new matter.

"Since the publication of the former edition of this volume, I have seen several cases of this very interesting affection, presenting characters similar to those which I have mentioned in the general description of it, and yielding to a free incision of the part, after the symptoms had been of long continuance, and had resisted much active treatment. One of them, in which the symptoms were very severe, and of eighteen months' standing, has been described by Mr. Blacklock, in the Edinburgh Medical Journal for 1831. In another of the patients, a clergyman, the affection seemed to have been produced by a small piece of plaster which fell on his head from the ceiling of a church. The injury at the time was of the most trifling description; but this affection gradually supervened, accompanied by a train of anomalous nervous symptoms, which greatly impaired his general health, and rendered him entirely unable for his duty for many months. He was quite cured by the incision, which had to be repeated twice.

"In these cases the seat of the disease was distinctly indicated by the tenderness on pressure of a defined spot of the pericranium. But the following case presents some features of great interest, from the complete relief which was afforded by the same operation, though there had been no tenderness at the part, and nothing that led distinctly to the belief that disease of the membrane existed. It has led me to suppose that there are cases of untractable affections of the head in which this treatment might be beneficial, though not distinguished by the symptoms indicating the disease which has led to these observations.

"Case xcvi. A man, aged thirty-nine, upwards of eight years ago, received an injury on his head from the wheel of a waggon. It produced a sore, which healed in about ten days. About eight months after this he began to be affected with attacks of headach, which had continued to recur from that time, though sometimes at long intervals. When I saw him, along with Mr. Kennedy, in autumn 1833, he had been suffering from intense pain in the head for two months. During the whole of this time he had been confined to bed, and unable for any kind of exertion; every kind of

active treatment had been employed, without any relief, and the case now exhibited every character of a fixed and formidable disease of the brain. As the principal seat of the pain, he referred to a spot on the vertex, and from this the acute pain seemed to dart into the centre of the brain, and particularly towards the left ear. The spot to which he pointed on the vertex corresponded to that which he represented as the seat of the original wound; but no cicatrix could be discovered, and there was no tenderness of the integuments, nor any other appearance of superficial disease. All the usual remedies, however, having been employed without benefit, I suggested a crucial incision at this part, which was done with complete relief. The wound healed in nine days; he soon after returned to his usual employment as a baker, and through the winter enjoyed good health. During the present summer (1834) he has had a return of headach, after exposure to great heat. After it had resisted various remedies, a repetition of the incision was contemplated, but at present the affection seems to be subsiding." (P. 196.)

Our readers will be interested by another of the new cases.

" *Extravasation in a Cyst, formed by Separation of the Laminæ of the Dura Mater, from Rupture of the middle Meningeal Artery.*

" The following remarkable case was lately communicated by Dr. John Gairdner, to the Medico-Chirurgical Society of Edinburgh, and will appear, in a more detailed form, in the next volume of their Transactions.

" CASE CXXI. A man, aged forty-eight, about the 12th of November, 1814, was assisting a neighbour to carry a heavy load to the top of a high stair, when he felt a sudden attack of headach. He was from that time troubled with headach and occasional giddiness, increased by stooping; and, after these symptoms had continued rather more than a fortnight, he became sensible of some imperfection of vision. When seen by Dr. Gairdner, on the 2d of December, he complained of violent headach; pulse forty, and feeble. The pupils were at this time sensible to the light, but after a few days became insensible. He sunk very gradually into coma, without any other remarkable symptom, and died on the 13th.

" *Inspection.* On the left side of the head a cyst was found, in the course of the middle meningeal artery, occupying the region of the lower part of the parietal and upper part of the temporal bone. It was formed by a separation of the laminæ of the dura mater, and contained about four ounces of coagulated blood. The portion of the dura mater forming the cyst was considerably thickened, and very vascular. There was a depression on the surface of the brain corresponding to the cyst, and the ventricles contained a considerable quantity of serous fluid. There was no other morbid appearance." (P. 238.)

Nor will they be dissatisfied with us for extracting the following one.

"A gentleman, aged sixty-four, was first seized with an attack of apoplexy in 1824, from which he recovered under the usual treatment, but retained some imperfection of speech, and a degree of weakness of the left side. Some months after, he had a second attack, and in July 1825 a third, accompanied by convulsions, in which he lay in a state of insensibility for thirty-six hours, and was not able to leave his room for a fortnight. From this time to the period of his death in 1830, he had a succession of apoplectic attacks, amounting in all to twelve. After these attacks, he was generally able to leave his room in a few days, but each left him more and more embarrassed in his speech, and paralytic on the left side, with distortion of the mouth; and he died in the 12th attack in 1830, after an illness of eight or ten days, during which he lay in a state of nearly perfect coma, with total loss of speech, and perfect palsy of the left side.

"*Inspection.* On removing the dura mater, a remarkable depression was found on the surface of the right hemisphere, forming a deep and well-defined cavity, capable of containing from three to four ounces of fluid. It had been filled by a clear serous fluid, which escaped when the dura mater was wounded in opening the head. The surface of the cavity presented nothing different from the ordinary appearance of the cerebral surface, being covered by the pia mater and arachnoid; but the dura mater had been separated by the fluid which had filled the cavity. On cutting into the cerebral substance which formed the cavity, it was found more dense than natural, and a cavity was exposed in the substance of the hemisphere immediately beneath it, presenting the usual appearance of the collapsed cyst, which had been the seat of extravasation. It was about an inch and a half in length, lined by a yellow membrane of the usual appearance, and part of it was obliterated by the adhesion of its opposite surfaces. Several other very small cysts were observed in various parts of the hemisphere, but they were all empty, and no appearance could be discovered capable of accounting for the fatal attack." (P. 267.)

This case is likewise printed in the Edinburgh Medical and Surgical Journal, where Dr. Abercrombie has added the following remarks, which do not appear in the work before us. "The leading peculiarity of this case is the remarkable cavity on the surface of the brain, produced by actual loss of cerebral substance at the part which covered the apoplectic cyst. It presents another fact of some importance, namely, the most distinct approach that I have seen towards an obliteration of the cyst by the adhesion of its opposite surfaces. The French writers describe the cysts as being entirely obliterated in this manner. I was formerly disposed to

doubt the accuracy of these observations; but, in this case, about one half of the cyst was obliterated, and there did not appear anything to prevent the obliteration of the remainder." (*Ed. Med. and Surg. Journal*, No. cxxi. p. 255.)

Should any of our readers have lived so far from the centres of medical science as to be unacquainted with this work, we recommend them to procure it immediately; for, to those who wish to be on a level with the knowledge of the age, Dr. Abercrombie's Pathological and Practical Researches are not merely useful, but necessary.

Clinical Lectures in the Manchester Royal Infirmary. By EDWARD CARBUTT, M.D.—London, 1834. 8vo. pp. 407.

THE author of this work appears to be a diligent physician, who, having ample opportunities of improving in the practice of physic, does not suffer them to pass by, and will one day, we trust, become an eminent master of the art. At present, Dr. Carbutt is haunted by the fear of gastro-enteritis to a degree which is perfectly astounding; for this Gallic generalization comprehends, with him, not merely dyspepsia, and fever, and other such diseases, where this inflammation of the digestive tube might make out a decent claim to prior possession, but he thinks gastro-enteritis entitled to lord it over hydrophobia, delirium tremens, and diabetes. Nay, more; phthisis depends on the same unsuspected cause.

"Gastro-enteritis accompanies or fatally terminates some diseases; as is seen in patients who die of phthisis, who are almost always carried off by a colliquative diarrhœa, and who, upon being examined after death, are found to have had the mucous membrane of the alimentary canal inflamed and ulcerated. I am inclined to think that, in these cases, the gastro-enteritis is the primary disease, and that it gives rise to the phthisis somewhat in this manner. You know that gastro-enteritis is a very insidious, obscure, and lurking disease. Well, we will suppose a patient with delicate and irritable lungs to labour under an unsuspected gastro-enteritis for several months; this produces cough in the manner explained already at page 15. This cough irritates the lungs, produces increased expectoration, inflammation, tubercles, and abscesses; in short, phthisis. This disease attracts the attention; the gastro-enteritis is quite overlooked until the colliquative diarrhœa comes on, and even then the patient is said to have died of phthisis with diarrhœa, the existence of gastro-enteritis being never suspected from the beginning to the end. We had a patient of the name of Peacock, who died in this manner in this house, two years ago; upon examining his lungs, after death, we found comparatively little disease in them, although most people would have said the man had died

of phthisis: but his stomach, duodenum, ileum, colon, and rectum, were both inflamed and ulcerated. The ulcers were so numerous, that the best mode of giving you an idea of them, is to ask you to conceive a vertical section of a bunch of grapes. Our worthy house-apothecary, who had conceived the disease to be pure phthisis, told me, after the inspection, that he had never been more surprised in his life. The man, in fact, died of gastro-entero-colitis; for which disease I had treated him." (P. 24.)

We are surprised at the surprise of the worthy house-apothecary, and doubly surprised at our author's saying that in such cases the existence of gastro-enteritis is never suspected from beginning to end. The fact that phthisis, in its last stage, is very often complicated with ulceration of the bowels, is now familiar to every one: we believe that it was first pointed out by Dr. Thomas Young, in his Treatise on Consumption, who mentions that it had been observed by Dr. Nevinson. A little further on, our author says,

"Every man who is intoxicated has, at the time, and for a number of hours afterwards, a gastro-enteritis, which is shown by his great thirst, burning pain at his stomach, nausea and vomiting, headach, pain and weariness in his limbs, his loss of appetite, and the lowness of his spirits. Give him absolutely nothing to eat, and nothing to drink except cold water, and let him lie in bed, and he speedily recovers. Hence we have a hint for the treatment of gastro-enteritis. Abstinence and repose." (P. 26.)

True, if the case be one of real active inflammation; but this is comparatively rare. In a very common class of dyspeptic cases, where there is a regurgitation of bile into the mouth, we may take a different hint for the treatment from our author's illustration of a drunken man: we may give an emetic.

We extract the following case, partly because it is very short, and partly to show the zeal with which our author presses everything into the gastro-enteritic service.

"Gastro-enteritis chronica; form, hysteria. 1st July, 1833. Mary Booth, aged twenty-five years, unmarried, works in a cotton-factory. Has been ill two years. Says she has never felt well since she bathed at Liverpool. She now complains of a sinking, as if she were going to faint. This is generally relieved by eating. Her appetite is rather increased than diminished Tongue rough, and slightly red at the tip and edges. Is much troubled with wind. Bowels regular. Pulse weak. Has occasionally pain in the back, hips, thighs, legs, and calves. No pain in the epigastrium on pressure. Has been troubled with unpleasant dreams. Catamenia regular.—Common poultices to the epigastrium and belly. To lie in bed. Rice diet, biscuit, and barley-water. Castor-oil occasionally.

"2d. Is much better. Slept well. No sinking.
"3d. Tongue clean. Pulse stronger.
"4th. Has been troubled with globus hystericus.
"5th. Much better.
"6th. No complaint.
"13th. Had an hysteric fit this morning, which subsided, upon her being threatened with the affusion of cold water.
"14th. Has no unhealthy symptom. A bucket of cold water is kept in readiness, but she has had no recurrence of the fit.
"15th. Discharged cured.
"*Observations.* Much will not be required to be said on this case. I would, however, just call your attention to the fact of the great efficacy of the fear of an effusion of cold water, in removing or preventing the hysteric paroxysm; and I can assure you, from much experience, that if the fear be so efficacious, the real affusion is still more so. It is, in fact, an infallible remedy; the principal objection against it being that females are exceedingly averse to it, and do not like to be cured of hysterics in this manner. I have never known but two females of the better class of society who took this remedy in really good part. You must therefore be guided by circumstances, and cure your patient either by this ready, infallible, and radical remedy, or go on for weeks, with aloes, assafœtida, valerian, castor, and ether, accordingly as you judge your patient and her friends will be the better pleased." (P. 54.)

Surely there were no marks of inflammation here, though we are aware that "chronic" inflammation is a drag-net that will hold most fish. Poor Mary Booth was an overworked factory-girl, sinking under the slavery of a cotton-mill, and a fortnight's repose in the Infirmary did wonders for her. The cold affusion is an admirable remedy in hysteria, and our author's observations upon it show the practised physician.

As it is well to have a choice of remedies, it is useful to know that hysterical patients usually have a tender spot in the spine; and, if this be blistered, they are much relieved: for this fact we believe that pathology is indebted to Dr. Griffin.

The next case is also called one of chronic gastro-enteritis; and the following is the first day's report and prescriptions.

"Elizabeth Schofield, aged thirty, married, and a weaver, has been ill eighteen months. Her complaint first came on with pain in the stomach, accompanied by pains in the back, shoulders, arms, thighs, and legs, rendering her unable to stand or follow her employment. Headach. Sleep disturbed by alarming dreams. Tongue streaked with red and white. Great thirst, calling for frequent draughts of cold water. Unpleasant taste in the mouth. Bad appetite. Bowels costive. Much wind. Skin moist. Pulse 110, weak. No catamenia for seven weeks.—Ten leeches to the epigastrium. Poultices afterwards. Castor-oil occasionally. To lie in bed; and take rice-diet, biscuit, and barley-water." (P. 56.)

In cases of this kind we should recommend an emetic on the first day, and afterwards something of this kind:

℞. Aq. Menth. Pip. ℥viij.
Rhei pulv. ʒss.
Zing. pulv. ℈j.
M. sumat coch. iij. majora ter in die.

This prescription is of course intended for institutions where the most rigid economy is a matter of dire necessity: under more favourable circumstances, it would be neater to substitute the Inf. Rhei and the Tr. Zingib. The mixture, however, as given above, has been prescribed by us innumerable times, with almost undeviating success. On the twenty-fifth day of this case, we find that the patient felt very sick, and vomited a small quantity of bilious matter. Was not this an instance of Nature's asking, in the plainest terms, for Ipec. rad. pulv. ℈j.?

There is in the book a case of ague treated by the endermic method. A blister was applied to the abdomen, and the vesicated surface being daily dressed with ten grains of sulphate of quinine, a cure was effected in five days.

In his observations on a case of turgescence of the spleen, Dr. Carbutt observes,

"If this man had not been affected with gastro-enteritis, I think he might have been cured by a liberal use either of the real Cheltenham water, or of an imitation of it. We come near enough in the imitation, if we dissolve two grains of sulphate of iron, four drachms of sulphate of magnesia, and four drachms of sulphate of soda, in a pint of water, and add twenty or thirty minims of tincture of iodine; this quantity to be taken every twenty-four hours, using reasonable exercise in the meantime. However, I was obliged to content myself with giving him tincture of iodine and laudanum, for his principal complaint, and the hydrargyrum cum cretâ with opiate confection for his diarrhœa, and some affection of the liver, under which he evidently laboured.

"The patient was very little benefited; and, if I must speak my candid opinion, I am inclined to think that his complaints will never be removed." (P. 198.)

Now it seems to us that this man might have ingurgitated his pint of imitation-Cheltenham water per day with the greatest safety, in spite of his gastro-enteritis, especially if our author had made a closer approximation to the real one; for it appears, by the following quotation, which he gives soon afterwards, that iodine exists in Cheltenham water in the proportion of a grain, not in one pint, but in ten or more gallons.

"'It seems not improbable,' says Dr. Daubeny, Professor of Chemistry, at Oxford, 'that very minute portions of certain principles may act upon the system with an energy commensurate, not to their own quantity, but to the change their presence occasions in the properties of the more inert ingredients that accompany them. In this manner we may explain the powerfully tonic effects of certain springs containing a very minute impregnation of iron; the cures effected by waters, such as those of Loueche or Gastein, which appear to approach as nearly as possible to absolute purity; and the efficacy in glandular disorders attributed to certain others, in which a minute proportion of iodine or bromine has been detected. In a memoir read before the Royal Society, on the saline and purgative springs of this country, in which I stated the proportions of iodine and bromine present in each, I expressed myself as being sceptical with regard to any medicinal agency that could be exerted by so small a quantity as one grain of iodine diffused through ten gallons of water, the largest quantity in which I had ever detected it. The considerations above stated now induce me to attach more importance to the circumstance of its presence, for it is just as possible, *à priori*, that this quantity of iodine should infuse new properties into the salts which accompany it, and cause them to act in a different manner upon the system, as that less than a millionth part of potassium should create so entire a change in the relations of a mass of mercury to electricity. Whether the waters of Cheltenham or Leamington affect the constitution differently from solutions of glauber-salt of similar strength, must be decided by the experience of those on the spot; but, granting this to be the case, and there is not wanting testimony in favour of such an opinion, the discovery of these new principles in several of them may serve to explain their superiority.' (P. 202.)

Our author's lecture on Dropsy, from p. 244-274, is very instructive; and so are the cases which follow it. He says, that when a patient has taken as much mercury as he can well bear, a small dose of aloes should be frequently repeated through the day, and will have the same effect in restoring the healthy action of the liver. Thus, at p. 276, Margaret Kearney is ordered to take two grains of Pil. Aloës cum Myrrhâ every hour whilst waking; and at p. 310, Sarah Holland is ordered to take three grains every hour, with the same limitation.

The work terminates with observations on Diabetes, and a number of cases; and, as they are not very common, we will give a brief abstract of each.

Cases of Diabetes insipidus.

John Wright, a labourer, æt. sixty-four, was admitted the 19th of June, 1833. The first day his drink amounted to five

pints, his urine to nine; its specific gravity being 1006. The quantity of urine was brought down to two pints; but he died on the 3d of July, of ulceration of the stomach and intestines. The kidneys were mottled and granulated.

Hannah Wardle, a sempstress, æt. forty, was admitted August 12th, 1833. Her drink on the following day amounted to twenty-eight pints, and her urine to thirty; on the 16th she drank seventy pints, and passed sixty. She was discharged, relieved, December 9th, when her drink amounted to ten pints, and her urine to nine.

John Ogden, a weaver, æt. sixty, was admitted on the 16th of December, 1833. At first, he passed eight or nine pints of urine daily, of the specific gravity of 1009. He was going on very well, and the quantity was reduced to seven pints; when he was carried off by a paralytic attack, a little more than a fortnight after admission. He had been subject to fits, probably epileptic, for some months.

Richard Rice, a boy, æt. seventeen, working in a cotton-factory, was admitted on the 11th March, 1834. The quantity of urine voided was then nine pints, of the specific gravity 1008. The urine was very soon reduced to five pints a day, of the specific gravity 1005. Rice had been in the house a short time before, labouring under the same disease, and had been discharged relieved.

Dr. Carbutt observes, "This is a case of successful treatment of the insipid diabetes. The patient had the sulphur bath and the vapour bath, the compound powder of ipecacuan, leeches to the stomach, and castor-oil when required. When he was finally discharged, his urine contained a plentiful quantity of urea." (P. 398.)

The remaining cases are all of Diabetes mellitus: we shall throw them into the form of a table, to save room.

Patient's Name.	Age.	Pints of Urine passed when admitted.	Result.
Wm. Grimshaw ...	37	21 ...	Much relieved in three months.
Francis Isdale ...	51	20 ...	Cured in two months.
Thomas Blackwell	17	15 ...	Relieved in four months.
Hugh Capstick ...	39	8 ...	Much relieved in a month.
Henrietta Wilson ...	39	12 ...	Died in a week.
Hannah Lees ...	38	15 ...	Slightly relieved in seven weeks.
Mary Kay ...	35	25 ...	Relieved in three months.
Ann O'Neale ...	26	17 ...	Died in three months.
Joseph Taylor ...	39	14 ...	Much relieved in two months.
Henry Bentley ...	6	27 ...	

It is not stated whether this last patient died or not; but Dr. Carbutt mentions his want of success in treating the case, and attributes it to the child's delicacy, which contraindicated

bleeding and leeching. His weight however increased, during his three months' stay in the Infirmary, from thirty-five and a half to thirty-eight and a half pounds, while the quantity of urine passed in twenty-four hours decreased from twenty-seven to seventeen pints. Our author bleeds and leeches in this disease, but prescribes opium and the warm bath, like other people.

This book is the work of a sensible, painstaking, and very candid practitioner: we recommend it to our readers, especially our younger ones.

The Principles of Ophthalmic Surgery; being an Introduction to a Knowledge of the Structure, Functions, and Diseases of the Eye, embracing New Views of the Physiology of the Organ of Vision. By JOHN WALKER, Assistant Surgeon of the Manchester Eye Institution, &c.—London, 1834. Foolscap 8vo. pp. 195.

MR. WALKER is already known as the author of a small pamphlet, containing some original and ingenious views on the Physiology of the Iris; and the present publication will show that he has paid no less attention to the diseases than to the functions of the eye. This treatise, however, is so succinct, that it can only be looked upon as a compendium, excepting on a few topics, into which the author has entered at more length perhaps than is consistent with his general plan; but, as all his observations are those of a clever and thinking man, we tender him our thanks for his digressions, as nothing is a drier task than wading through, month after month, elementary treatises, scarcely varying in anything but the expressions in which they are couched.

The first point to which we shall direct our reader's attention is Mr. Walker's treatment of *purulent ophthalmia.* After describing very briefly the symptoms and causes of this disease, and mentioning the opposite plans of treatment that have been proposed by different writers, he thus proceeds:

"If the former line of treatment [*i. e.* the antiphlogistic,] be adopted, it is evidently applicable only to the first stage of the disease. In strong, plethoric persons, where the inflammatory action runs high, and is attended with febrile excitement, no possible harm can result from one moderate bleeding; but, to carry it to the point recommended by some persons, is exceedingly absurd, inasmuch as it will be highly injurious to the constitution of the sufferer, rendering it less able to struggle successfully through the after-stages of the complaint, or to repair the mischiefs which frequently result from it. My experience of this disease has led me

to conclude that the subjects of it are not usually of that description in whom we should willingly order very copious venesection; indeed, the constitutional disturbance has never been at all marked; if anything, rather depressed than excited: in short, my impression of the disease is, that it is strictly local, and that it should be treated as such. If, therefore, the loss of blood be necessary, it appears to me that the local abstraction of it is to be preferred, and that it will be best effected by the application of a moderate number of leeches placed upon the eyelids, the drain from which will have a tendency to lessen the congestion of the vessels: that this practice will be often useful, I have no doubt. Counter-irritation by blisters, &c. may be of some benefit, but is not likely to influence the disease to any extent.

"The tartar-emetic seems admirably adapted to depress still further a state of constitution, which will soon be sufficiently depressed without it. Useful as this remedy may be in acute internal diseases, I should no more think of using it here than in any other ordinary local affection.

"That the antiphlogistic plan of treatment is inefficient, will appear from the want of success attending it. Dr. Vetch, who took fifty or sixty ounces of blood from patients affected with this disease, reports, that fifty cases, out of six hundred and thirty-six, lost the sight of both eyes, and that forty more were blinded in one eye, and this under every advantage, the patients being soldiers in a military hospital, and of course under strict surveillance. Most writers who advocate the antiphlogistic treatment, are compelled to admit that, in spite of its being employed most energetically, the disease will frequently terminate in destruction of the eye. I have myself seen many instances, where it has been duly followed up, in which it has completely failed to influence the progress of the disease, which has gone on to the destruction of both eyes. If therefore it has failed in the hands of individuals who have used it fairly and promptly, how much more likely is it to do so in those of practitioners in general, who in this disease seldom have recourse to more than half measures. The hundreds of people, old and young, who are constant victims of this destructive malady, speak, in a language that cannot be misunderstood, that our plans of treatment are anything but effectual in combating it; and, as the antiphlogistic (or something which goes under this name,) is the plan usually adopted, upon it only can we lay the blame, which attaches somewhere.

"If, on the other side of the question, we examine carefully the result of the stimulating treatment, we shall have ample reason to conclude, that, as the affection itself is a local one, so the remedies may be strictly local also. Dr. O'Halloran, who, as an army surgeon, had extensive opportunities of treating this disease, having become dissatisfied with his want of success from the antiphlogistic treatment, began the use of sulphate of copper applied to the inner surface of the lids, or dropped into them a ten-grain solution of

nitrate of silver, which he generally repeated daily. He expresses his opinion that bleeding is unnecessary, and says that he has treated hundreds of cases with the stimulant treatment, and always with the greatest success.

"Mr. Guthrie has been very successful with an ointment in which the nitrate of silver is the prominent ingredient, and which is placed with a spatula or brush between the eyelids, so as to come in contact with the conjunctiva. Dr. Ridgway appears to have been the first to recommend the nitrate of silver in solution, in these cases.

"Feeling a similar dissatisfaction with the antiphlogistic plan, I resolved to have recourse to the stimulating treatment, in the very first case I had under my own exclusive care. I was of course aware that it had been used before; but, independently of that knowledge, this case immediately struck me as the one for this treatment. In a paper published in the Lancet, I gave a detailed account of the case, in which I had recourse to the nitrate of silver in substance, applying it to the inner surface of both eyelids once a day for the first week, and afterwards every second or third day, until the morbid state of the parts had disappeared. I have used it since then in many instances, in all ages, and in every stage of the complaint, with the most gratifying result. It can be applied with much greater facility than any liquid or unctuous substance. It is simply necessary to separate the lids, when eversion is sure to take place, and the pencil of the nitrate of silver is drawn lightly across the conjunctiva, which is but the work of an instant. The pain is not so severe as many persons may suppose, and soon subsides. The name, which is sometimes given to this substance, of *lunar caustic*, seems to have constituted it a complete bugbear. Its application is from this cause contemplated by some with a degree of horror, for which there is not the slightest occasion. It is in truth no caustic; for no destruction of surface, or at all events very slight, and consequently no cicatrization, ever results from its use.

"Little else need be done. Attention to cleanliness, and the frequent washing out of the matter from the surface of the eye, with a solution of alum or sulphate of copper, with attention to the general health, as may be required, constitute the essential points. It must be remarked, that, under the best kind of treatment, a certain period will elapse before the diseased action subsides. This will vary according to management, but in severe cases it will seldom be under six weeks." (P. 21.)

From this, our readers will perceive that our author is a warm opponent of the antiphlogistic treatment of these affections, and a no less sturdy champion of the stimulating plan; for, where other surgeons use a solution of nitrate of silver, he would recommend the substance. For our own parts, we are partly inclined to agree, and partly to differ, from his views: like him, we think the disease local, and,

like him, we would apply our principal remedies locally; but we have seen so much benefit arise from the copious and frequent application of leeches to the eyelids, that we should be loth to resign their use, or even to employ them as sparingly as the author advises. With regard to the nitrate of silver, we believe it to be principally useful when the vessels have become relaxed by the continuance of the distension, and in such cases we would join our author in ascribing extraordinary powers to it; but we would mention a single case, that will tend to show that this disease is to some extent under the power of constitutional remedies. It fell to our lot to witness the practice of a surgeon, who had a very unusual method of treating affections of the eye. A patient came under his care, with a very severe attack of purulent ophthalmia, supposed to be produced by the contact of gonorrhœal matter, as he was at the time suffering from that disease. The eye was greatly swollen, the pain was extreme, and the conjunctiva so vascular, that it scarcely resembled the membrane usually known by that name; and there was considerable chemosis, especially about the edge of the cornea, which was injected with red blood, and showed signs of incipient sloughing. A few leeches were applied to the eye, and a draehm of the Vinum Colchici was exhibited three times a day. The next day the sloughing of the cornea was no longer equivocal, though the eye was somewhat less swollen. No more leeches were now applied, nor any other local treatment employed: the colchicum was continued; the slough of the cornea came away, but proved to be superficial; ulceration, however, went on, deeper and deeper, until the remaining layer was so thin as to begin to project, but the conjunctiva had become less vascular and swollen. Meanwhile the colchicum was acting violently, and the patient was greatly reduced by the vomiting and purging. Here then the disease stopped: this thin layer of the cornea never ulcerated through; cicatrization took place under the moderated use of the remedy, and, contrary to the expectation of every one who saw him, the patient perfectly recovered his sight, as the contraction of the cicatrix entirely removed it from the sphere of vision. We do not quote this case as a specimen of good surgery; but it evinces so satisfactorily the power of constitutional remedies over the disease, that it can scarcely be expedient to omit them, whatever may be our local treatment.

When ulceration or sloughing of the cornea has taken place in this affection, Mr. Walker recommends the application of nitrate of silver once or twice a day. We have never

used it in substance, but can speak highly of the good effects of a strong solution, in these cases.

While speaking of the uses of the eye generally, our author makes some brief observations on the nature of light, which are not remarkable for the closeness of their reasoning. Thus, he says, "When we consider that it is not merely the medium by which other objects are seen, but that it is itself visible, and that it has also the property of not merely exciting, but irritating the eye, we are naturally enough led to believe that it is a real, material substance." (P. 42.) Let us make an application of a similar argument to the ear, thus: When we consider that sound has not only the power of exciting and irritating the ear, but that it may rupture the tympanum, and produce disorganization of structure, is it possible to believe that sound is not a real, material substance? We have no doubt that Mr. Walker would attribute these phenomena to the vibrations of the air; why not, then, the less marked effects of light to "certain undulations, communicated by luminous bodies to an ethereal fluid which fills all space." We do not pretend to settle the question of the nature of light, which has perplexed philosophers from the commencement of the world, and will most likely continue to do so till its end, but we cannot permit such loose talk to pass current as scientific argument; nor do we think that the author makes a better figure, while drawing an analogy between the opening and closing of flowers, and the natural tendency to keep the eyes open during the day, and closed during sleep: yet some of our brethren may feel grateful to him for so good an excuse for lying in bed late in the morning as the following passage will afford them; for, what use can there be in struggling against their vegetative nature?

"The tendency to close that the eyelids evince when in a state of darkness, and that to expand under the influence of light, may be considered, then, as bearing a striking analogy to the corresponding phenomena noticed in certain productions of the vegetable world.

"In the eye, a moderate degree of the stimulus of light seems to cause expansion; whilst an excess, as well as an absence, produces the opposite effect. It is well known that we are much more prone to sleep in dark winter mornings, and the reverse. It is the same in dull days: we feel a heaviness of the eyes and contiguous parts; and, to arouse ourselves into exertion, we employ friction over the face and eyebrows, as well as the eyelids, in order to stimulate the branches of the fifth pair, which are insufficiently excited by the diminished supply of light." (P. 44.)

The following observations, however, are of a very different stamp; and, for our own parts, we think that Mr. Walker's physiological views on the eye's sensibility to light are correct, and shall quote them, for the benefit of our readers.

"It has been the custom, however, to consider the retina as peculiarly the seat of sensibility to light; but many facts go to prove that this sensibility is not dependent upon the retina, but is derived from the fifth pair of nerves. In a case of disease of the fifth pair, where the taste, feeling, and voluntary motion, were all impaired, this sensibility to light was gone, although vision, the function of the retina, remained entire; and in paralysis of the retina, it is not unusual to observe this sensibility to light remaining. In M. Magendie's well-known experiments, after division of the fifth, he found the eye of the animal insensible to the stimulus of light. Hence he was led to imagine, that vision was destroyed by that injury, which was certainly a great mistake, arising from his not having made this distinction between sensibility to light and vision, two very different properties. Those experiments proved that the fifth has great influence over the eye; but to infer, as Magendie did, that it is therefore the nerve of vision, was carrying the induction farther than the premises warranted.

"Some individuals, supposing that this sensibility to light resided in the retina, have been unable to account for its possessing this quality, seeing that it has no connexion with the nerve of sensibility; hence Dr. Macartney was led to predict, that one day or other a branch of the fifth would be discovered penetrating to the retina. At present this prediction remains to be fulfilled.

"If the retina be sensible to the stimulus of light, and the contraction of the pupil be for the purpose of defending it from this stimulus, we might expect that, where no iris exists, a not unfrequent congenital deficiency, the intolerance of light would be extreme; whereas I should be inclined to say, from an instance I have myself observed, that it is imperfection of vision from the optical deficiency, rather than dread of light, which is experienced.

"The same may be said of the Albino. I recollect once asking a person of this description, whether the light was not very painful to her; it was a sunny day. Her reply was, 'No, it does not hurt me, but I cannot see so well." The terms, intolerance of light, and indistinctness of vision, are often used as synonymous, when speaking of these individuals. It is the optical deficiency which inconveniences them.

"In ordinary inflammation of the external parts of the eye, whether it arise from a particle of dust, or any other cause, and where the retina cannot possibly be affected, there is the greatest intolerance of light; whilst, in the most destructive internal inflammation, there is generally infinitely less dread of light, and sometimes none at all. It may be mentioned, as confirmatory of this view, that the pain in the eye, eyebrows, and head, which accom-

panies ophthalmia, is always diminished, by lessening the supply of light to the individual; and that the pain felt is always in those parts which are supplied by branches of the fifth.

"Persons who, from their occupation, expose their eyes to a strong glare of light, and others who inhabit high northern latitudes, such as the Tartars, where the light reflected from the snow is very injurious, producing what is termed snow-blindness, and which consists not in amaurosis, or affection of the retina, but in inflammation of the external tunics, are in the habit of defending the external parts of the eye by a frame, with a central aperture for the light to get to the retina. It is quite evident that the object of such individuals is to defend the sensitive, exterior portion of the organ, whilst as much light as ever must pass through the pupil to the retina. Indeed, if it be the retina that requires to be defended, the closure of the pupil must be the only effectual relief in these instances,—a process which would be incompatible with vision, and which never, under any circumstances, takes place.

"This view is further strengthened by the fact, as stated by the best authorities, that certain mammalia and reptiles, in whom the eye is in an imperfect, rudimentary state, and who have no optic nerve, and consequently no vision, have nevertheless a sensibility to light, which they receive from the ophthalmic branch of the fifth pair, the only nerve which enters the eye; such are the mole, shrew, mus capensis, proteus, &c. Many of the zoophytes also exhibit distinct indications of a sensibility to light, without the slightest trace of an organ of vision. In the annelida a near approach to an optical apparatus is found, but in so simple a form, that it is believed they possess merely a sensibility to light, and have no perception of objects.

"Thus it appears evident, from all these facts, that sensibility to light and vision are two distinct attributes, possessed by different portions of the organ of vision; that they are independent of, and may exist without, each other; and that the sensibility to light exists in the exterior of the organ, and is derived from the fifth pair, whilst vision is the function of the retina through the optic nerve." (P. 44.)

The above passage is a good specimen of the author's powers: as a piece of reasoning, the facts are clearly stated and well arranged, and, in our opinion, the conclusion is correctly deduced.

Mr. Walker is of opinion that near-sightedness depends upon an unnatural contraction of the pupil, and on an inability to accomplish its full dilatation. It is well known, indeed, that the pupil contracts when viewing a near object, and dilates when the eye is fixed on a more distant one; and any one who has read Dr. Roget's beautiful detail of his own case, as published in Mr. Travers's work, will probably be inclined to attribute the power of adjusting the organ of

vision to different distances, partly, if not principally, to this contraction. But we cannot understand what the author gains by the mis-statements of the effect of glasses.

"In looking at remote objects the pupil always dilates, and the eyelids separate, to collect the rays from the distance. In near-sighted persons this is not sufficiently effected. The concave glass remedies this defect, by collecting the more distant rays, and, by converging them, allows their entrance into the pupil.

* * * *

"Some individuals are able to see objects at considerable distances with distinctness, but find it difficult to discern near objects. To this state the name presbyopia is given. It is attributable to a want of proper contractility of the pupil, a process which always takes place in changing the eye from a distant to a near object. The opposite kind of glass, viz. the convex, is suited to this condition, for reading or looking at any near or small object, which has the property of representing these objects more distinctly, which it does by diverging the rays of light." (P. 66.)

We imagined that every schoolboy who had ever burnt a hole in his hat by means of a convex lens, was aware that, by its means, he collected the sun's rays into a focus, and that the reverse was accomplished by means of concave glasses.

We would willingly follow our author through all his arguments concerning the use of the iris, but the subject is extremely complicated; and a successful attempt to unravel it would require more than the limits of a review. Suffice it to say, that he is a believer in the muscularity of its structure, and that his opinion is founded upon the appearance of two sets of fibres which it frequently presents, and upon the fact of its being supplied with branches from a motor nerve. He affirms that the contraction of the pupil does not depend upon its sympathy with the retina, but with the third and fifth nerves. His reasons are as follows: 1st. As yet no connexion has been traced in the dead body between the ciliary branches and the retina. 2dly. In many cases of paralysis of the retina, and in perfectly opaque cataract, the iris remains active. 3dly. A dilated and motionless pupil sometimes occurs without loss of vision. 4thly. In sleep the pupil is contracted, though the retina is not excited. The principal objections which we have to urge against these statements are: 1st. The generality of cases of perfect amaurosis are attended by dilated and immoveable pupil, as it is this which gives the peculiar expression to the countenance of an amaurotic patient. 2d. When a pupil is dilated without disease of the retina, it is generally in consequence of disease of the iris itself. 3dly. Too little is known of the

state of the nervous system during sleep, for any argument to be founded on the contraction of the pupil in that state. Lastly: It has been found by physiologists (and Mr. Walker does not pretend to deny it,) that the iris itself is insensible to light, as long as light is prevented from impinging on the retina.

Again, our author is of opinion, that the iris is connected by sympathy with the palpebræ, or, to use his own words, "that the sympathies and relations of the iris are with the palpebræ, and not with the retina;" and he adduces various circumstances as reasons for this hypothesis. 1st. They are supplied by the same nerves. 2dly. When the fifth nerve is divided, both iris and palpebræ are paralysed. 3dly. In certain cases of disease, in which there is a constant twitching and closing of the eyelids, there is also a rapid contraction and partial dilatation of the pupil; and, 4thly. That in the lower animals the iris is active in proportion to the perfection of development of the eyelids. Doubting, as we do, the first steps of Mr. Walker's argument, viz. that the sympathy of the iris is not with the retina, we cannot be expected to enter into any discussion upon these other statements in support of his hypothesis; but we may mention, *en passant*, that we have seen an instance of tremulous iris, in which there was no peculiar irritability of the palpebræ; nor do we think it surprising, that, in proportion as the eye is more perfectly developed, the action of its various parts, and of the iris amongst others, is likewise perfected; so that, we confess we are yet far from our author's conclusion, that the iris is but an internal eyelid.

Having thus completed our notice of the more interesting portions of the work, we think it due to our readers, and the author, to present them, before closing the book, with a specimen of the manner in which the diseases are treated of: and we open, as hazard directs us, on *Retinitis*.

"*Inflammation of the Retina. Active Amaurosis.*—Increased vascular action of the retina may vary in extent and severity, from simple turgescence or congestion, to the most active inflammation, which may be followed by deposition, or change of its structure, opacity, and even ossification, as is seen in some of the other textures of the eye, but which is not so visible here. It frequently arises suddenly, proceeds rapidly, and may destroy vision in a very brief period.

"*Symptoms.* The most important of these, and the one which first and most forcibly strikes the attention of the patient, is impaired vision, which may exist in various degrees, from slight dimness and obscurity, to complete and total blindness. Frequently

also pain is complained of, deep in the orbit, sudden and severe darting into the head and neighbouring parts with a sense of confusion and giddiness of the brain. This however is by no means a constant attendant, as in the worst cases there is sometimes a total absence of suffering, particularly after the disease has existed some little time. Flashes of fire, and objects sometimes black, like flies, (*muscæ volitantes*,) at others red, sparkling, and variegated, are seen floating before the eye, with confusion, and change of form in surrounding objects. On looking into the pupil, we often observe, instead of the natural shining or brilliant black, a dull lack-lustre appearance, sometimes approaching to a grey colour, with an inactive, sluggish, or motionless state of the iris, frequently accompanied by a change in the shape of the pupil, which is oval, or still more irregular. The pupil is not always dilated, particularly at the onset of the disease, or, in the case of one eye only being affected, the iris often sympathising with the free action of its fellow. The impaired function of the iris is to be attributed to the extension of the diseased action to its structure, or from the ciliary nerves participating in, or being paralysed by, the inflammation of the contiguous membrane, the choroid, which we can hardly conceive to escape when there is any active disease of the retina. In the early stage there is sometimes intolerance of light, from the excited state of the organ, and occasionally this is the case in confirmed amaurosis; but more frequently in the latter, light makes no impression upon the eye, the patient not being able to discriminate between light and darkness.

"*Causes.* Frequent instances occur of active amaurosis arising suddenly, without any perceptible cause. Often it may be traced to direct causes, such as flashes of lightning, exposure to blazing lights and large fires, excessive use of the organ, particularly on minute or brilliant objects; intoxication, and general free living. More indirectly, the cessation of menstruation, suppression of hemorrhage, or other discharges, &c.

"*Treatment.* In the commencement very active measures must be resorted to, and those of an antiphlogistic kind. We must bleed largely from the arm, *ad deliquium.* This must be repeated in a short time, if no improvement takes place. Cupping, leeches, brisk purgatives, and counter-irritation, must follow, in quick succession, if we desire to check the progress of the affection. A pretty rapid use of mercury, so as to affect the mouth in a short period, or until the symptoms improve, is an essential part of the treatment of this disease. Perhaps this is the most important remedy. It should be used promptly and energetically, so that ptyalism be produced with as little delay as possible, when a restoration of the functions of the retina generally succeeds. A state of rest, with light diet, is to be advised, and the organ protected from light and other irritants, such as cold air, &c.

"If the attack be slight and the symptoms partial, or the patient feeble and delicate, the principle to act upon is still the same, but

must be more cautiously and moderately put into practice. Here a smaller bleeding, perhaps a few leeches, with purgatives, counter-irritants, and a mild course of mercury, must be adopted, with an attention to the general health, or other circumstances that may arise." (P. 94.)

From what we have said, our readers will perceive that this is no ordinary work. It is made still more useful by the addition of a vocabulary of ophthalmological synonyms, in several languages.

We think that the treatment of diseases of the eye is on the eve of receiving many and most important improvements; and we have no hesitation in predicting that Mr. Walker will be eminently successful in enlarging our knowledge of this most interesting branch of the art of healing.

Practical Treatise on Diseases of the Eye. By Wm. Mackenzie, M.D. *Second Edition.* London, 1834. 8vo.

It is somewhat more than four years since this work was presented to the profession; a second edition, in a new and more extended form, has now given us a double opportunity of congratulation,—to the author, on his well-earned reputation and success,—to our medical brethren, on the stand which ophthalmic medicine and surgery has of late taken in the ranks of British science.

It is needless to enter into a history of this subject, since, in the first number of our Journal, the question was discussed, in the review of Mr. Lawrence's treatise; yet we may remark that, considering the perfect organization of the eye, and the high intrinsic interest of the maladies to which it is liable, it is somewhat singular that the morbid conditions of this organ should not be made still further available to the general elucidation of pathology and therapeutics.

In the eye, and its adjuncts, we meet with almost, nay all, the tissues of which the organism is compounded, all the varieties of disease, all accidents to which these textures are exposed. Here we trace the commencement of inflammation, and its progress through all its phases, to destruction of the organ, or to cure. We have the effects of our remedial agents, and in some instances even the *modus operandi* of our plan, "oculis subjecta fidelibus." We see the tubercle of lymph, in iritis, eaten into as it were day by day, under the sorbefacient influence of mercury; the scattered fragments of a cataract disappearing, by the solvent action of the aqueous fluid; or the ulcer healing, as the inflammatory symptoms abate, and the constitution regains its tone. After all this

field of observation, shall we not be guided by those general principles which are demonstrated in the eye, in our application to the more obscure diseases of the concealed viscera? It is not for the eye alone that the investigation of ophthalmic pathology is so highly interesting, but, as in other sciences, we learn the unknown by the known, and the unseen changes which take place in the liver or the heart may be more than guessed at, from what we have observed in the eye.

In an organ which differs so little in actual magnitude, (for, what is called *a small eye*, often depends only upon the size of the palpebral fissure,) we think that the exact admeasurements, as given by our author, and the reference to a scale of Parisian lines with the division of our own inch (vide Plate 2, p. xxxiv.) is a circumstance of no little importance, especially as relates to some of the more delicate manipulations of the surgeon.

In speaking of the sclerotic coat, at p. xxii. reference is made to a serous membrane, more particularly described when mentioning the attachments of the choroid to the sclerotic: thus we find,

"This serous membrane, called *arachnoidea oculi*, is reflected from the sclerotica to the choroid, posteriorly, around the entrance of the optic nerve; anteriorly, behind the ciliary ligament; and at every place where a vessel or nerve passes from either of these tunics to the other. There being a great many of such vessels and nerves, especially at the back part of the eye, the cavity of the arachnoidea oculi is rendered less evident there than anteriorly." (P. xxiv.)

Now we remember to have read in some old authors how the tunics of the eye were expansions of the membranes of the brain, blown out as it were like a globule of melted glass from the end of a tube. Thus the dura mater gives us the sclerotic, the tunica arachnoides the membrane in question, and the pia mater the choroid, while the actual substance of the brain is to be found in the retina. We suspect, however, notwithstanding the elegance of this theory, that the "arachnoides oculi" is only a fine cellular membrane of connexion; and this is further confirmed by the examination of the fœtal eye, which, if placed in water, shows many fine flocculi adherent to the sclerotic and choroid coats, not dependent alone upon the ruptured extremities of nerves and vessels, as may more clearly be distinguished if the organ be previously injected with coloured size. That a serous membrane exists, however, adherent on the one part to the choroid, we do indeed believe; but then this is on the internal surface of the tunic, and is the membrane of the pigment on the one hand,

and the tunica Jacobi on the other. That this choroidal reflexion does not secrete the pigment, is proved by its existence in the albino; and that it terminates at the *ora serrata*, is, we think, well marked by the defined scalloped border of a more intensely coloured pigment. This colouring matter is, we apprehend, secreted *behind* the serous covering as regards the choroid; *anterior* to the zonula Zinnii in reference to the corpus ciliare; and *behind* the delicate membrane which lines the posterior chamber, as regards the iris or uvea, (*vide* p. xxvi and vii.)

The following is the account here given of that very interesting point, the so-called "foramen of Sömmering:"

"In the direction of the axis of the eye, the retina is raised into a small fold, which extends from near the temporal side of the entrance of the optic nerve transversely outwards for about two lines. Here the retina presents a spot, about two lines in diameter, of a fine yellow colour, deeper in tint at the centre than at the circumference, and about the middle of the spot, in a transparent point. These parts were discovered, in 1791, by S. T. Sömmering, who, considering the transparent point a hole, called it *foramen retinæ centrale*, and the yellow spot *limbus luteus foraminis centralis*. The appearances just described are found only in the human eye, and in that of quadrumanous animals. In the chameleon and some other lizards, there is a central point or hole, which appears continuous with the small fissure through which the rudimental pecten of those animals projects, a circumstance which goes to support the hypothesis that there is an analogy between the central point of the retina, and the fissure in the retina of birds, for the passage of the pecten. This hypothesis, first suggested by Professor Huschke of Jena, has its principal foundation in the appearances presented by the eye in the different stages of its development, but into which it would be foreign to our purpose to enter. There have been many opinions regarding the nature of the yellow spot. Dr. Ammon of Dresden, one of the latest writers on the subject, is of opinion, and in this he is joined by Dr. Arnold, that the yellow spot is owing to the black pigment changed in colour. That the pigment is there sometimes of a yellowish brown colour is true, but its tint is very different from that of the yellow spot; moreover, the pigment is separated from the yellow spot by the interposition of the membrane of Jacob. From examination with the microscope, it appears that the yellow spot of the retina is owing to yellow globules. In birds, the whole of the outer surface of the retina is covered by a layer consisting of yellow globules, the tint of which is deeper around the fissure of the retina which gives passage to the pecten. May not, then, the yellow spot of the human retina be a rudiment of that layer of yellow matter found on the outside of the retina of birds? This supposed analogy corresponds with that which has been mentioned to exist

between the central point of the human retina and the fissure in that of the bird, for the passage of the pecten. The analogue of the central fold of the human retina may also be found in that which the retina of the bird presents at an early period in connexion with the pecten." (P. xxviii.)

In the eye of a chameleon now before us, the central point or hole is at the distance of a line and half from the pecten, and there is no *fissure* continuous with it, but a double fold, which appears analogous to the fold of the human retina, in the centre of which the yellow spot is generally seen. In the eye of the human fœtus at the term, in which the fold is often very visible, and in two instances which we have attentively examined, the aperture penetrates the retina, properly so called, but not the tunica Jacobi. These preparations underwent no manipulation beyond the removal of a portion of the choroid and tunic of Jacob from the back of the eye; a transverse section being then made just behind the cornea, the vitreous body and lens fell out, leaving the fold and foramen perfectly distinct; a free ray of light now penetrates this aperture, exhibiting the reality of the perforation.

Although our author's anatomical introduction is very short, yet it is well put together, and contains much of what is yet but little known, and for which we are indebted to the minute labours of the German anatomists. Some of the more delicate structures, however, require farther examination, and the descriptions given should be verified by other observers.

In a work containing upwards of one thousand pages, the choice of subjects for comment becomes difficult, from their very abundance. Upon mature consideration, we think that the portion of the work dedicated to the examination of the more common maladies of the eye, is, for many reasons, the most deserving of our attentive study: principally, indeed, because the various permanent defects of this organ, as the results of disease, are all, more or less, dependent upon previous inflammatory action of some or other tunic. The treatment, moreover, of the different forms of inflammation, originating from specific causes, or modified by variable conditions of constitution, affords us a fair specimen of our author's powers of investigation, and of the talent and skill which he brings to bear upon his subject.

Dr. Mackenzie enters upon his account of ophthalmiæ in general, by mentioning the primary symptoms of inflammation, as "increased redness, unnatural heat, swelling, and pain;" and the secondary train, as "effusion of red blood, colourless blood or fibrine, adhesion, suppuration, ulceration, mortifi-

cation, granulation, and cicatrization." After these come the tertiary set of inflammatory phenomena, dependent upon the secondary, viz. "hypertrophy, atrophy, induration, softening, &c." From these data he proceeds:

"Inflammation, in whatever part of the body, and consequently in whatever part of the eye, it exists, may terminate in any of the processes now enumerated. It is also well known that the secondary and tertiary phenomena of inflammation are always modified, according to the structure of the part affected. Every different texture of the eye, as it possesses both physical and vital properties peculiar to itself, must suffer differently from these several processes of inflammation. In general, the modifications of inflammation, from differences of textures in the parts affected, are displayed with much distinctness in this organ: in some cases these modifications can be judged of only from their consequences, and by a very minute observation of the derangement which remains in the organization or in the function of the part which had suffered; while, in other cases, from the delicate texture of the part, or its hidden situation in the eye, the modifications in question may altogether escape observation.

"The conjunctiva, sclerotica, cornea, and iris, present a series of the modifications of inflammation to which I have just now referred, sufficiently distinct to convince the most sceptical of the truth of what I have been asserting, and sufficiently striking to rouse the most inattentive to research. The muco-cutaneous conjunctiva secreting a flood of purulent matter, as in the contagious ophthalmiæ,—the fibrous sclerotica affected for months with rheumatic inflammation,—the cornea losing entirely its transparency, becoming infiltrated with pus, or destroyed layer after layer by a penetrating ulcer,—the iris pouring out coagulable lymph, and this lymph forming the medium of morbid adhesions, so that the pupil is deprived of its natural power of expanding and contracting: these are facts in which are displayed some of the modifications of inflammatory action, more distinctly and strikingly than they are manifested in any other part of the body.

"There are other circumstances besides differences of texture which modify the inflammatory affections of the eye, rendering also this subject very extensive in the discussion, and causing the diseases to be occasionally very perplexing in the treatment. They are under the influence of peculiarities of constitution, and of constitutional diseases, and are subject to innumerable variations from the influence of sympathies. Scrofula, syphilis, and gout, are each of them capable either of exciting inflammation in different parts of the eye, or, at least, of communicating to an inflammation excited by other causes, such differences in character as often to render it difficult to recognize a disease with which we are well acquainted in its simple or idiopathic form.

"By the influence of local sympathy, inflammation of one tex-

ture of the eye never takes place, without extending in some degree to the textures with which the first affected is in contact; by the same influence an inflammatory disease originating in one texture of the eye shall be communicated to several of the other textures, the inflammation of the superficial tunics being communicated to those more deeply seated, and conversely that of the internal parts spreading outwards; and, while each texture obeys its own laws of morbid action, the whole organ in this way may become involved by what had at first a very limited existence, and perhaps a very trivial aspect." (P. 381.)

The term ophthalmia is indeed a very vague one, and of this every person must be convinced, from meeting with its use so constantly in the reports of various authors, without any definite meaning being conveyed to the mind of the reader. Thus, when Mr. Calvert (vide *Reflections on Fever*, 1815,) speaks of "cases of ophthalmia where 160 or 170 ounces of blood were said to have been taken (unsuccessfully, however,) in the space of three days," we are at a loss to know what particular form of ophthalmia it could have been to justify so dangerous a depletion. Our author very justly pursues the subject as follows.

"When we reflect, then, on the innumerable combinations which may take place among the inflammatory diseases of the eye, and the many causes by which these diseases may be modified, we shall be convinced, I think, that of all the subjects requiring descriptions and explanations of morbid actions and changes, there can be few more difficult than those diseases which have been swept together with so indiscriminating a hand under the name of *ophthalmia*. To consider these actions and changes individually, and only in a single texture of the eye at once, may seem to lessen the difficulty; for instance, to consider inflammation of the cornea, and to exhibit to ourselves in order, effusion of serum, effusion of coagulable lymph, secretion of pus, formation of abscess, ulceration, mortification, and cicatrization, according as each of these processes manifests itself in the cornea. But, to do all this, is to consider and to exhibit what never takes place separately in nature. Unless this be kept in mind by those who begin to study the inflammatory diseases of the eye, they will be not a little perplexed by the diversified complications of morbid phenomena which they will meet at every step of their progress.

"The knowledge of the inflammatory diseases of the eye has been greatly retarded by the practice of confounding them all under the name of ophthalmia, and thus overlooking both the seat of the disease, and the peculiar nature of the inflammation. The consequence of thus viewing all these diseases without discrimination, has been a method of treating them equally preposterous. In fact, in the practice of those who have had no opportunities of pro-

perly studying the diseases of the eye, one routine of remedies continues to be used in every case in which the eye appears inflamed; and it often happens that it is not till this routine is exhausted, and the eye, in some of its essential parts, becoming seriously disorganized, that a suspicion arises of there being something specific or peculiar in the case. Even from the slight view which we have already taken of this subject, it is evidently impossible that the inflammatory affections of parts so widely differing in structure and function as do those which are assembled in the eye, can be treated at once indiscriminately and successfully. We find, for example, that the remedies which in the course of a few days are sufficient completely to remove inflammation of the conjunctiva, only aggravate inflammation of the sclerotica or iris; while the plan of treatment which speedily cures sclerotitis or iritis, if trusted to in conjunctivitis, would expose the eye to almost certain destruction. Great advantages will accrue, then, from the adoption of an accurate classification of the ophthalmiæ. One advantage of no inconsiderable moment will be, that we shall conduct our examinations of the inflammatory diseases of the eye which may come under our care with much more accuracy than we could possibly do, were we to employ the vague nomenclature commonly used upon this subject. Having noted exactly the disease which is before us, we shall be able both to ascertain, to our own satisfaction, the effects of the remedies which we employ, and to communicate our experience to others, which, without a just classification and perspicuous nomenclature, it is utterly impossible to do." (P. 382.)

At the conclusion of this section we find a table of the varieties of inflammatory action in the different tissues of the eyeball, somewhat minutely divided as regards certain textures, and, as it appears to us, scarcely sufficiently discriminative in others. For instance, scrofulous conjunctivitis includes in this table all cases of phlyctenulæ and pustule. Now, this we think much too comprehensive, as there are undoubtedly cases in which these appearances exist without the scrofulous diathesis being present; and equally true is it, that the strumous ophthalmia, characterised by its most prominent symptom, intolerance of light, shall for months afflict the patient, without the remotest appearance of either.

In glancing over the history and symptoms of this disease, the scrofulous conjunctivitis, we find the following observations on the distressing photophobia almost invariably present during some part of its progress.

"The intolerance of light, in this disease, has by one author been regarded as depending on an affection of the retina, an idea which appears to derive some degree of support from the fact, that, in the dusk the patient is able to open his eyes, whereas were this

symptom dependent merely on the state of the conjunctiva, it would remain the same in obscure as in bright light, and be more marked in catarrhal than in phlyctenular ophthalmia.

"In one case which I saw, the intolerance of light and spasm of the lids had continued for more than a year. When at length they abated, which they did of themselves, without the influence of medicine, (the mother having neglected to attend at the Eye Infirmary,) the child groped with its hands, as if blind, although it saw; so strongly confirmed was the habit of using the sense of touch in preference to that of sight.

"In another case, on the photophobia subsiding, we discovered the child to be amaurotic, although, until seized with the ophthalmia, it had seen perfectly." (P. 453.)

When a particular inflammatory disease affects one membrane of the eye, this, if unchecked, and of sufficient violence, will often gradually proceed to the implication of contiguous tissues, until the whole organ becomes involved in one general action; thus, the phlyctenula may give birth to a penetrating ulcer of the cornea; the aqueous fluid now escapes, the iris prolapses, and general inflammation of the anterior chamber ensues. This may go on till the internal tunics are attacked, and the retina, in its turn, suffers, and becomes amaurotic. But that the intolerance of light, which forms one of the most distressing symptoms, and sometimes almost, we might say, the only one, is dependent upon an "affection [inflammation] of the retina," we cannot bring ourselves to allow. Considering the delicacy of this membrane, and the permanent impairment of vision which frequently follows acute or chronic inflammation of its tissue, we confess that the rarity of amaurosis, and even of defective vision, after strumous ophthalmia, (unless when it arises from mechanical obstruction to the rays of light, from opacities, &c.) seems to contradict such an hypothesis.

The following is a very good specimen of the disease in its aggravated form; and is here quoted, to show the phenomena attendant upon scrofulous ophthalmia, and that the obstacle to vision was rather from mischief done to the anterior chamber, than from any participation of the retina in the inflammatory action, although the intolerance of light was excessive.

"CASE II. James Tassie, aged eight, was admitted on the 15th of August, 1828, with phlyctenular ophthalmia of the right eye. He had been troubled with this complaint, more or less, for seven years. There was formerly a considerable albugo on the right cornea, but it had diminished much till within a fortnight before his admission, when a relapse took place. The cornea appeared to be

rough and nebulous, but the intolerance of light was so great that it was with difficulty that any part of it could be exposed. The nitras argenti solution was applied, and he had a solution of tartar emetic, in divided doses, till vomiting was produced. Next day he could open the eye better; and an onyx was now observed at the lower edge of the cornea, which had not been perceived on the previous day. He was ordered to take a grain of sulphate of quina thrice a day, and to use the murias hydrargyri collyrium. By the 18th the onyx was gone. The extract of belladonna was applied to the eyebrow and forehead, some fears being entertained regarding the state of the iris. By the 20th, the intolerance of light having considerably subsided, the cornea could be more completely seen. The centre of it was found to be perforated by an ulcer, and the pupil contracted. On the 22d, the eye continued easier, but the iris was observed to be everywhere in contact with the cornea. The sulphate of quina, belladonna, and collyrium, were continued. On the 27th, the iris appeared to be returning a little into its natural place, the pupil was pretty visible, and he saw a little with the eye. On the 28th, the pupil was evidently expanding, and the cornea clearing. By the 1st of September, the pupil was free of the cornea, except at its inner edge, where it still adhered by a single point. By the 16th, the iris was entirely free. Soon after this the ulcer of the cornea cicatrized, the speck gradually cleared, and the eye retained a very considerable share of vision." (P. 461.)

There is no question that, during the existence of this disease, the sensibility of the retina is increased to a morbid degree of exquisite suffering, and we agree with Mr. Lawrence, (vide *Treatise on Diseases of the Eye*, p. 246,) that this is not so dependent upon vascular action "as upon irritability of the structure, and a sympathetic or functional affection." It becomes a matter of much importance to put this question on a proper footing, since, in our prognosis, we are hereby enabled to assure the friends of the patient that one of the most grievous symptoms, and which to them appears so alarming, does not involve risk to the sight, permanent or even present. Of this indeed we may assure ourselves, by seeing that the little patient, after sitting all day with its head buried in the bosom of its mother, hiding from the light, and screaming with pain on the least attempt to uncover the eyes, will, on the approach of twilight, open its lids, and observe objects with distinctness and freedom from pain. This certainly could not be done were the retina actually inflamed.

In the table of Ophthalmiæ, at p. 383, we find No. 3, "Leucorrheal or Ophthalmia Neonatorum," and at p. 432 a description of this disease. The symptoms of the purulent

ophthalmia of infants are too well known to make it necessary to quote Dr. Mackenzie's very excellent description. We may say, however, that, although there can be no doubt but that the mother's being affected with leucorrhœa at the time of birth is a very common cause, yet it is not so uniformly present as to justify us in adopting the term leucorrhœal as the generic name of this disease.

After having detailed the general symptoms, our author proceeds to deny the opinion of Mr. Saunders, that the destruction of the cornea is produced by the process of sloughing, thus—

"His opinion regarding the mode in which the cornea is destroyed in this disease appears of more importance, but equally incorrect. He maintains that it is by sloughing, not by suppuration and ulceration, that the destruction of the cornea is effected. The opportunities which I have had of watching the progress of the affection of the cornea have convinced me of the contrary. Onyx or infiltration of pus into the substance of the cornea, is the uniform harbinger of destruction: the lamellæ exterior to the pus give way by ulceration; the ulcer spreads and deepens, till the cornea is penetrated, and often almost quite destroyed. Any thing like mortification, or sloughing, I have never seen. The coming away of the purulent infiltration, exposed by ulceration, must have given rise to Mr. Saunders's notion of successive sloughs." (P. 433.)

Now, that onyx and infiltration of pus between the laminæ of the cornea does not unfrequently take place, we have no wish to deny; yet we have undoubtedly seen, in cases where the disease has been neglected, sloughing of the cornea, at times implicating the whole substance of this tunic. Even before opening the eye of the infant, we are sometimes certain, from the purple lividness of the swollen lids, that the cornea is in a state of mortification, or that the slough has either wholly, or in part, detached. In some instances we have seen the cornea, of a dirty grey or brown colour, separate from its circumference, and fall out as a watchglass from its verge, followed, in one particular instance we witnessed, by the lens, which had to a considerable extent lost its original transparency.

The prognosis of this disease is accurately and tersely expressed.

"*Prognosis.* If the corneæ are only free from ulceration, and from purulent infiltration, how violent so ever the inflammation may be and profuse the discharge, our prognosis is favorable, the sight is safe. If the disease has been allowed fairly to establish itself, and its progress not interfered with for eight days or longer, it often proves tedious; six, eight, or ten weeks elapsing before it

is perfectly cured. It is always more difficult to overcome, when the child is exposed to cold damp air, ill nourished, improperly fed, or when the nurse drinks spirits or porter. If there is superficial ulceration, without onyx, probably a slight speck may remain. If the ulceration is deep, an indelible opacity must be the consequence. If the iris is protruding through a small penetrating ulcer, the pupil will be permanently disfigured, and vision more or less impeded. If the ulcer is directly over the pupil, the probability is that the pupillary edge of the iris will adhere to the cicatrice, and vision be lost until an artificial pupil be formed in after-life by an operation. If there is a considerable onyx, we can promise nothing; for although, under proper treatment, the matter may be absorbed, this is by no means a certain result: the purulent exudation may, on the contrary, increase, the cornea burst, and the eye become partially or totally staphylomatous. Whenever the person who brings the child to me announces that the disease has continued for three weeks or longer, I open the lids of the infant with the fearful presentiment that vision is lost, and but too often I find one or both of the corneæ gone, and the iris and humours protruding. In this case, it is our painful duty to say that there is no hope of sight." (P. 434.)

The treatment is also ably detailed; but the simple remedy which we have seen so successful in many hundred cases is not even mentioned by name: we mean the solution of alum, (gr. iv. vel x. ad ℥j. Aq. destillat.) As in the majority of instances the application of the means employed, especially with the poorer classes, must necessarily be left to the mother or the nurse, we are unwilling to trust the nitrate of silver, or other active stimulants and astringents, to their hands; while, in prescribing the solution of alum, we feel perfectly satisfied as to the result: we have the satisfaction of knowing also that the application is not only perfectly safe, but that it can scarcely be abused.

In many hundred instances where this mode of treatment has been adopted, we hardly remember one in which it has failed to produce a perfect cure. We of course speak of those cases only which are brought to the surgeon prior to infiltration, onyx, or ulcer.

When, however, the disease has proceeded to the extent of endangering the cornea, the mode of treatment certainly becomes more complicated, and we would rather trust to the application of a single leech, with the sulphate of quinine, as recommended at rule 9, p. 437, than to the use of calomel, which, employed indeed at any stage of the disease, would, we fear, hasten the destructive ulceration of this membrane.

We may observe, in passing, that cataract is but a rare result of purulent ophthalmia unaccompanied by synechia;

since, fortunately, unless the cornea be penetrated by ulceration, the internal structures seem but little affected in this disease.

Accuracy of diagnosis is of the highest importance in all diseases, but more especially so in the eye, where the safety of the organ often depends upon our first decision as to the specific nature of the affection; we are therefore grateful to all who help us to those external characters which, however trifling, taken separately, by their combination unravel some of the hidden mysteries of morbid action. We have thus, at p. 395, the objective and subjective symptoms of the varieties of ophthalmia. To this are attached four diagrams explanatory of the text, which the descriptions quoted will sufficiently indicate.

"Either by looking at the inflamed eye, and particularly by observing the arrangement of the enlarged blood-vessels, without hearing the patient's account of his sensations, or by learning from the patient the kind of pain with which he is affected, without looking at the eye, a tolerably correct notion may in general be formed of the kind of ophthalmia which is present. Of course, before proceeding to treat any particular case, we avail ourselves of all the symptoms, both objective and subjective, both what are offered to the direct examination of our own senses, and what we must receive on the testimony of the patient.

"§ 1. *Arrangements of the Blood-vessels.* We meet with four arrangements of the external vessels, in the ophthalmiæ; namely, the reticular, the zonular, the fascicular, and the varicose.

"1. The network observed in the first of these arrangements is seated in the conjunctiva, the vessels of which it is formed are comparatively large, and tortuous, they anastomose freely with one another, and can be shoved or drawn aside, by pressing or dragging the eyelids with the finger. This arrangement is characteristic of puro-mucous conjunctivitis.

"2. In zonular inflammation, the vessels are small and hair-like, never very tortuous, but running like separate radii towards the cornea; thus forming, not a network, but a halo, over which the conjunctiva is easily made to slide. This arrangement belongs to sclerotitis and iritis.

"3. In the preceding arrangements, the enlarged vessels are spread pretty equally over the eyeball; but in the fascicular, the redness commonly occupies only one side of the eye, and often consists of a few vessels only, running towards the cornea, and terminating in a phlyctenula or pustule. This arrangement, then, belongs to the scrofulous varieties of conjunctivitis.

"4. Large tortuous vessels, derived from those belonging to the recti muscles, constitute the varicose arrangement, which we meet with most frequently in the chronic stage of arthritic ophthalmia, and in choroditis. The vessels in question are branches of one or

other of the seven trunks, which, advancing towards the cornea, are visible in every eye; namely, one from the rectus externus, and two from each of the other recti.

"These four arrangements of vessels are, in general, perfectly distinct; but, in some cases, they are mixed together, or are obscured by what is termed chemosis, that is, an inflammatory œdema of the cellular substance under the conjunctiva, so that this membrane is raised from the sclerotica, and so much swollen as sometimes to overlap the edge of the cornea, or even protrude from between the eyelids. When chemosis is present, nothing can be seen of the particular distribution of the vessels. In the compound ophthalmiæ, again, such as the catarrho-rheumatic, pustulo-catarrhal, &c. two or more of the arrangements may be combined.

"§ 1. *Kinds of Pain.* Two different varieties of pain attend the ophthalmiæ, the one being characteristic of the inflammation of the conjunctiva, the other of those affecting the sclerotica and iris. The former is uniformly compared by the patient to the feeling which is produced by sand in the eyes; it is most felt during the day, and especially in the morning, when the eyes begin to be moved; the latter is pulsatory, affects the circumorbital region as much as the eye itself, and is strikingly nocturnal, commencing after sunset, increasing in violence till after midnight, and abating toward sunrise, scarcely felt during the day, but returning about the same hour in the evening. Ophthalmiæ attended by the conjunctival or sandy pain, are generally curable by external applications; those which are accompanied by the circumorbital or pulsatory pain, always require venesection." (P. 395.)

We are afraid we have not left ourselves much room for further remarks, although we wish we had it in our power to notice more fully the very many excellent cases with which the work teems.

Mr. Lawrence, near the end of his treatise, introduced the report of a case of entozoa found in the anterior chamber of the eye of a patient in the Glasgow Ophthalmic Infirmary: the result, however, was not known when his book went to press; we shall therefore not apologize to our readers for quoting the whole history, with its termination, expressing our regret, however, that the animal (*Cysticercus cellulosæ*) was not extracted entire or alive, in order that it might have been subjected to microscopical examination.

"Case. From the month of August 1832, till about the middle of January 1833, when she was first brought to Mr. Logan, the child had suffered repeated attacks of inflammation in the left eye. Mr. L. found the cornea so nebulous, and the ophthalmia so severe, that he dreaded a total loss of sight. He treated the case as one of scrofulous ophthalmia; and, after the use of alterative medicines,

and the application of a blister behind the ear, the inflammatory symptoms subsided, leaving, however, a slight opacity of the lower part of the cornea. After a week, the child was again brought to Mr. L. who, on examining the eye, discovered, to his great surprise, a semitransparent body, of about two lines in diameter, floating unattached in the anterior chamber. This body appeared almost perfectly spherical, except that there proceeded from its lower edge a slender process, of a white colour, with a slightly bulbous extremity, not unlike the proboscis of a common fly. This process, Mr. L. observed to be of greater specific gravity than the spherical or cystic portion, so that it always turned into the most depending position. He also remarked that it was projected or elongated from time to time, and again retracted, so as to be completely hid within the cystic portion; while this, in its turn, assumed various changes of form, explicable only on the supposition of the whole constituting a living hydatid.

"On the 3d April, when I examined the case, I found the cornea slightly nebulous, the eye free from inflammation aud pain, and the appearances and movements of the animal exactly such as described by Mr. Logan.

"When the patient kept her head at rest, as she sat before me, in a moderate light, the animal covered the two lower thirds of the pupil. Watching it carefully, its cystic portion was seen to become more or less spherical, and then to assume a flattened form, while its head I saw at one moment thrust suddenly down to the bottom of the anterior chamber, and at the next drawn up so completely as scarcely to be visible. Mr. Meikle turned the child's head gently back, and instantly the hydatid revolved through the aqueous humour, so that the head fell to the upper edge of the cornea, now become the more depending part. On the child again leaning forwards, it settled like a little balloon in its former position, preventing the patient from seeing objects directly before her, or below the level of the eye, but permitting the vision of such as were placed above.

"Mr. Logan had observed no increase of size in the animal while it was under his inspection. Mr. Meikle had watched it carefully for three weeks, without observing any other change than a slight increase in the opacity of the cystic portion.

"To every one who had seen or heard of Mr. Logan's case, the question naturally occurred, ought not this animal to be removed from the eye? Mr. Logan and Mr. Meikle appeared to have deferred employing any means for destroying or removing it; first, because it seemed to be producing no mischief; and, secondly, because there was a probability that it was a short-lived animal, and likely therefore speedily to perish, and shrink away, so as to give no greater irritation than a shred of lenticular capsule. Various means naturally suggested themselves for killing the animal; such as passing electric or galvanic shocks through the eye, rubbing-in oil of turpentine round the orbital region, giving this medicine

internally in small doses, or putting the child on a course of sulphate of quina, or of some other vegetable bitter known to be inimical to the life of the entozoa. As the patient appeared to be in perfect health, it was natural to suppose that the other organs were free from hydatids, and that a change of diet would have little or no effect upon the solitary individual in the aqueous humour. Had she, on the contrary, presented a cachectic constitution, with pale complexion, tumid belly, debility, and fever, none of which symptoms were present, we should have been led to suspect that what was visible in the eye was but a sample of innumerable hydatids in the internal parts of the body, and might have recommended a change of diet, with some hopes of success.

"In the course of six weeks after I saw the patient, the cysticercus having enlarged in size, the vessels of the conjunctiva and sclerotica become turgid, the iris changed in colour, and less free in its motions, while the child complained much of pain in the eye; it was decided that the operation of extraction should be attempted, and I owe to Dr. Robertson, of Edinburgh, who operated, the communication of the following particulars.

"The incision of the cornea was performed without the slightest difficulty, but no persuasion or threats could induce the child again to open the eye; she became perfectly unruly, and the muscles compressed the eyeball so powerfully, that the lens was forced out, and the hydatid ruptured. The patient was put to bed in this state. In the evening, Dr. R. succeeded in getting the girl to open the eyelids, when with the forceps he extracted from the lips of the incision the remains of the animal in shreds, it being so delicate as scarcely to bear the slightest touch. A portion of the iris remained in the wound, which nothing would induce the girl to allow Dr. R. to attempt to return.

"After the eye healed the cornea remained clear, except at the cicatrice, where it was only semitransparent; the pupil, in consequence of adhesion to the cicatrice, was elliptical, and the opaque capsule of the lens occupied the pupillary aperture. The patient readily recognised the presence of light." (P. 967.)

Two engravings accompany this case, and are useful in explaining the appearances described.

We are led, in conclusion, to say a few words relative to the plates in general which illustrate this edition of Dr. Mackenzie's book. We are at all times adverse to the introduction of engravings into the body of the type, which are necessarily, we believe, either woodcuts or casts in metal from the block. Now, although we are aware the plates to this work are intended simply as diagrams, yet woodcuts are so particularly unsuited to the very nature of the diseases intended to be represented, that we almost doubt that they are disadvantageous to the student, as leading to an erroneous

or very imperfect impression of the morbid appearances of the organ. In fact, if there be any class of diseases which more than another requires accuracy of drawing and delicacy of touch, it is the morbid conditions of the organ of vision. Not only should the engravings be of the highest order of art, but, where so much depends upon variations of tint, and degrees of opacity or transparency, they ought to be coloured with fidelity, and by one accustomed to such pursuits. We are well aware that such plates would add most materially to the expense of the book, and put it beyond the reach of students in general; but Dr. Mackenzie's work is not for such readers alone; nor do we know any medical treatise in the English language which better deserves to be accompanied by an atlas of engravings of the character we have described: such we yet hope to see in a future edition of this admirable book. The frontispiece, indeed, forms an honourable exception to the criticism we have ventured to apply to the rest of the plates.

Traité Théorique et Pratique des Blessures par Armes de Guerre, redigé d'après les Leçons Cliniques de M. le Baron DUPUYTREN, Chirurgien en chef de l'Hôtel Dieu, *et publié sous sa direction* par MM. les Docteurs A. PAILLARD et MARX. *Tome Second.* —Paris et Londres, 1834.

A Theoretical and Practical Treatise on Wounds from Weapons; being the Substance of the Clinical Lectures of the Baron DUPUYTREN, *published under his direction* by Drs. A. PAILLARD and MARX. *Second Volume.*—8vo. pp. 527.

IN our last Number we presented our readers with an outline of the contents of the first volume of this work, and we then had occasion to speak highly, both of the soundness of its surgical doctrines, and of the eloquence and spirit of its language. Nothing more need be said of the merits of the present volume, than that it is evidently the produce of the same master-hand, and is in every respect worthy of its predecessor.

It opens with a very complete history of hemorrhage, which commences with a caution to young surgeons against being misled as to the quantity of blood lost, either by the representations of attendants, or by a hasty survey of its appearance and colour. The best method of judging of the extent of hemorrhage is by its effect on the constitution, though this will of course be much modified by the rapidity with which the blood flows.

The colourless skin and feeble pulse, the general coldness of the body, and loss of strength; subsequently, the irregu-

larity of the pulse, the alternate failure and acceleration of the expansions of the chest, syncope more or less frequent and prolonged, palpitations of the heart, vomiting, inability to retain either food or drink, and spasmodic or convulsive movements; are the principal symptoms indicative of a great loss of blood, and demanding instant attention.

Copious and repeated hemorrhages have a much more lasting effect than is generally supposed: they occasion for a long time paleness, languor, and weakness, which may last months, years, or even during the whole life, according to the quantity lost, and the age and constitution of the patient. Meanwhile, the blood is of a light colour, and does not readily coagulate, and for a long period the patients retain a chlorotic and bloodless appearance; so difficult is the restoration of its fibrinous and colouring matter. Nevertheless, during this time local congestions frequently occur, the presence of which is shown by restlessness, sleeplessness, spasms, drowsiness, giddiness, and pulsations in different parts of the body, as the head, neck, heart, &c. But these symptoms are easily removed by the abstraction of small quantities of blood. The remedies for this state of system are repose of body and mind, good nourishment, especially of the animal kind, broths, jellies, tonics, steel, and country air: these, continued for a greater or less period, according to circumstances, will generally restore the health to its pristine vigour.

Children are unable to bear large hemorrhages; though, should they survive the first depression, and the convulsions which frequently follow them, the blood is more easily replaced than in adults. Women, on the other hand, especially those in the pregnant state, support the loss of blood better than men; and they likewise possess a greater power of reproducing it.

The quantity of blood which may be removed without occasioning death greatly varies in different persons, and also according to the rapidity with which it flows. Instances have occurred where twenty-five pounds of blood have been lost in a few days; a larger quantity than circulates at any one period in the body. In such cases there is extreme thirst, and the fluid taken into the stomach is immediately absorbed, so that the blood is diluted, and becomes perceptibly of a lighter colour.

We have thus abridged the general remarks upon hemorrhage; not that we have been prompted to it by an idea that these points are unknown to the readers of this Journal, but rather that, by the selection of what is familiar to them, we may show them the comprehensive and practical manner in

which our author discusses the various parts of his subject. The restlessness, however, and other symptoms indicative of local congestion, should not be treated with small bleedings, but with opium.

Dupuytren lays great stress upon the peculiar colour (*couleur d'amaranthe*) of the blood when diluted after large hemorrhages, and states that it cannot be successfully imitated by the admixture of any substance with the blood out of the body. We must confess that we have not recognized this colour by the author's description; for, though the venous blood of weak persons is certainly lighter than that of the robust, yet, as far as we know, it only possesses the tint of blood diluted with serum.

The section upon *Arterial Hemorrhage* commences with a description of the difference between arterial and venous blood, followed by an account of the structure of arteries. In speaking of the use of the middle coat, which he believes to be fibrous, he attributes to it the powers both of retraction and contraction. The retractile power is most remarkable in beasts of prey, less so in wild herbivorous animals, and still less in the domesticated, especially in such as are fat. In the human subject it is greater during infancy and youth than in adult life; it decreases in old age, till it ceases altogether, from the ossification of the vessels. Hence arises the extreme difficulty of stopping hemorrhage in young persons, when small vessels are only partially divided; and, on the other hand, the little liability to it in advanced life. The coagulability of the blood varies also in different animals and in man: this tendency exists to the greatest extent in birds, and nearly as powerfully in carnivorous animals, but is much weaker in herbivorous creatures. In man it is more marked than in the latter class, though inferior to the two former. The importance of these remarks is evident, in comparing the results of experiments upon animals with that which takes place in the human subject. The coagulation of blood is more rapid in the negro than in the white, in adult man than in the infant, the old man, or the woman; in a healthy individual, than in the weak; in a sanguine and bilious, than in a lymphatic constitution; in patients with inflammatory diseases, than in those affected with atonic maladies; in such as have never lost blood, than in those in whom it is diluted by repeated hemorrhages. Hence the author cautions the surgeon against satisfying his patient's thirst; for by this means the blood becomes diluted, and loses that coagulating power to which he looks for the suppression of the bleeding.

Our author then proceeds to detail the various methods of

arresting arterial hemorrhage; and, not content with relating how they are severally to be employed, he describes with great minuteness the rationale of their action. The editors too, in their notes, do full justice to the labours of our English physiologists, especially of Hunter and Jones.

From this part of the work we shall select the following summary of the author's opinions upon the present state of our knowledge with regard to the torsion of arteries.

After describing the methods of Amussat and Thierry, he thus proceeds:

"Finally, the torsion of the extremities of arteries divided in an operation, or by a wound, has in its favour many different experiments upon animals, besides some successful trials upon the human subject. If it should succeed, it will greatly aid in promoting union by the first intention; for the ligature, acting as a foreign body, irritates the bottom of the wound, and frequently prevents this process. But at present torsion wants the sanction which time and numerous trials alone can bestow on so important an operation. The method of torsion, when it requires the complete division of the artery prior to its application, is neither free from objection, nor is it applicable in all cases. The plan of twisting a whole artery, as proposed by M. Thierry, requires a combination of circumstances which is rarely found, and then it risks the rupture of the vessel, and consequent hemorrhage. Even when it can be employed, it requires uncommon dexterity, and is much more difficult in its application than the ligature. At any rate, however, it must be confessed that the experiments upon which the plan of torsion is founded are highly important; and it is to be hoped that some useful method will spring from them. Meanwhile, prudence demands that we should employ it with great caution, and in such places only where we are sure of finding other assistance against the accidents to which they may give rise when they fail." (P. 52.)

The Baron has entered at considerable length into the subject of *Venous Hemorrhage;* but, as there is but little novelty in his remarks, we shall content ourselves with quoting his directions on the method of applying compression to veins, which, if sufficiently attended to in practice, are not generally laid down so clearly in books.

"Compression, applied badly, instead of being serviceable, is frequently highly injurious to the patient. In order to arrest arterial hemorrhage, pressure should be applied, so that the sides of the artery may be put in contact with one another, and its cavity entirely obliterated; but, when applied to veins, it should only slightly support their parietes; and this is generally sufficient to prevent the further effusion of blood. If, however, the pressure be so great as to obliterate their cavity, as in the arteries, it always occasions a collection of blood beneath the compressed part, which

is soon evidenced by the swelling of the limb and the violet colour of the skin. This is soon followed by extravasation of blood, either from the wounded vein, or from those in its neighbourhood. However small may be the size of the vein, the pressure should be confined to the point wounded, and neither be applied above or below; and its object should only be to support, and not to obliterate the vessel." (P. 63.)

The author insists much on the influence of deep inspirations in increasing venous hemorrhage, and he therefore cautions the surgeon to prevent the patient's cries as much as possible. Every one who has witnessed any serious surgical operation must perceive the wisdom of this remark.

While on this subject, our author devotes a section to the consideration of the effect of air entering the veins, and another to varicose aneurism; but we shall pass over them, and proceed to his observations upon *Visceral Abscesses*, or *deposits of pus*. He commences by referring us to many authors who long since noticed the existence of abscesses at a distance from the injured part, though he gives the credit to modern surgeons of having directed attention to them as a frequent cause of death after accidents. Nothing is more obscure or insidious than the symptoms of these internal inflammations and suppurations, after severe wounds or operations. They are, however, generally preceded by traumatic fever, of a graver character than might be expected from the appearance of the wound. This fever continues for a considerable period, with occasional exacerbations, preceded by shiverings, which, occurring from the fifth to the tenth day, are rather to be regarded as the signs of the formation of pus, than of the existence of inflammation. These rigors are the only symptoms that can be depended upon: they make their appearance almost every day, and so regularly, that the patient is not unfrequently supposed to labour under intermittent fever. Very frequently an attack of indigestion takes place at the onset of the disease; the sore becomes unhealthy and pale, and the discharge diminishes in quantity, and becomes of a serous nature. The patients, nevertheless, complain of little or no pain, but suffer only from fever and extreme uneasiness. The utmost caution often fails in discovering the seat of the disease; but, as it proceeds, the fever becomes more severe, the discharge dries upon the surface of the sore, the skin becomes slightly jaundiced, the tongue is dry and black; muttering delirium supervenes, and the respiration becomes affected. It is then only that the symptoms are sometimes recognised as those of suppuration; the patient dies, and the examination of the

body verifies the late prognosis, with the exception of the mischief being more extensive than could have been suspected. The progress of the disease will of course be modified, according to the organ attacked. When the brain is affected, there will be more delirium; when the liver, there will be tenderness in the right hypochondrium, vomiting, &c.

To this excellent history of the symptoms of internal suppuration, which we have abridged from the author's account, little can be added with advantage. We think, however, that he has rather over-rated the difficulty of detecting the seat of the malady. As far as our experience goes, we should say that the patient ordinarily complains to his nurse or attendant of darting pains in the part affected, and that, if he do not mention it to his surgeon, it is because the mind participates in the feebleness of his body, and he is unwilling to exert himself to give an account of his feelings, or possibly he may have forgotten them ere the surgeon's next visit. The appearance of the sore, too, is so peculiar as to deserve a more lengthened description; for, whether the matter be confined in the immediate neighbourhood of the wound, or whether these visceral abscesses are forming, the same process takes place. The ulcer first becomes pale, then yellowish streaks appear intersecting it in various directions, and afterwards all the granulations become absorbed. The surface is smooth and glossy, with the exception of a few pale reddish points, which seem like vain attempts at granulation. The rapidity with which this change takes place is quite astonishing: a sore may be healthy in the morning, but in the evening it may be in the last described state.

Another circumstance that may be mentioned in connexion with these abscesses, is the length of time that the disease may exist before it terminates fatally. We have ourselves seen a patient live seven weeks after the first rigor in this hopeless state, and they very commonly survive three or four weeks. There is, however, a fortunate provision in these cases to mitigate their miserable condition, viz. an utter unconsciousness of their extreme danger, so that they will constantly answer the surgeon's interrogatories by assurances of being much better, while they are really within a few days of death.

The morbid appearances depend upon the length of time which the patient survives after the first onset of the disease. There may be either simple congestions of the vessels, a small ecchymosis, an infiltration of serum, pus either inclosed in one of the great serous cavities, or diffused through the cellular membrane; and, lastly, circumscribed abscesses in the pa-

renchyma of some viscus. These abscesses may also occur in the limbs, the calf of the leg, &c.

The question now arises, how are these abscesses to be accounted for? The most common theory is, that of the absorption of pus from the surface of the wound: there are others who believe that they are occasioned by inflammation of the inner surface of the veins. But the author objects alike to both of these hypotheses, and offers the following explanation of the method of their formation. The traumatic fever which accompanies wounds at the period of their inflammation is intended to form a certain quantity of pus; it is (if we may be allowed the expression) a pus-forming fever, *(fièvre pyogenique;)* that is to say, it gives to the fluids that flow towards the affected part such a nature as is requisite for their conversion into pus. Is it then to be wondered at that this disposition to form pus extends beyond the fluids going to the inflamed part, and that, in consequence of this disposition becoming more general, suppurations should take place in those parts which might be in a somewhat disordered state prior to the accident or operation. There is no doubt that the existence of suppuration in one part of the body inclines other parts to take on the same process, or, in other words, suppuration produces suppuration in any part where a previous tendency may have existed.

We shall not enter into any examination of the truth of this hypothesis: it appears to us as good as any other, and in one respect better; for, if this be true, it will lead surgeons to pay still greater attention to the minutiæ of the patient's constitution, previously to undertaking any important operation; whereas, if the theory of its absorption by the veins be correct, we are utterly ignorant of the circumstances favouring this absorption, and therefore can do nothing to prevent its occurrence. There is one circumstance that will support our author's views which he has not mentioned, viz. that these abscesses never, or at least very seldom, occur in private practice, where greater care is taken about exposing the patients to draughts of air, and other exciting causes of fever, than can be bestowed in large public institutions.

The observations on *Hospital Gangrene* are extremely good, but, as far as we can judge, in nowise original. Our author generally employs the nitrate of mercury as the local dressing; in this country we are in the habit of using nitric acid, or the liquor arsenicalis, as recommended by Blackader. We have ourselves seen considerable benefit arise from the use of the Barbadoes tar, spread thickly upon lint, and laid upon the sore twice a day.

In the chapter upon the *Diseases to which Cicatrices are liable*, the Baron gives excellent directions how to detect people in voluntarily cutting off their own fingers; but, as we are not very partial to this amusement on this side of the water, our readers will forgive us for passing over them, to make room for some of his remarks on *Wounds of the Head.*

In the section upon punctured wounds of the scalp, our author enters into the subject of diffuse inflammation of the cellular tissue under the aponeurosis of the occipito-frontalis muscle, of which he gives a good description. There is one point only on which we should differ with him, and that is in the treatment. He recommends a free division of the parts as a preventive measure, and to this we have no objection; but he goes on to add, that recourse should be had to large bleedings from the arm. Now, from this practice we entirely dissent; for, as far as our experience goes, we should say that, under ordinary circumstances, bleeding is one of the most efficacious means of exciting diffuse inflammation. In cases of injury of the head where mischief has been done within the cranium, it may be requisite to bleed, and to run our chance of the inflammation externally: nay more, in certain very full-blooded and robust persons, a small venesection may be advantageous. But in such constitutions as are generally met with in large towns, (and it is in such cases that the disease is most likely to be severe,) bleeding ought never to be employed. Diffuse inflammation is a disease of weakness, for, where the patient is strong, the inflammation is circumscribed; the parts are endowed with but little vitality; and, if this be diminished by loss of blood, they readily fall a prey to the progress of the malady. This opinion is not theoretical; we can refer to a large number of cases, in which it would be shown that those patients with wounds of the scalp who were bled, almost always were attacked by diffuse inflammation.

We are, however, but little inclined to argue with such a man as Dupuytren, for we feel that we are more fitted to learn from him; and, as our readers are probably of the same sentiments, we thall abridge some of his most practical observations upon severe injuries of the head, without discussing his opinions.

Lesions of the cranium from pointed instruments may remain without doing mischief for a number of years. The following case illustrates this fact, and at the same time shows how far good surgery may go in saving the life of a patient.

"Eight or ten years ago, a young man received a stab on the

head, and the knife broke in the bone. This was not detected at the time; the edges of the wound were brought together, and united. He remained perfectly well for several years, excepting occasional pains in the cicatrix. At the end of this time, without any known cause, he was attacked with fever and stupor; and, on examining the cicatrix, a foreign body was felt protruding beneath it. A trepan was applied, and a piece of the blade removed. The bad symptoms continued, and the opposite side of the body became paralysed. Dupuytren divided the dura mater, but nothing escaped; he plunged a bistoury into the brain itself, a large quantity of matter spirted out; before evening the fever, delirium, and coma had subsided, and the patient ultimately recovered." (P. 146.)

Where a portion of the skull has been cut away by a sabre, the patients frequently do well; the surgeon, however, should be extremely cautious to remove the smallest fragments of bone that may be loose. The Baron cautions us against trusting to the hope that, because the fragments are attached to soft parts, they may still be saved, as such an expectation always proves fallacious. Every fragment of bone should be removed, and the flaps of integuments laid down, in order to obtain as much union by the first intention as possible.

Our author's opinions upon the subject of *Trepanning* are extremely sound: he is neither a partizan of the Pott school, who would trephine every fissure of the cranium, nor, on the other hand, does he run into the opposite extreme of leaving too much to the restorative powers of nature. The fact of there being fracture, with depression of the bone, is not, in his judgment, sufficient to justify the operation, unless there are also symptoms of compression of the brain. He relates a case of a banker in Paris, with fracture of the skull, and depression of a portion of the frontal bone. As no symptoms of compression were present, the parts were left tranquil, and the gentleman recovered without any ill consequences manifesting themselves, and he is now as able to conduct his affairs as before the accident, though the bone remains depressed. In cases where it is difficult to distinguish the situation of the coagulum pressing on the brain, as, for instance, when the fracture is occasioned by the *contrecoup*, our author would still advise the use of the trephine, leaving it to the judgment of the surgeon to determine on the spot to which it should be applied. His reasons for so doing are, that we can make the case no worse, and we may perhaps do good. We are willing to give all due force to this argument, though we doubt if we can follow him to his next

application of it. "For," says the Baron, "in certain cases of deep extravasation, we are obliged to cut through the dura mater, the arachnoid, and even the brain itself, if the coagulum be near the surface;" and, by way of justification of such bold measures, he adds, "that Boyer did not scruple to plunge his bistoury deep into the brain." (P. 183.)

Now, for our own parts, we do not know how it is to be decided that the coagulum is near the surface; and, should an English surgeon plunge his bistoury deep into the brain, and fail in discovering the coagulum, we apprehend that the coroner would probably interfere to give his medico-legal opinion on the point.

The chapters on *Wounds of the Face* are replete with sound surgery, but there is little in them that is either novel or interesting.

The *Wounds of the Orbit and Eye, of the Nose, Ear, Cheeks, and Jaws,* form separate sections, but their treatment is nearly similar, and may be comprised in a few directions, viz. to clean the wounds, and extract all foreign substances; and, as soon as the sloughs have separated, and the inflammation diminished, to draw the edges together, and keep them as nearly as possible in contact with one another.

We have said that there is but little novelty in our author's observations on wounds of the face; but we must make an exception of the following brilliant operation.

"Charles Antony Mercier, ætat. thirty-six, a soldier in a dragoon regiment, attempted suicide in 1830; but, fearful lest his courage should fail, he drank a large quantity of spirits, to prime him for his attempt. Having loaded his pistol with two balls, he placed the point of it under the jaws; but, being completely intoxicated, his hand shook, and the explosion broke the lower jaw to pieces, and carried away a large quantity of the surrounding soft parts. The surgeon who saw him in this state merely applied some simple dressings, under which the wound healed, leaving however a dreadful deformity. The portion of the lower jaw between the canine tooth on the right side, to the ascending ramus of the left side of the jaw, was totally destroyed; and nearly all the lower lip, together with the integuments covering the chin, so far back as the os hyoides, had also been shot off. Thus the lower part of the face presented one great cavity, of which the superior maxillary bone formed the roof, and the os hyoides the floor, over which the saliva was constantly trickling. The masseter and internal pterygoid muscles, having no antagonists, had raised the portion of the jaw upwards nearly to the nose, and projecting before the canine tooth.

"The only question to be considered by the operator was, how far this portion of the jaw could be saved for the purposes of mastication. Dupuytren decided on its removal, as it could not, from

its situation, be in the least serviceable without the division of the masseter and pterygoid muscles; and then it would be useless from want of power to move it. The operation was performed as follows:

"A transverse incision was made, about one inch and a half in length, in the right cheek, at the commissure of the lip, and the portion of the jaw dissected, and removed as far as the second molar tooth by the chain-saw. The other edges of the opening were then pared off, and the parts drawn forcibly together by sutures in a direction from above downwards. The sides of the wound were in contact, excepting a small portion at the lower parts, where they were too firm to admit of extension. Bandages and graduated compresses were then applied, to assist the sutures in preserving the situation of the parts. A large portion of the wound united by the first intention, and the rest, with the aid of the nitrate of silver, subsequently filled up with granulations, so that the face regained nearly its natural appearance." (P. 267.)

We have greatly abridged the account of this operation, (which is from the pen of M. Hippolyte Larrey, the son of the celebrated surgeon;) but even our account of it, which does not enter into minute details, requires no comment to convince our readers that none but a first-rate anatomist, and a most dexterous operator, could have succeeded in so arduous an undertaking.

The chapter on *Wounds of the Neck* is full of excellent cases; as also that on *Wounds of the Chest.* In the latter are detailed several instances of severe wounds of the heart that did not prove fatal for several days; one especially, where life was prolonged for twenty days, though the left ventricle was transfixed by a watchspring. Such instances, though highly curious, have but little practical utility, as no case has yet been recorded of complete recovery after an incised wound of the heart. We shall terminate by an abridgment of our author's observations on *Gunshot Wounds of the Abdomen.*

Many instances, of course, occur, in which such mischief is done to the contents of the abdomen as to cause immediate death, or, if the patient survive long enough to admit of receiving surgical aid, all that can be done is to stop the hemorrhage; and, having dressed the wound with some simple dressing, to endeavour to prolong life for a few hours, by the exhibition of stimulants. Another set of cases which escape instant death, end fatally in a few days, from the inflammation consequent on the injury. Here, however, the surgeon's province is more extensive: he must return the protruded viscera into the cavity of the abdomen; remove, if it can be easily done, all extraneous substances; prevent

the occurrence of inflammation by all the means in his power, and give issue to any effusion that may take place afterwards.

When the stomach is wounded, the injury is generally fatal. Inflammation sometimes, however, arises; lymph is effused which unites its serous coat with the peritoneum lining the walls of the abdomen, and thus extravasation of its contents being prevented, a perfect cure is obtained by means of antiphlogistic treatment, rest, and total abstinence. No attempt should be made to extract the ball.

Wounds of the small intestines are generally mortal, as several of the folds are most probably injured. If, however, the wounded portion of intestine can be seen, it should be drawn towards the parietes, and be secured there by a suture. Nature will sometimes of herself effect a cure; adhesions take place around the edge of the wound, and prevent effusion of its contents. When however this effusion occurs, severe peritonitis is excited, and the surgeon's art is of no avail. Violent pain, colic, and vomiting, with smallness and feebleness of the pulse, are the symptoms indicative of approaching dissolution.

When the cœcum and colon are the injured parts, a more favourable result may be anticipated. As they are not covered entirely by peritoneum, the effusion of fæces may take place externally, and after an attack of inflammation, more or less severe, the patient is left with an artificial anus. Great care should be taken in removing any bridles, or cleansing the edges with the knife, lest the peritoneum be wounded, which would render the prognosis much more unfavorable.

Wounds of the rectum are generally complicated with wounds of the bladder or sacrum. When the bladder is wounded, our author advises the free division of the external sphincter, in order that the fæces may have a free escape from the rectum, as is practised in this country for fistulous communication between these viscera.

Injuries of the liver are for the most part fatal in a few days, either from hemorrhage or inflammation. The whole treatment must consist of bleeding, abstinence, and effervescing draughts, to moderate the vomiting. If the ball be near the surface, and there is no hemorrhage, an attempt may be made to extract it. Under this treatment a few cases have recovered.

Gunshot wounds of the spleen are always mortal.

Dupuytren has seen only one case in which the kidney has been wounded by a bullet. In this instance urine escaped from the wound; the ball was not extracted, but the patient recovered in fourteen days. It would be expected that, if

thc urine did not flow through the external wound, that it would make its way either into the cellular substance in its neighbourhood, or into the cavity of the peritoneum; in either of which cases death would be certain. Wounds of the bladder are generally followed by extravasation of urine, the symptoms and treatment of which should be known to every one. A few cases are recorded where the bullet remained in the bladder, and produced all the symptoms of calculus, for which the operation of lithotomy is the only remedy.

We have now brought to a conclusion our notice of this work, the best and most comprehensive upon the subject that has yet fallen into our hands. The author has been long recognised as the first surgeon in Europe; the perusal of these lectures will lead us to doubt if he be not also one of the best speakers. For the pleasure and improvement that we have derived from these volumes we tender our thanks to the editors, who, by thus connecting their names with that of Dupuytren, will earn a lasting reputation.

A Systematic Treatise on Comparative Physiology, introductory to the Physiology of Man. Translated, with Notes, from the German of FREDERICK TIEDEMANN, Professor of Anatomy and Physiology in the Heidelberg University, *by* JAMES MANBY GULLY, M.D., *and* J. HUNTER LANE, M.D., F.L.S. &c. *Vol. I.* —London and Liverpool, 1834. 8vo. pp. 431.

COMPARATIVE anatomy and physiology are at length beginning to be estimated at their just value. After a slumber of more than two thousand years, they rose up, under the auspices of Hunter and Cuvier, to give a new impulse to the science of life, and to add new lustre to the fame of Aristotle, whose genius was so far in advance of the times in which he lived, that the accumulated knowledge of ages has alone enabled us to understand, and appreciate his labours.

The importance of these sciences to medicine has been generally recognized only within the last few years, and is even now imperfectly understood, if we may judge from the limited number of those who cultivate them.

As a means of determining the functions of organs, comparative anatomy and physiology are invaluable, since they enable us to avoid the numerous fallacies inseparable from all experiments on living animals which are attended with mutilation. In the vast series of organs and functions which living nature displays, we are enabled, by their aid, to trace functions from their earliest dawn to their highest perfection, in conjunction with the organs on which they depend; or to

follow them in the descending scale of organization, till they disappear along with their ministering organs. How much more exact and satisfactory is the information derived from this source, than any which can be drawn from anatomical experiments on the living animal! In the one instance, organs are curtailed or withdrawn by the hand of nature; the organism varying its form, and the number or perfection of its functions, yet still presenting an entire and healthy living body: in the other, the removal or lesion of organs by mechanical violence often leaves for our observation only the wreck of an organism, scarcely animated by a fast-ebbing vitality. The method of comparison has also another great advantage: it enables us to reason synthetically as well as analytically. The anatomical experimenter may take away a part, or the whole of an organ, and mark the consequent abolition of function; but he never can expand an organ into increased development, nor add one to the number of those already existing. The observation of nature, however, affords us this power: we see new organs added, and new functions simultaneously called forth; and we find the relation between the two corroborated by the increasing perfection of the function accompanying the fuller development of the organ. As Sir C. Bell has justly remarked, experiment on the living animal is chiefly useful, as affording the hint which leads to discovery; but, in order to place physiological theory on a broad and firm basis, we must have recourse to analogies derived from an extended survey of the varied forms of life.

While, however, comparative physiology, if philosophically pursued, is of infinite utility, it affords the same scope for hasty generalization, which renders all analogical reasoning dangerous in the hands of those who are not careful to keep their imagination in abeyance to their judgment; and it must be confessed, that several highly fantastic and puerile hypotheses have been reared on a comparison of organized beings. We may briefly allude to one first promulgated by Robinet,* and which has found more favour than it deserves at the hands of some distinguished physiologists.

From the ascending series observed in nature, from the simplest to the most complicated forms of living being, it has been surmised that the author of all things, like other unpractised artificers, was obliged to begin how he could, and gradually attained dexterity by experience. It is not much

* Considerations Philosophiques de la Gradation Naturelle des Formes de l'être; ou, les Essais de la Nature qui apprend a faire l'Homme. Paris, 1768. 8vo.

worth while to argue against a doctrine so much opposed to the first principles of ethics; it would not, however, be difficult to turn against its supporters their own kind of reasoning. For example: the human organism is considered by these philosophers as the highest achievement of creative power. Now we find this organism progressively developed *in utero*, from a simple drop of fluid, in which there exists not one of the complicated organs afterwards to be evolved; we find it passing through several stages of development, each resembling, to a certain degree, the organization of some animated being lower in the scale than man; though the analogy be not so complete as those physiologists would have us believe, who regard the development of the human fœtus as a kind of epitome of the whole animal creation. Again, in the development of the human fœtus, there are, from the very beginning, powers at work, mighty enough to build up the majestic frame of man,—causes prospectively adapted to this end; and, if their operation be gradual and progressive, what can we see in this but the wise adaptation of the organism to the several stages of its intra-uterine life, whose regular succession marks the footsteps of infinite power and beneficence, and whose inversion would render the existence of man impossible, or, if possible, absurd? If then it be clear, in this striking instance, that progressive development from more simple to more complex forms of life is the result, not of defective power in the beginning, but of prospective wisdom, looking towards the consummation, why should we take an opposite view of the series which animated nature now presents, or the wrecks of successive worlds unfold? Why should we not rather believe, in accordance with all we can observe of the relation of past and present living beings to the things around them, that each organism is exactly adapted to the state in which it is to live, and that, where organs are not given, it is because such organs would be useless? Such a view of the subject is strongly corroborated by the fact, that, in the organisms which we are accustomed to consider as inferior, whenever high perfection in any one organ is required, that perfection is found to exist. Thus, in the *crinoidea*, a family of radiated animals, which were among the earliest inhabitants of our planet, we find an organ of apprehension, quite as wonderful, and infinitely more complex, than the human hand.* Many other examples might be given; but the argument has been recently and very ably

* For the anatomy of these animals, see Miller's Natural History of the Crinoidea, &c. Bristol, 1821.

handled by Sir Charles Bell, who has one remark, so ingenious and apposite, that we cannot refrain from quoting it.

"We are led to this reflection, that the creation of a living animal, the bestowing of life on a corporeal frame, however simple the structure of that body, is of itself an act of creative power so inconceivably great, that we can have no title to presume that any change in the organization, such as the provision of bones and muscles, or the production of new organs of sense, is a higher effort of that power."*

The only supposition on which the idea of progression in creative power could be reasonably entertained, would be, that the Deity committed the fabrication of the world to inferior intelligences, and made it a sort of school of arts for the improvement of their ingenuity; a notion which might perhaps be grafted on the philosophy of the modern Platonists, but which is quite dissonant from that of the nineteenth century.

But we are physiologists, not theologians; apologizing therefore for the preceding remarks, which, however, we trust, will not be deemed altogether inappropriate as an introduction to our subject, we proceed to examine the volume before us.

This system of comparative physiology exhibits an extended acquaintance with facts and opinions, combined with cautious reasoning, and a candid spirit of inquiry. As this is the first work of the kind that has appeared in the English language, we shall give a short analysis of the contents of the entire volume, commenting upon them as we find occasion.

The first book is occupied with *a Comparison between Living Bodies and Bodies not endued with Life.* If it be true that all the physical sciences blend with each other, it is not less true that there are points at which each of them merges in metaphysics,—at which our progress is arrested by the difficulty of analyzing our own ideas, and affixing to the terms we use a precise and intelligible meaning. The attempts hitherto made to define an organised being, as distinguished from one that is inorganic, afford illustrations of this remark. Tiedemann has wisely abstained from any such attempt, and has employed himself more profitably in ascertaining the cognisable properties of each class of bodies. These are treated of under the heads of *Chemical Composition,* and *Mechanical Texture and Configuration.*

We have only space here for the general conclusions of our author. On the subject of chemical composition he observes,

* Bridgewater Treatise, p. 39.

"The principal result of the comparisons made between the composition of organic bodies and those of inorganic bodies, which comparisons are founded on observations and researches in the chemical composition of these bodies hitherto pursued, is that the former have peculiar matters, which we call organic, for their basis. The changes of composition which take place in bodies endued with life, are not simply the effects of affinities similar to those observed in brute or inorganic bodies; they are the effects of affinities and forces of a special nature. Organic matters are the only ones which exhibit, and for the greater period of time in a particular state of aggregation and form, called organization, the manifestations of activity which we designate by the name of life. They are accumulated at one time in bodies actually living, and life is manifested in them; at other times, they are exterior to living bodies mixed with inorganic matters, and then only capable of living. In this latter state they may return to the domain of living bodies, and into the tide of life, either in the shape of aliments, or, in a direct manner, by the aid of certain circumstances, as happens in spontaneous generation. Purely chemical affinities, or the action of simple chemical forces, appear, in the present state of our planet, to produce no organic combination or matter, such as albumen, gelatin, starch, gluten, &c.: at least, we possess no facts which go to support the contrary opinion. None but organic bodies themselves are capable of introducing inorganic matters into organic combinations, of which respiration in particular, and the nutrition of plants, are examples." (P. 12.)

A general comparison of the mechanical properties of the two classes of bodies is contained in the following passage.

"From the parallel which has been established between the form and aggregation of organic and those of inorganic bodies, essential differences are collected. All organic bodies have a regular form, terminated by undulating lines and surfaces, which are not flat. They all proceed from an assemblage of heterogeneous parts, both liquid and solid, having a peculiar mode of arrangement and distribution, and connected so as to produce an harmonious whole; in other words, engaged in a reciprocity of action necessary to the preservation of the individual. The form and aggregation sway each other mutually; the destruction of one leads to that of the other. All organized bodies preserve their form and aggregation by virtue of an internal activity under the influence of external circumstances, and amid incessant changes in their material substance, or their composition. They are developed from each other, produce themselves, are formed and maintained by their own activity, are subject to regular changes, and enjoy a certain durability.

"These bodies thus constitute separate beings, whose various parts, with their different qualities, have a configuration and an aggregation of such a nature, that unity, harmony, concurrence of actions to a common end, the preservation of the individual and of

the species, may, and in fact do, follow as results. They are relatively more perfect than inorganic bodies. This superiority of relative perfection is exhibited by the greater number of different parts and matters entering into their composition, as also by the more intimate connexion and more exact reciprocity of action existing between all these parts and matters, so that we cannot but recognise a train of coincidences tending to one end, or to unity of end." (P. 26.)

The origin of organic bodies has given rise to much interesting speculation; we need make no apology for introducing a long extract, which contains a very judicious review of the opinions that have been entertained on this curious subject.

"The solution of this problem passes the limit of our experience. Should we, however, wish to hazard an answer to it, we fall into the waste of conjecture, and are forced to erect hypotheses, which are but probable, and not at all certain. We suppose that organized bodies have existed in our planet from its commencement; or else we admit that organic matters and living bodies have been produced, under certain circumstances, together with the elements and inorganic matters, by the action of general physical causes; or, lastly, we conjecture that the substance of living bodies was primitively contained in water, as primitive organic matter, having the property of taking on the organic form; that it gave origin to organic bodies of very simple and varied kinds in consequence of circumstances, and that these bodies have passed successively to more complicated forms, until at length the generative organs and their manifestations of activity having appeared in them, they were endowed with the faculty of preserving themselves in a continuous manner, by means of generation, as separate species.

"Geology is opposed to the first hypothesis of the existence, in our planet, of living bodies from the first moments of its creation. Fossils are found only in the exterior crust, that is to say, in the superficial layers of the earth, the formation which is most recent, whilst there are none at all in the primitive earths. Consequently, there was a time when no living being existed on the globe. Even supposing we admitted this hypothesis, we should still leave untouched the question, how living bodies were formed, inasmuch as we could say nothing concerning the mode of origin of our planet and of the bodies which constitute it. In reference to this question, it matters little whether we declare for Vulcanism or Neptunism, since the geologists are under the necessity of leaving the origin of fire and water without explanation, and the biologist is still less able to pronounce any opinion on that of living bodies.

"The difficulties which occur in the second hypothesis, of the dependence of the production of organic matters and living bodies on the action of general physical forces, are, that we are actually in want of facts which would authorise us to conclude analogically that organic matters and living bodies can proceed from

inorganic matters, never having observed any thing similar, at least, up to this day. Far from this being the case, living bodies are unable to produce, with inorganic substances, the greater number of the materials which enter into their composition, and for such end they require the matter of other organic bodies, which they introduce into themselves. Plants are nourished principally by the remains of dead vegetables or animals: animals likewise preserve their existence by means of vegetables, and even of other animals.

"The most probable hypothesis is the third, viz. that the substance of organic bodies existed primitively in water, as matter of a particular kind, and that it was there endowed with the plastic faculty, that is to say, with the power of acquiring, by degrees, different simple forms of living bodies, with the concurrence of the general influences of light, heat, and perhaps also of electricity, &c., and of then passing from the simple forms to other more complicated, varying in proportion to the modification occurring in the external influences, until the point when each species acquired duration by the production and manifestation of activity of the genital organs. Although we cannot here also answer the question, whence came the water and the organic matter which it contained, yet this hypothesis is the one which accords best with the facts with which geology has latterly been enriched. In fact, we find no organized bodies belonging to what is called the primitive world in the strata of earths which modern geologists consider as the products of fire or of Vulcanism. They are only observed in the upper layers of the earth, in those of the latest formation, and in the soils which have evidently been precipitated in the midst of the waters. Aquatic animals existed before terrestrial animals. An argument which favours the hypothesis according to which the organic kingdom has been gradually developed and elevated from simple to more complicated forms, is drawn from the fact, that we meet with remains of organic bodies belonging to the most simple species in the secondary and more ancient soils, whilst the most recent strata of the earth contain the remains of more complicated living bodies. The soils which rest directly on primitive rocks present fragments of corals, radiated animals, and shells. It is only after these that remains of vertebrated animals, fishes, reptiles, and cetacea, are found in the water. Fossil bones of oviparous animals exist in the deep strata of the earth, whereas the viviparous mammiferæ are met with in the superficial layers. We observe the same in the organic complication of vegetables whose remains are contained in the different layers of the earth. Impressions of cotyledonous plants, especially of ferns, are the first vegetable traces met with in the deep seated strata. Then come the remains of monocotyledonous plants, of aborescent gramina, of palms, &c., and finally, those of the coniferæ, and other dicotyledonous plants.

"There have not yet been found any fossils belonging to apes or

man, whose organization has reached the highest degree of complication and development. We may therefore admit, with great probability, that apes and men are the last and the newest products of our planet." (P. 13.)

The translators have here inserted the following ingenious note.

"An additional argument in favour of this hypothesis, is the fact, that whenever animal matter shall have lost that power which gave and maintained it in a higher degree of complication in form and functions, no matter how high this degree, it invariably returns to the most simple forms. The noble human form, after the cessation of the functions, possesses only sufficient plasticity to take on the shape of the lowest insects and worms. The same applies to the kingly lion of the forest, and the soaring eagle. In fact, the matter composing each of these, after death, is in the same state as the matter which is described by Tiedemann as possessing merely the aptitude for life, and therefore taking on only the most simple form. Again, that external circumstances modify structure, is very well ascertained. The absence of light generally causes a mother to produce a deformed child, as Edwards observed in females confined in dungeons; whilst tadpoles, preserved from the light, became huge tadpoles instead of frogs. Natives of different climes have different parts of their organization prominently in action: the muscular system, for instance, is much more developed in cold than warm climates; on the other hand, natives of the tropics are from birth more excitable than those of northern parts of the globe; in other words, the animal nervous apparatus is more developed. In a pure hypothesis it is not expected that the modus operandi of the circumstances to which Tiedemann alludes should be explained; collateral evidence is certainly in favour of it." (P. 16.)

The remark is original and apposite.

"Another circumstance," continues Professor Tiedemann, "favourable to the hypothesis of the gradual development of organic bodies, from the most simple to the most complicated, is, that all those bodies, as well vegetables as animals, to this day appear in a simple form, at the period of generation, or when they proceed from the germ, and that it is only by degrees they acquire the most complex form peculiar to such species. To commence in a very simple manner, and to rise thence to the complicated, is the general character of every thing that has life, as well of individuals as of the entire of the organic kingdom.

"These reasons, coupled with the fact that, after the extinction of the life of individuals, the materials of organized bodies are reduced to the most simple organic forms by the action of what is called spontaneous generation, oblige us to admit a primitive organic matter extended on the surface, or in the crust and waters of our planet, concerning the first origin of which matter it is as

possible for us to certify any thing as on that of the planet itself. This organic matter, with its different organic modifications, considered as matters of a peculiar species, sometimes is seen active and living in the individuals of vegetable and animal species actually existing, under conditions and in the midst of phenomena, the recital of which will be made hereafter; at other times remains merely capable of enjoying life, and endued with the faculty of taking on, in certain circumstances, the most simple organic forms, whenever it has been withdrawn from the composition of living bodies.

"Several naturalists, particularly Buffon and Needham, have allowed the existence of a matter peculiar to living bodies. G. R. Treviranus concludes from his researches on life—

"1. That there is in nature a matter which is ever moving, by which all living beings, from the byssus to the palm, and from the infusoria animalculæ to the sea-monster, possess life, and which, though immutable in its essence, is, notwithstanding, variable in its form, and is incessantly changing it.

"2. That this matter is deprived of form in itself, but nevertheless ready to take that of life; that it maintains a determinate form under the influence of external causes; that it only continues in that form so long as these causes are active, and that it takes another so soon as new causes influence it.

"3. That the matter capable of life, and the living principle, exist reciprocally, and that death is only a passage of certain forms of this matter to certain others." (P. 16.)

It may be interesting to compare the view here taken of living matter by Treviranus with that of John Hunter.

"Animal matter, then," says the latter author, "is the result of a peculiar combination of other matter; and this combination, or modification of common matter, may be endowed with the living principle or not, the living principle not depending on that modification of matter which renders it animal matter; for this modification, which is peculiar to animal matter, and which constitutes it, may remain when the living principle is gone. Life is therefore something superadded to matter thus modified, or it is such an arrangement of the most minute particles of this modification as life may arise out of it, which arrangement may be the principle of life; and, if this arrangement be destroyed, the principle of life is also destroyed, and the part becomes dead animal matter; and, though it has suffered this alteration in its arrangement, and the loss of this principle, yet its modification, as far as our senses can discover, remains the same."*

The philosophical caution of this opinion of Hunter's cannot be too much admired.

* Parkinson's Hunterian Reminiscences, p. 2.

The hypothesis maintained by Treviranus may also be advantageously compared with that of Aristotle, who taught that a plastic energy exists throughout the universe, which causes matter to assume the forms of life: ἠτε ἐν φυτοις, και ζωοις, και δια παντων διηκουσα, εμψυχος τε και γονιμος ὀυσια,—"pervading plants, and animals, and all things,—a living and generative nature."*

He appears to have considered all *activity* as *life:* for he tells us that the heavens, (meaning thereby the universe,) are animated;† and he ascribes their activities to a portion of the soul of the universe, just as he ascribes the unconscious actions of the animal body to a portion of its soul.‡

The question how far all activity is life need not be argued, because it is one merely of words; but the fact that ordinary matter is never observed to take on the forms of organisation, appears to justify the conclusion of Treviranus and others, that the capacity of doing so is confined to a particular kind of matter. In separating the plastic power from the matter of which it may possibly be only a property, Aristotle falls into an error, exceedingly common with him and all the Greek philosophers,—the disposition to mistake properties for substances, to make entities of attributes. On the other hand, Treviranus is incautious in asserting absolutely that the matter capable of life and the living principle exist reciprocally: life may be a property of matter, or it may be something superadded to matter,—we know not which.

In the infancy of geology, the Aristotelian doctrine of plasticity gave birth to a very curious notion. The organic impressions found in rocks were considered, not as the actual remains of living beings, but as the productions of the *vis plastica*, vainly labouring in the bowels of the earth to evolve the forms of life: nature, hemmed-in and oppressed by unfavourable circumstances, could produce nothing but these stony abortions. This opinion, though often controverted, pervaded the writings of geologists, from Albertus Magnus§ to Dr. Plott,‖ the latest author of note who defended it.

The idea is one of the wildest in the romance of science;

* Lib. De Mundo, c. iv., ed. Du Val.
† De Cœlo, lib. ii. c. 2, 12, ed. Du Val.
‡ Vide Cudworth's Intellectual System of the Universe, book i. c. 3.
§ De Mineralibus et Rebus Metallicis, lib. i., tract ii., c. 8. Ed. Colon. 12mo. 1569.
‖ Natural History of Oxfordshire, c. v. Folio. Oxford, 1705.

a subject on which an entertaining, and perhaps not uninstructive, work might be composed.

The subject of the second section of this book is a *Parallel between the Manifestations of Activity of Organic and those of Inorganic Bodies.*

The first chapter treats of the manifestations of activity common to organic and inorganic bodies, and their modifications in the former.

The causes of activity in organic bodies may all be reduced to repulsion and attraction: the first includes impenetrability and extension; the second, mechanical attraction, gravity, cohesion, and chemical affinity. These properties are common to inorganic and organic bodies, but in the latter they become modified by *life*, which always influences, and sometimes appears to antagonize them.

The second chapter is on the manifestations of activity proper to organic bodies.

All organic bodies are in a state of continual activity, and undergoing perpetual changes. Some of their actions and mutations take place uninterruptedly during the whole life of the individual; there are others which present themselves only once, and some that occur only at certain periods. In the first class, nutrition holds a prominent place; and, on the whole, the functions by which a living individual maintains itself as such, are the following:

"1. Taking from the external world liquids and solids, entitled aliments, which is performed by absorption, or by particular movements.

"2. Absorption of gaseous substances from the media which surround them, and expulsion of their materials in the same form, to wit, respiration.

"3. Conversion of the food, or gaseous bodies, which they have absorbed, into a mass resembling that of their own humours, —assimilation.

"4. Movement of the humours between the interstices of the solid parts,—the circulation.

"5. Conversion of the humours into solids, or combinations of these humours with the solid parts, and preservation of the properties of the latter,—nutrition properly so called.

"6. Lastly, preparation of particular liquids, at the expense of their humours,—secretion." (P. 31.)

The second class of vital activities, which come into play only once during the existence of the individual, are those connected with the origin, the development, and the periods of life or of age. The consideration of the origin of life leads

the author to the theory of generation. The kinds of generation are three.

1. *Spontaneous generation*, (generatio æquivoca, spontanea, heterogenea, primitiva,) as observed in the products of putrefaction. A simple modification of this is found in the formation of the *entozoa*. On these our author remarks,

"The reasons alleged by Pallas, Müller, Werner, Bloch, Goeze, Braun, and especially G. R. Treviranus, Rudolphi, and Bremser, forbid our admitting that they come from without the animal, since they are not found out of it, nor in the earth, nor in plants, in which they cannot exist, and since they are met with sometimes in organs, such as the eye, the brain, the muscles, and others, which have no communication whatever with the external parts. We must, therefore, with these naturalists, regard them either as the products of non-assimilated elements, or as morbid productions, which, in certain circumstances, are formed in the humours or the parenchyma of the organs. However, many of them, being once formed, are provided with genital organs, and are reproduced by generation properly so called.

"The results of observations and researches on this subject equally impose on us the necessity of admitting the axiom established by G. R. Treviranus,—that there exists a matter peculiar to organic bodies, capable of life, and having the property of taking on certain forms, at the same time that it acquires a particular mode of action. The manner in which this property is manifested in the actual development of form, is dependent on the conflict and reciprocity of action existing between organic matter and external or physical influences, according to which circumstances it takes either an animal or vegetable form." (P. 40.)

2. *Generation by division or scission of an organ into new individuals*, (generatio fissipara,) which occurs only in very simple organised bodies, composed of one homogeneous substance; as in some infusoria, in confervæ, and sometimes in fresh-water polypi; in which latter, however, it scarcely ever happens, otherwise than accidentally, and under particular circumstances.

3. *Generation by germs.* When organic beings are multiplied by means of parts separated from their bodies, to form new individuals, the parts thus produced are called *germs.* Propagation by germs is divided into that by *shoots* or *sprouts*, and that by *reproductive corpuscules.*

In the propagation by shoots or sprouts, the germ is elevated on the surface of the body producing it, in the form of a swelling, which gradually increases in size, and is finally detached, to constitute a separate individual. This mode of propagation is exemplified in the armed polypi, vorticellæ,

corals, &c. In plants, it is only found in conjunction with other modes; thus, many plants which produce seed also multiply by creeping roots, shoots, and twigs.

In the mode of generation by reproductive corpuscules, globules or grains are emitted, from which new individuals proceed.

a. The production of these corpuscules sometimes occurs only at a particular part of the parent organism, and is accomplished by special organs, which may be regarded as the first rudiments of the female organs of generation. In the *gorgonia, madrepore, sertularia, red coral,* &c., there is formed, in the central substance of the polypus, and not far from its arms, a small membranous sac, containing the corpuscules, which, being detached, bursts, and discharges the corpuscules. The organ which prepares the corpuscules is annually formed, and thrown off, together with its contents. In other instances, the corpuscules are enclosed in tubes or bladders, as in the *medusæ*, or disposed in a fan-like manner, as in the *actiniæ.* Some vegetables are found to propagate by similar collections of germs, to which botanists have assigned different names; and a number of phœnogamic plants, provided with proper sexual organs, multiply also, independently of these, by knots, tubercles, bulbs, and buds; thus combining the two modes of generation.

b. At other times the corpuscules are diffused through the whole organism, and developed in several places; as in certain zoophytes, and in some acotyledonous plants, as *confervæ, ulvæ, fuci,* &c.

4. *Generation by two sexes,* as in the mammalia, birds, reptiles, fishes, crustacea, insects, most of the mollusca and annelidæ, and some of the entozoa.

A third class of vital activities was enumerated, which present themselves only occasionally, or at certain periods.

To this class are referred those diurnal changes in living bodies which are connected with the earth's movement round the sun, and other external circumstances, as sleeping and waking in animals, and the phenomena indicative of corresponding states of repose and activity in many plants: also those manifestations of activity and development which occur at longer intervals; as, in animals, all the phenomena connected with procreation,—the renewal of hair, feathers, skin, scales, antlers, &c.,—hybernation,—migration; in vegetables, the annual changes evinced in germination, the evolution of leaves and flowers, fecundation, the fall of the fruit, the decay of the leaf. These periodical changes arise from the

action of light, heat, and other external agents, on living bodies, which varies according to the situation of our planet in reference to the sun.

Among the occasional manifestations of vital activity are to be reckoned the restoration of continuity in divided parts, and the regeneration of those that have been lost. These phenomena are familiar both in the animal and vegetable kingdom.

The author's remark, that regeneration of parts in warm-blooded animals is confined to the epidermoid textures, is not strictly accurate: the translators correct it in a note, in which allusion is made to recorded instances of regeneration of the glans penis and phalanx of the finger. It is added,

"Can we consider the growth of a third set of teeth, in old age, as a regeneration of lost parts, since two sets only are usual? also of their sockets? Some instances of this are quoted by Dr. Mason Good, Study of Medicine, vol. 1, page 55, from the German Ephemerides, Medical Commentaries, &c." (P. 441.)

The second book contains *a Comparison of Animals with Vegetables.*

In the first section their *material composition* is considered, under the heads of chemical composition, external configuration, and aggregation, or intimate structure.

We could have wished to have extracted the chapter on external configuration entire, but we have not space; and, as it does not admit of condensation, we must be content with recommending it to the attention of the reader.

The third chapter, on intimate structure, involves an excellent epitome of general anatomy, the more valuable for including that of vegetables; but it will not be expected that we should enter into such a subject here.

The second section compares the *manifestations of activity* of plants and animals. These are considered under three divisions, treating, 1, of the functions of nutrition; 2, of the evolution of imponderable matters; 3, of the movements.

The functions of nutrition are illustrated under the head of aliments,—of the reception of aliments by absorption,—of the reception of aliments by the buccal aperture,—of the assimilation of aliment in the first passages,—of respiration,—of the movement of the nutritive fluid,—of nutrition,—of the secretion of humours.

Taking the eight chapters devoted to these subjects in the mass, (for it would be impossible to condense them within the limits of a review,) we shall merely offer a few excerpta,

as specimens of the author's manner, and inducements to the reader to peruse the entire work.

From the chapter on respiration we may quote the author's summary view of this process, and its uses in the vegetable economy.

"If we compress into a small space the phenomena of the respiration of plants, we see that they consist in the exhalation of water in the vaporous form, and of oxygen gas during the day, under the influence of the sun's light. The water comes from the sap which the roots send, by the sap-vessels, into the parenchyma of the leaves, and from the moisture these absorb in the night-time. The primary effect of the evaporation of this water is the condensation of the organic matters contained in the sap. The oxygen gas is in great part taken from the carbonic acid absorbed during the day, and from the water impregnated with this gas, which the roots bring from the soil, together with the organic matters; these are the sources to which Senebier, Woodhouse, and Saussure assign it. Possibly, it also partly arises from the oxigenated organic combinations contained in the sap, that is, from the acetic acid, the sugar, and the matter analogous to gum. It is not certain that the water of the sap is decomposed by the respiration of plants, as Berthollet and Thomson have supposed, and that a part of the oxygen proceeds thence; Saussure rejects this decomposition as by no means probable. The exhalation of oxygen increases the proportion of carbon relatively to the other elements of the sap, just as its absolute quantity becomes greater by the absorption of the carbon contained in the carbonic acid of the atmosphere. In support of this hypothesis, the experiments of Chaptal, Hassenfratz, and Senebier, may be quoted, from which it follows, that plants which have increased in the shade contain much less carbon than others which have been exposed to the light." (P. 119.)

"The acts of respiration which living leaves execute under the influence of light, are of the highest importance to the life of plants. If plants be deprived of their leaves, or if they lose them by cold or the destructiveness of insects, their nutrition and growth are stopped, the development of the flowers, the act of fecundation of the fruit and seeds, cease to occur, and the already formed fruit does not ripen. It is true, that perennial plants then shoot out new leaves, because the buds which should not open until the year after are developed; but this loss does not on this account less frequently cause the death of vegetables.

"If we inquire in what respect respiration is necessary to the life of plants, we can find no other use for it than to produce the nutritive juice, properly so called, or the cambium, from the sap sucked by the roots. The sap, which reaches the leaves colourless, not coagulable, without globules, and composed of water holding in solution carbonic and acetic acids, a gummy saccharine matter and divers salts, is in them converted into a greenish liquid, partly

coagulable and filled with globules, which the nutritive vessels return into the trunk of the plant, where it serves for the proper nutrition, as also to the formation, the development, and growth of the parts. It is from this liquid that, in perennial plants, the matter necessary to the production of new ligneous and cortical layers is deposited; it is this which furnishes the materials of which new shoots are formed.

"The juice expressed from the leaves contains the green fecula, which is precipitated as a sediment. In this fecula are perceived green grains or globules, which do not exist in the sap. From the experiments of Rouelle, Einhof, Proust, Vauquelin, Pelletier, and Caventou, it follows that it is composed of a green resinous matter, soluble in alcohol and ether, and combustible, called chlorophylle, of starch, or matter-like gluten, and vegetable albumen. When the juice is heated, it partly coagulates in flakes, and acids precipitate it. Senebier and Gough clearly demonstrate that the green colour of plants depends on respiration, subservient to the influence of light. The conversion of the matters contained in the sap, of the carbonic acid suspended in water, of the acetic acid, of the sugar, and the gum, into more compound organic combinations, such as they exist in the green fecula, are to be considered as an effect of respiration, for which no satisfactory theory has yet been given. From the facts hitherto obtained concerning respiration, the following is the least strained explanation of it. The matters existing in the sap, the acetic acid, and particularly the gummy saccharine principle, are organic combinations of an inferior kind, containing a vast quantity of oxygen relative to the carbon. Again, in the fecula are found starch, a substance approaching to gluten, and albumen, in the composition of which matters less oxygen enters in proportion to the carbon. It is precisely these changes in the respective proportions of the two elements, which seems to be the result of respiration, since the absorption of carbonic acid from the air augments the mass of carbon, either absolutely or relatively to the oxygen, and the quantity of the latter is perhaps diminished by exhalation. From this it follows, that the organic combinations of a lower degree that exist in the sap are converted into others of a higher degree, which are found in the green fecula. Lastly, in regard to the azote contained in the glutinous matter and albumen of this fecula, it is probably taken from the humours, | and is already existing in the sap, wherein some chemists have found an azotized substance. With the formation of organic combinations of a higher degree, which accompanies respiration, seems also to be connected the first appearance of the organic materials of aggregation or globules." (P. 121.)

All the green parts of plants participate in the function of the leaves; while other parts, as the roots, flowers, and fruits, effect chemical changes in the atmosphere, different from those produced by the leaves.

"Roots that have recently been dug from the soil, when placed in a receiver full of moist atmospheric air, from which the stalk and flowers project, and the ends of which alone are immersed in water, absorb oxygen, and exhale a little carbonic acid gas, during the day, according to the experiments of Th. de Saussure. They therefore act like the leaves during the night. When he introduced nitrogen, hydrogen, or carbonic acid gas, into the receiver containing the roots, the plants soon perished.

"The action of the flowers on the atmosphere likewise differs from that which the leaves exert. Th. de Saussure found, in his experiments, that all, even those of aquatic plants, absorb oxygen gas, and that they are not developed in media deprived of this gas. They faded in a vacuum and in nitrogen gas. When a flower is placed under a receiver full of atmospheric air, and stopped by a bath of quicksilver, the quantity of air is but slightly diminished, or even is not at all diminished, so long as there remains any oxygen gas. The flower absorbs the oxygen, and replaces it by a nearly equal quantity of carbonic acid gas. The operation is accelerated by the influence of solar light and heat, whereas it is much more slow in the shade. In general, equal weights of flowers produce more carbonic acid gas than green leaves disengage in darkness, in the same space of time. The absorption of oxygen gas, and the production of carbonic acid gas, take place chiefly by the genital organs. Formerly Saussure supposed, and Grischow also thought he remarked, that flowers exhale nitrogen; but, in his later experiments, he was convinced they gave out neither azotic nor hydrogen gas.

"Regarding the changes which the fruit occasions in the atmospheric air, Th. de Saussure found green fruit determine similar ones to those produced by the leaves. Exposed to the air, they absorb, according to him, carbonic acid gas and exhale oxygen, in smaller quantity, however, and less freely, as they approach the period of ripeness. Berard, again, assures us, that he remarked, in his experiments on the ripening of fruit, that green fruits, raspberries, pears, apples, apricots, figs, cherries, gooseberries, grapes, &c. do not act like the leaves at any period of their growth, under the influence of solar light; that they do not absorb any carbonic acid gas, nor do they exhale oxygen. He maintains that their sole action on the atmosphere, as well in light as shade, consists in the absorption of oxygen and the exhalation of carbonic acid. This contradiction determined Saussure to undertake fresh experiments, and he has shown that green fruits, cherries, plums, pears, and grapes disengage oxygen, and absorb carbonic acid, in the solar light, as well in air containing carbonic acid as in water holding this acid; that, on the other hand, in darkness, they absorb oxygen and exhale carbonic acid gas, and that consequently they act on the air in the same manner as the leaves, although in a less powerful degree. If their growth go on tardily, they destroy the purity of the

air under any circumstances, but less in light than in darkness. Lastly, he thought he found that, in the immature state, and at the time they began to get sour, they also absorb a part of the oxygen of the air, which might consequently contribute to the development of their acidity." (P. 123.)

Under the head of Nutrition will be found some philosophical observations on the plastic power of living bodies. Our author strongly and successfully maintains the doctrine of a vital principle, against the iatro-chemists and iatro-mechanicians, whose hypotheses, several times exploded and revived, have been blended into one, which now prevails to a considerable extent on the continent of Europe. The doctrine, we think, can hardly fail to be again, and finally discarded, as one equally opposed to the facts of science, and to the common sense of mankind.

The second division treats of the evolution of imponderable matters.

The functions of life are, in certain instances, attended with those phenomena which some philosophers believe to arise from the movements of imponderable matter, and which others attribute to particular modes of activity in common matter. Such are the production of heat, light, and electricity.

In the chapter on Vital Heat, the author has occupied himself more with facts than theories,—and he is right: for none of the theories hitherto promulgated explain the phenomena. The following is a judicious summary of what is known on the subject of animal and vegetable heat.

"The only point that can be regarded as placed beyond doubt is, that the evolution of heat is a vital act which depends immediately on the process of nutrition, the conditional and preservative cause of life. The taking of alimentary matters, and their assimilation by digestion and respiration, the circulation of the fluids, nutrition, and secretion, the renewal of materials that accompanies the exercise of life, and the incessant changes of composition in the solids and liquids, all which are under the influence of the nerves, also act a part in the production of heat; and it is erroneous to seek the cause of it in any one of these acts only. The intensity of the evolution of heat, and the property of maintaining itself at a certain temperature proper to each species, are, in animals, in direct ratio with the composition of their organization, and with the sum and intensity of their manifestations of activity. Birds and mammifera, which take aliment at the shortest intervals, which digest with the greatest rapidity, which consume the most oxygen, and give out the most carbonic acid,—whose circulation is most rapid and energetic, which exhibit the greatest pertinacity in their movements, in which we observe the strongest effects of the nervous

system, which secrete the greatest quantity of diversified humours, and in which, in short, all the phenomena proclaim that the renewal of matters takes place in the most speedy manner; these have the highest degree of heat, and are able to maintain it with the greatest uniformity at the temperature proper to each of them. Amphibia, fishes, insects, mollusca, and worms, whose structure is less complex, whose vital phenomena exhibit less diversity, and in which the above-named factions of life have less intensity, have also a lower degree of heat, are more subject to variation in their temperature, and have their faculty of generating caloric confined to smaller limits.

"Further, the generation of heat resulting from the renewal of matter, and the changes of composition ever accompanying life, varies in animals, within certain limits, according to the development, the periods of age, the nature of aliment, and the manner of performing digestion, according to the respiration, the circulation of the blood and the nervous influence, the seasons, even according to the periods of the day, during waking and sleeping, according to the external stimuli that affect animals, and finally, according to diseases, medicinal remedies, and poisons. The proofs in support of this assertion shall be given when we treat of the heat of man.

"In plants, an evolution of heat seems to occur, though only to a small degree, during the acts of respiraton, nutrition, and secretion, as also during fecundation and germination. But vegetables do not appear to undergo continual changes in consequence of their internal activity, in their solids when once formed, as is observed in animals, in which the matter of the different tissues is incessantly changing; neither do they execute voluntary movements, nor does the entire group of nervous functions belong to them, so that they lack the chief sources of the generation of heat." (P. 247.)

It has been thought that Crawford's theory of animal heat derives great support from the fact, that, throughout all classes of animals, the more the lungs, by the extent and perfection of their organization, favour the chemical changes in the blood, the higher is the temperature of the animal, compared with that of the medium it lives in.* The observation we believe to be just; but we suspect that it is so, only because the higher organization of the lungs is connected with a more perfect development of the whole apparatus of life; and hence, that Professor Tiedemann's estimate of our knowledge of animal heat is correct: it amounts briefly to this,—the greater the activity of the general functions of life, the higher is the temperature of the animal.

The chapter on the Evolution of Light contains a sum-

* Bostock's Physiology, vol. ii. p. 275.

mary of all that is known on phosphorescence. This phenomenon, familiar as occurring in dead vegetable matter, is also stated to have been observed in some living plants, which, as well as the author's observations, are fully enumerated.

"The causes of phosphorescence in vegetables are not yet ascertained. Pultney and Volta regarded it as an electric phenomenon, produced by the idio-electric pollen. But against this may be advanced the fact of Haggren having seen the light proceed from the petals and not from the filaments of the stamina. Probably it is owing, if it occurs at all, to the emanation of a combustible matter, perhaps a volatile oil, which enters into a kind of combustion under the influence of the air. The *Dictamnus albus* is said to spread around it, during the warm summer evenings, an atmosphere that takes fire on the approach of a candle, and gives a brilliant blue flame. The phosphorescence of cryptogamia appears likewise to be owing to a slow combustion, if we may judge from the foregoing experiments." (P. 257.)

The phosphorescence of living animals is also amply illustrated. On the curious subject of the luminous appearance of the sea, the translators give a note, which condenses all that is known on the subject.

The chapter on the Electrical Phenomena of Living Bodies is no less learned and judicious than the rest of the work, and the anatomy of several electrical fishes is given with accuracy and minuteness.

The third division treats of the movements of organic bodies. In the first chapter, the movements of animals are referred, 1, to those of muscles; 2, of the cellular and other tissues; 3, of globules, or organic molecules; 4, movements of turgescence; 5, movements of the nerves. The second chapter treats of the various movements of vegetables; and the third, of the causes and powers which determine the movements of living bodies.

This division involves a review of many well-known physiological theories, and brings us back to the beaten paths of the science, over which the author diffuses a light, derived from the vast range of natural knowledge contained in the preceding portions of the volume. It is not necessary that we should enter into these subjects: we trust enough has been said to convince the reader of the great importance and admirable execution of the work.

To the translators the profession is much indebted for the introduction of such a book into English literature. Their version of the author is correct and perspicuous; and the sound judgment and accurate information evinced in the

notes, induces us to regret that their comments have not been more extended.

It is scarcely worth while to allude to typographical errors; but we may just suggest that the correction of not a few will materially improve the appearance of the second edition,—which we hope will speedily be called for, as the work is one which ought to find immediate access to the library of every advanced student of physiology.

A Practical Treatise on Lepra Vulgaris; to which are added, Observations on the Treatment of some of the Local Varieties of Psoriasis. By Edward Beck, m.d.—Ipswich. 8vo. pp. 74.

The common remedies prescribed for the cure of lepra are, as our readers well know, dulcamara and arsenic. Our author has tried them both, but without being satisfied with either; and he objects to the latter and more potent medicine, first, that it is dangerous in the doses which are required for the cure of the disease; and, secondly, that this cure is not permanent. He has therefore adopted a different set of remedies, and, as he informs us, with great success.

If the disease is of long standing, and there is considerable pain and inflammation, Dr. Beck, before commencing what he calls his "specific plan," premises a few doses of aperient medicines; such as equal parts of Pil. Rhei c., and Extr. Colocynth. c., with or without the addition of blue pill. In such cases, too, half a drachm of precipitated sulphur, with five grains of the dried subcarbonate of soda, two or three times a day, is found to reduce the irritation. The best local applications are the Liq. Plumbi Subacet. dil., or "a lotion containing the Plumb. Subacet. in combination with Zinci Sulphas." (P. 22.) This latter lotion can hardly be said to contain a combination of the two metallic salts, for they decompose each other, forming a solution of acetate of zinc, in the manner directed in the Edinburgh Pharmacopœia; but the lotion should be filtered, to separate the insoluble sulphate of lead. When the irritation has been mitigated by these means, the specific remedies may be prescribed; and, in mild cases, the treatment may commence with them. They consist of tar, exhibited externally and internally, in the following manner.

"The specific plan consists in applying the following liniment to the parts affected:—R. Picis Liquid. Sulphuris. Adipis Præpar. sing. unciam. misce.

"The following pills are at the same time to be taken regularly:

—℞. Picis Liquidæ unciam dimidiam. Flor Tritici q. s. misce. et divide in Pilul. sing. gr. v. iii. ad vi. ter in die sumantur.

"Where the irritation is very considerable, a milder liniment may first be had recourse to, as the following:—℞. Picis Liquidæ. Sulphuris singul. unciam dimidiam. Adipis Præparat. unciam. misce." (P. 24.)

As these ointments are stimulant, it is requisite, in cases where the irritation is considerable, not only to begin with the milder one, but to let it remain on the skin for a minute or two only. It is likewise requisite to continue the use of the pills for some time after the disappearance of the eruption. To prevent the pills being tasted, (as they are then apt to cause nausea,) the best method is to take them "at the point of a tablespoonful of gruel."

Dr. Beck tells us that "two months will be required for the cure of lepra in its advanced stage; and, where it has been of very long standing, it may even be prudent to continue the pills somewhat longer." (P. 32.)

We will now give an abstract of our author's cases.

Case i. A patient, who had been treated for several months in the manner recommended by Willan and Bateman, but who, far from improving, was getting worse, came under our author's care, suffering from lepra in a very violent form. After trying a variety of remedies for ten days, the Liquor Arsenicalis and Decoct. Dulcamaræ were prescribed, and persevered in for nearly three months, with great advantage. They were now omitted; and, after exposure to cold and wet, the disease returned in an aggravated form. The medicines were resumed, but in vain. A strong solution of the nitrate of silver was now applied, to a small part of the arm, with much benefit, and the tar ointment and pills being soon after exhibited, a complete cure was effected in a few weeks.

This patient has since had some slight returns of the eruption, which have been immediately removed by the use of the pills.

Case ii. S. W., æt. sixty-one, who had tried a variety of treatment without benefit, applied for advice, in consequence of one leg being enveloped in a thick crust, from just below the patella to the instep. The disease was so far advanced, that its characteristic marks were no longer obvious, and our author did not recognise it till his third visit, when a new leprous spot was visible. This patient soon got well under the use of the specific.

Case iii. H. L., æt. eleven, had suffered from lepra for six years. In this case, Dr. Beck says, "I prescribed for this patient fifteen grains of Sulph. Præcip., with five grains

of Soda Exsic. twice in the day, and a dose of the pills, with Extr. Coloc. comp., and Pil. Rh. comp., three grains of each, every second night." (P. 45.) We do not know what is meant in this passage by "the pills:" we should have understood the tar-pills, were it not that our author says, in the very next sentence, "as there was little local irritation in this case, the stronger Ung. Picis comp., after a few days, was applied to the arms, legs, and head, but no Pil. Picis were prescribed."

We must observe, however, that this little work is somewhat carelessly written: in several places Dr. Beck calls his ointment a liniment, and in others gives this name to a cerate of camphor. Then, too, at pp. 22 and 23, he has allowed his printers to put *granas* for *grana:* but, instead of dwelling on these niceties, we will return to our analysis of the case.

The tar-ointment alone was first used: this cured the arms, and benefited the legs, but scarcely affected the leprous eruption on the head. Dr. Beck then ordered the head to be dressed alternately with the Ung. Picis comp., and the Ung. Hydrarg. Nitr. This improved the state of the head; but, as the disease returned on the fore-arms, our author thought it necessary to administer the tar-pills, which completed the cure. A slight eruption of a suspicious character subsequently appeared on the fore-arms: for some weeks nothing was prescribed, and there was no alteration in the disease; but it was then removed by the Ung. Hydr. Nitr.

Case iv. The patient, a young woman of seventeen, was suffering from the disease, in its acute form. After purging for a week, the milder ointment and the pills were prescribed with great advantage; yet it was necessary, in order to effect a complete cure, to use an ointment more tarry even than the strong one given above; this being the only case in which our author has ever found so stimulating an unguent requisite. The following is the composition of the Ung. fortiss.

℞. Sulph.
Adip. Præpar., aa ℥ss.
Picis liquidæ, ℥j.

Case v. This patient had suffered from slight attacks of lepra for several years, but it had not affected the scalp till within a few months. He did not wear clothes enough to keep him warm; an absurdity which Dr. Beck has remarked in most of the leprous patients who have come under his care. We will give the treatment in our author's own words.

"The treatment in this case varied but little from that pursued

on other occasions. The pills, composed of equal parts of Pil. Rhei comp., and Extr. Coloc. comp., were given a few days, and the Liquor Potassæ, in doses of twenty drops, three times in the day.

"The stronger Ung. Picis comp. was soon applied to the few patches on the lower extremities, and the Pil. Picis Liquidæ were directed to be taken, and increased to eighteen daily.

"To the head, the Ung. Hydrarg. Nitrat. was applied alternately with the Ung. Picis. comp.; the hair being kept as closely cut with scissors as possible.

"In this, as in other cases under my care, the disease on the scalp proved more obstinate than on the limbs, and continued to require attention some little time after it appeared perfectly well elsewhere.

"The following ointment was, after a time, substituted for the alternate use of the Ung. Hydrarg. Nitrat., and Ung. Picis comp., and with most satisfactory results:—℞. Picis Liquidæ, Sulphuris Ung. Hydrarg. Nitrat. sing. unciam. dimid. Misce.

"The use of flannel and warm clothing generally was manifestly beneficial to the general health, and aided powerfully, I am persuaded, the other means for removing the disease." (P. 53.)

CASE VI. **The disease in this instance was of a very acute form, and seems to have been produced by eating plentifully of codfish, for several successive days.**

"In this case, the following was the plan of treatment adopted. An active aperient of Pil. Rhei. comp., and Extr. Colocynth, comp. was given every second night, and the Sulphur. Præcipit. in combination with the Sodæ Subcarb. Exsicc., was taken three times in the day.

"After a few days, the heat and irritation being much moderated, the powders and pills were discontinued, and the Infusum Rosæ, containing a drachm of Magnesiæ Sulphas in each dose, was substituted. In ten or twelve days the disease was on the decline; and, in three weeks from the attack, it was perfectly removed.

"I have met with two other instances of lepra being occasioned by errors of diet, not very unlike the foregoing. In one case, the individual had partaken plentifully of cucumber; and in the other case, of walnuts.

"The Pilul. Picis Liquid., and the Unguent. Picis. comp., would, I am persuaded, greatly aggravate all the symptoms in cases of this kind. This form of lepra, unlike the other, has an evident tendency to spontaneous cure, and will disappear in two or three weeks, under common antiphlogistic treatment, attention being paid to the state of the stomach and bowels." (P. 55.)

Our author remarks, in his recapitulation, that asthma sometimes appears to alternate with lepra; and that, in such instances, it would probably be injurious to repel the latter by astringent applications, unaided by internal remedies.

Dr. Beck's essay on *Psoriasis* is short, but bears marks of careful observation; yet we hardly understand the distinction he draws, when he says that "the parts occupied by the eruption of psoriasis have a rough chapped appearance, and somewhat resemble lepra, if looked at superficially only; but, when attentively examined, and with the aid of a magnifier, the difference is very striking. This rough appearance is not occasioned by scales, as in lepra, but by numerous partially detached, minute portions of cuticle." (P. 63.) Surely "partially detached minute portions of cuticle" are scales. Bateman, too, puts psoriasis, as well as lepra, among the scaly diseases.

After the preliminary use of aperients and tepid ablution, our author employs a cerate, composed of half an ounce of camphor to two ounces of Cerat. Cetacei, and the following powder:

℞. Sulph. Præcip., gr. xxad xxx.
Sodæ Subcarb., gr. vj.
Ft. pulv. nocte et manè sumendus.

The quantity is to be such as to relax the bowels; but, if the patient dislikes the powder, the Liquor Potassæ may be substituted, and the bowels kept open by the Pil. Rhei c., with or without a grain or two of blue pill; but the powder is more efficient. After a few days, the strength of the camphorated cerate may be increased. Three cases are given at length, in which these remedies were employed.

Case I. A lady, æt. sixty, had suffered from psoriasis palmaria for several years, and, during great part of the time, from severe dyspepsia. The disease was much mitigated in a short time by the plan of treatment just mentioned; the Pulv. Rhei c. and the Liq. Potassæ being substituted, after some time, for the powder.

Case II. D. S., æt. thirty, had suffered from psoriasis labialis, and dyspepsia, for several months. The Decoct. Aloës c., with magnesia, the powder, and the camphorated ointment, ultimately effected a cure, though the case was the most obstinate that Dr. Beck has ever seen.

Case III. G. L., a gardener, aged about forty, had suffered from psoriasis diffusa for several years. "Nausea, heat, and thirst, with a general feeling of indisposition, were complained of, as well as want of appetite and restlessness at night. The tongue was much loaded, and the breath very offensive, as I have generally observed in psoriasis. The treatment in this case was antiphlogistic for several days, with frequent ablution of the parts, which were much inflamed and painful, with warm decoction of bran."

(P. 73.) The feverishness having been moderated in this manner, a perfect cure was soon effected by the powder and cerate.

This occurred three years ago: a relapse has since taken place, but the disease speedily yielded to the same treatment.

Dr. Beck's treatment of lepra is, we believe, quite new as regards the pills; a tar-ointment has already been recommended. "As external applications," says Mason Good, "most benefit appears to be derived from the tar-ointment, as employed by Dr. Willis, and a dilute solution of sublimate, or the unguentum hydrargyri nitrati, as recommended by Dr. Willan." (*Study of Medicine*, vol. iv. p. 455, fourth edit.) It is also among the remedies advised by Bateman. (*Practical Synopsis*, p. 33, sixth edit.)

In the treatment of psoriasis, too, Bateman says, "if the constitutional disturbance has subsided, the use of the fixed alkali, combined with sulphur lotum, or with an infusion of cinchona, together with tepid washing with simple water, or milk and water, will gradually remove the complaint." (*Pract. Synopsis*, p. 44, sixth edit.)

But, even if the tar-pills likewise had been mentioned among the remedies against lepra, we should not deny Dr. Beck the merit of having selected a new, as well as a successful medicine, in the treatment of an obstinate disease; for, in a tentative art like ours, where almost every remedy has been proposed, if not tried, against every malady, it would be hard to refuse the praise of novelty to him who acts where others talk, and succeeds where his predecessors have despaired.

It now merely remains to be seen whether this medicine will be equally powerful in the hands of other practitioners. We trust that it will be so; and that it may be our office to congratulate our readers on having obtained another trustworthy therapeutic agent, and Dr. Beck, on the enrolment of his name among those who have advanced the practice of physic.

Illustrations of the Natural History of Worcestershire. By CHARLES HASTINGS, M.D.—London and Worcester, 1834. 8vo. pp. 184.

THIS book belongs to a genus, of which we should be glad to find the species rapidly increase. It is a prodromus of the natural history of Worcestershire, and we doubt not that it will be followed by the publication of much more satisfactory and ample details. As a first attempt, it is most

creditable; and, from the additions which have been made to the lecture, as originally delivered, it has become not only a portly, but an important volume. Our libraries are often said to be very rich in county histories: we have consulted them, and too often we have found them lamentably poor. True it is that we have been overwhelmed with cumbrous folios, but very little county history do they contain. Their authors, instead of giving a history of the counties, have collected memoirs of the men born in them, and copied the memorials sculptured on their tombs. Our neighbours gave a memorable instance of their discrimination between places and people, when they changed the title of their monarch from "King of France" to "King of the French:" and, although to some this seemed an unnecessary refinement, still it is not a distinction without a difference: and of this difference we have now an illustration before us; for, while we are rich in the history of county-men and their works, we are poor in the extreme in the histories of our several counties. We have no objection to books devoted to the commemoration of the worthies of England, but we likewise desire some memorials of the counties themselves, beyond the scanty information usually given of their boundaries and superficial extent. The natural historian demands that researches be made into the geological structure of the country, the variations of its climate, whether produced by altitude or latitude, or affected by local peculiarities, as the vicinity of the ocean, the passage of rivers, the prevalence of marshes, and the abundance or destitution of wood: these, combined with inquiries concerning the plants and animals, whether indigenous or naturalized, will lead the way to investigations that more immediately, although not more powerfully, concern our race, viz. the productiveness of the soil, the salubrity of the air, the prevalence of disease, and the duration of life. Such are the proper materials for county histories; and if to these the chronologist may choose to add the annals of each place, or the antiquarian to subjoin copies of epitaphs, and other archæological treasures, we object not: we only demur to folios being filled with monumental inscriptions and obsolete local customs, to the exclusion or neglect of the natural condition of the county itself.

The foundation of provincial literary institutions and philosophical societies, would seem likely to fill up the hiatus in our literature indicated above; and, if the members of such institutions fairly perform their duties, much is in their power: they have the means of examining and investigating on the spot the several productions of their various localities,

of collecting specimens in their museums, and publishing accounts in their Transactions; which museums and Transactions would then become the most valuable sources of reference to general writers. But we fear that these associations are misused, and their objects, as scientific institutions, very much perverted. The members too often have "itching ears;" they go to the meetings, rather to be amused than instructed,—rather to while away a vacant hour, than to lend that hour on usury for the advance of knowledge. The conductors are well aware of this feeling; or, if not at first fully sensible of it, they soon become convinced of its strength, by the falling-off in the subscriptions, if they fail to amuse the subscribers. The philosophers in and out of petticoats must be made to laugh, and then they are contented to be members of a learned society; but, if most of the meetings, or many of them, be devoted to really scientific subjects, the philosophers yawn, go to sleep, and withhold their guineas.

Let us, however, not be misunderstood. We object not to people being amused, and every liege subject of our gracious king is at full liberty to amuse himself as he himself thinks fit: but let him not call folly philosophy; let him not desecrate our altars;—we desire none of his society.

It is time, however, that we turn to the volume before us; and, however encouraging the *prospect* may be which opens with Dr. Hastings' Lecture, the retrospect is anything but pleasing. The Doctor takes shame to his native county for the backwardness there evinced in the pursuit of natural knowledge: we fear, however, that Worcestershire should not be made to stand alone on the stool of penance, though her sin be grievous.

"In this county the study has been so much neglected by the great mass of the community, that every thing is to be done. It is positively necessary that the student of, as well as the proficient in, natural history, should have books to which he can refer frequently, for without these he cannot advance himself, or know what has been done by others. With grief and shame be it spoken, that we are in this town lamentably deficient in this respect. The transactions even of the several societies that exist, and are actively employed in the advancement of knowledge, are not to be met with in our public libraries. The Transactions of the Linnæan and the Geological Societies, and of several others, we look for in vain; and we have also to deplore an entire neglect of all foreign works, which are so abundantly rich in natural history. It will in itself form a strong attraction to cultivated individuals to become members of our newly formed society, if they find that this great blank in the literature of our city is about to be filled up; which in the

course of a few years it may be, by judicious measures being adopted." (P. 7.)

The Worcestershire Society appears to be founded on a very comprehensive, and, we think, satisfactory basis. Besides the formation of a library and museum, and the institution of courses of lectures, the members are associated in different sections, according to the peculiar tendency of their several pursuits; and the purpose of these sections is to collect and communicate specimens and observations to the society in general, and, through the society, to the public at large. The principal of these sections are the following: 1, Statistics; 2, Zoology; 3, Botany; 4, Geology and Mineralogy; 5, Meteorology.

These several sections form the theses for the several divisions of Dr. Hastings' discourse; and we shall conclude our notice of this volume by making a few extracts from them in succession.

During our rambles last summer, we had the pleasure of meeting Mr. Abraham, the inventor of the grinder's magnetic guard, an apparatus which we had always admired as a most philosophic application of magnetic power, and perhaps had admired the more, as it is one of the very few applications of magnetism to practical purposes; *i. e.* to aid the mechanic arts. But we were much disappointed to find that, even in Sheffield, the town celebrated for its invention, it is very little used. Dr. Hastings gives a parallel instance of its neglect at Redditch, where needle-making is carried on to a very great extent; and adds a quotation, illustrative of the infatuation of the people employed in this and such other deleterious trades.

"The excessive earnings of the needle-pointers at Redditch maintain a succession of men who taint the whole neighbourhood with profligacy, who, with the most perfect consciousness, devote themselves to an early death for the sake of a life of idleness and debauchery, and who acquire such a callous indifference to the fate which they know awaits them (premature death from the grinders' asthma, occasioned by the constant inhalation of an atmosphere loaded with metallic particles), that their apprehensions are said to have been excited lest Mr. Abraham's invention (Abraham's magnetic guard for collecting the steely particles,) should be successful enough to affect their wages." (P. 20.)

As an instance of the effect of strata upon health, we subjoin the following extract.

"It appears, from what I have before stated, that there is a great variety of soil in the county of Worcester, consisting of sand, bogs, debris of rock, lime, clay, and loam. Immediately under this soil,

and the superficial beds of gravel and clay, the principal strata of the county are those of the red sandstone formation.

"Dr. Henry, of Manchester, in estimating the advantages of this kind of stratification upon health, says: 'The only principles on which the strata of any district lying beneath the soil and superficial beds of clay and gravel, appear capable of exerting an influence over the health of its inhabitants, are, as those strata absorb water more or less readily and completely, thereby affecting the hygrometrical state of the atmosphere; and as they furnish, by springs and rivers, water more or less impregnated with foreign ingredients, and therefore less or more fit for the use of man. Under the first view, the red sandstone is well adapted, by the avidity with which it imbibes water, to moderate the evils of a rainy climate like that of Lancashire. Under the second aspect, this rock furnishes an abundant supply of beautifully clear water, agreeable to the palate, but holding in solution much carbonate of lime, and a little sulphate of that earth, both of which are deposited on boiling. There is no reason to suppose that these impregnations have any effect unfavorable to health. They can have no tendency to produce calculous diseases, which were once imputed to them, but which have been shewn to be produced by causes quite independent of the qualities of water, and to depend on morbid operations of the animal economy. The almost universal freedom of the red sandstone from noxious metals (lead and copper being rarely found in it,) adapts it for the purpose of an excellent natural filter. By its spontaneous decomposition, also, this sandstone is known to furnish an excellent sandy loam, one of the most desirable that can be found for the production of every vegetable; and in this manner it cannot but materially contribute to the salubrity of any country of which it is the prevailing rock.'

"In confirmation of the truth of the principles here laid down by Dr. Henry, it may be stated that the whole of this county, in which the sand stone prevails, enjoys a great freedom from severe febrile diseases, the worst forms of typhus fever being rarely witnessed; and from my own experience I may assert that the hilly parts of Worcestershire, where there is a clay soil, as about Broadway, and the line of hills running in that direction, are much more prone to be affected with fever than the sandstone district which comprises the lower parts of the county. This immunity from severe forms of fever is not confined to the rural population; but is in a great measure also to be observed in the large towns. In Worcester it is a very rare thing to meet with very severe cases of fever, and the worst forms of the disease in this town are seen after flood-time, in the vicinity of the river Severn. This river, which rises in Plinlimmon, in Montgomeryshire, becomes of considerable size before it enters Worcestershire, a little above Bewdley. The bed, in its entire course through the county, is several feet below the banks; it has been stated, on an average eighteen feet. This circumstance necessarily detracts considerably from the effect

that would otherwise arise from so fine a stream passing through so rich a country. It does not, however, prevent the valley through which the river passes being frequently inundated, particularly in the southern parts of the county, as about Upton, where, after floods, (which almost surround the town,) the population is liable to sore throat, bronchitis, and low fever.

"The stream of the Severn is much increased after entering the county by three small rivers and two canals, which join it before it reaches Worcester. The river flows rapidly by Worcester in a winding, but for the most part south-easterly direction. The chief streets of the city are situated several feet above the river, and the consequence is, that although the river rises very high in time of floods, the inhabitants of these parts are not affected by them; but those in the lower parts, chiefly inhabited by the poor, as in Turkey, Cripplegate, and Hylton lane, are very liable to be inundated; and thus, from the stagnation of water in the ditches and low grounds, miasmata arise, and the inhabitants, consequently, after rainy seasons, suffer from fever and inflammatory disorders.

"From want of draining, also, other parts of the city are rather liable to disease. This objection unfortunately applies to some of the houses that have been most recently erected: in the Blockhouse Fields, for example, the houses are erected upon a low marshy ground; and, from the circumstance of the bed of the canal, which runs near it, being higher than the foundation on which the houses are built, it is difficult to get an effective drainage; the result is, as the books of our charitable institutions shew, that low fever is more frequent here than in other parts. Does not such a fact as this, in conjunction with others of a similar nature, shew that it would be desirable that an act should pass the legislature to compel those who erect any considerable range of dwelling-houses so to choose their site that the necessary drainage may be effected; the neglect of which must necessarily produce disease, and its consequences, a squalid population. But, notwithstanding these defects in the medical police of Worcester, it must be conceded that fever is seldom epidemic in it. Nor is it only in the town of Worcester that we have the satisfaction to observe this comparative freedom from fever. Even in Kidderminster, where a large manufacturing population is pressed together, and where formerly, in the days of Dr. Johnstone, in the last century, scarlet fever and malignant sore throat, were so fearful and so destructive, these diseases now very seldom assume a severe form. The improvement in the health of the town in this respect may fairly in a great degree be attributed to a careful attention to the state of the small river, the Stour, which passes through it, by which accumulations of filth are prevented, and much of the ground that was formerly marshy is no longer visited by floods.

"Ague as a disease has almost ceased in this county; we rarely see a case of it: although, within the last few years, it has been rather more prevalent than formerly.

"By consulting our Infirmary records, I find that fifty years ago, a large proportion of cases admitted to that institution were for ague; but I doubt whether within the last twenty years the whole of the ague patients that have been treated at the Infirmary amount to so large a number as ten. This beneficial result may fairly be traced to improved cultivation of the soil." (P. 29.)

Dr. Hastings has collected a formidable list of aged individuals, to illustrate the salubrity of the county; as for example:

"In taking the account of the population of Droitwitch in 1821, there were found six sisters, all of them widows, whose united ages amounted to 443 years, viz. Elizabeth Everton, eighty-six; Ann Underwood, seventy-seven; Mary Bourne, seventy-five; Martha Blackford, seventy-one; Margaret Noake, sixty-eight; Hannah Kendall, sixty-six.

"The united ages of the sixteen men, inmates of St. Oswald's Hospital, in September, 1831, amounted to 1,123 years; and the twelve women, partakers of this excellent charity, had collectively attained the advanced age of 826 years.

"At Hawford, in the parish of Claines, December the 17th, 1792, lived Samuel Corbin, a member of the Society of Friends. He had two brothers and two sisters, all of whom attained a great age.

John Corbyn,	was born in	1700,	and died in	1785.
Samuel Corbyn,	—	1706,	—	1799.
Thomas Corbyn,	—	1711,	—	1791.
Hannah Palmer,	—	1713,	were living in	1796.
Candia Burlingham,	—	1714,		

The father died aged eighty-four, and the mother aged ninety-seven.

"There is now living in the parish of Stone, in this county, a poor man, aged 104, who spent his early days at manual labour, and now enjoys a peaceful and serene old age." (P. 37.)

"Mr. Locke mentions, in his journal for 1681, that in that year he saw a woman, named Alice George, who was then 108 years of age, who was born at Saltwych, in Worcestershire; her father lived to eighty-three, her mother to ninety-six, her mother's mother to 111; 'she never,' adds Mr. Locke, 'took any physic but once, about forty years since.'" (P. 38.)

As we have given an instance of an old lady who lived upwards of a century, and only took one dose of physic, we will close this account with that of a gentleman, who is said to have been worried to death at the immature age of eighty-eight.

"In Arely church, near Stourport, is the following curious inscription: 'Here lyeth the body of William Walsh, gentleman, who died the third day of November, 1702, aged eighty-eight, son of Michael Walsh, of Great Shelsley, who left him an estate in Shelsley, Hartlebury, and Arely; who was ruined and undone by

three quakers and three lawyers, and a fanatick to help them out. (P. 42.)

It may be interesting to some of our zoological friends to know that the old English black rat still maintains a station in Worcestershire.

"Two species of rats are found, *Mus rattus* and *M. decumanus*. The latter species is very numerous, and proves a serious annoyance in old houses. The black rat, *M. rattus*, the original English species, has recently much engaged the attention of naturalists, and particularly of one of our own members, Mr. Jabez Allies, from the curious fact, that, like the Indians in the New World, the race has almost dwindled away before the more ferocious and sagacious brown Norway rat, *M. decumanus*. Whether the popular opinion that the blacks are destroyed by the brown ones, or Dr. Fleming's suggestion that the substitution of tiled and slated roofs for thatch, is the correct cause of their declension, certain it is that, within the memory of individuals now living, the black rats which were formerly known to abound are now rarely met with, while the brown rats swarm everywhere. Though at some few farm-houses the black rats are found in company with the brown ones, yet it is believed that Mr. Dowding's, of Wick, is the only place in our vicinity where the black rat is found alone." (P. 61.)

The following fact deserves investigation.

"It is a curious circumstance, that though the salmon ascend many other tributaries of the Severn; and are frequently caught in the Teme, yet neither that fish, nor the shad, lamprey, nor lampern, ever attempt to enter the Avon at Tewkesbury, which joins the Severn at that place. There are certainly various impediments to the passage in mills and weirs, but such obstacles are in other places surmounted by salmon. It is however stated by the fishermen, that the salmon manifest the utmost aversion to the Avon water, and if forced into it by them, when deposited in the trunks of their boats, they turn round to escape, and soon die, if they are not relieved. It seems probable that some unpleasant vegetable particles are held in solution by the waters of the Avon, which, notwithstanding its universal praises by the poets, is in effect little better than a winding stagnant pool, and offers no advantages to the fish, who prefer a quick flowing stream with a gravelly bed, and dislike the muddy bottom of the Avon." (P. 77.)

From the lists given of native plants, the botany of Worcestershire would appear to be tolerably rich, but these catalogues do not afford any passages for extract. We confess that we are rather disappointed with this division of the lecture; for we know not any more sensible indicators of climate than plants, and we should have been much pleased to have found that Dr. Hastings had turned his attention to this subject. In the geological and mineralogical sections, we have fur-

that has been often made, for want of a knowledge of the first principles of these interesting sciences.

"It is indeed but a few years ago, so complete was the ignorance of persons upon these subjects, that a shaft was sunk to raise gold from the hills of Malvern, and the individuals concerned lost a large property in the speculation. Setting aside, then, all considerations of the suitableness of such pursuits to our intellectual gratification, the mere desire of thrift should prompt us to become acquainted with the geological peculiarities of our county." (P. 89.)

The mildness of the vale of the Severn is well known, but the want of extended and accurate observation prevents any general statement of the climate of the county being as yet adventured; but, from some observations made at Woodthorpe, near Sheffield, and at Barbourne, near Worcester, the difference would appear to be much greater than could have been anticipated. We subjoin an extract, made by Dr. Hastings, as a specimen.

"Mean temperature of the last week in October, at twelve o'clock in the day:

Barbourne.	Woodthorpe,
60° 3′	55° 5′
Mean of the month of November.	
49° 16	44° 2′
Mean of first week in December.	
50°	44° 4′
Mean of the whole six weeks.	
52°	45° 32. (P. 126.)

We now take leave of Dr. Hastings, whose work affords us a double pleasure: first, from its intrinsic excellence; and, secondly, from its being an additional instance of the compatibility of the most ardent cultivation of science with the active pursuits of a professional life.

A Compendium of Osteology, being a Systematic Treatise on the Bones of the Human Body; designed for the Use of Students. To which is subjoined, an improved Method of Preparing Bones for Osteological Purposes. By GEORGE WITT, M.D., Physician to the General Infirmary, Bedford.—London and Bedford. 4to. pp. 72.

THIS work will be useful to students. Dr. Witt tells us that his mode of teaching osteology "consists in taking up each bone in succession, and placing and retaining it in one given and fixed position, until the different parts presented to the eye, whether processes, foramina, or grooves, are *read off* in this lucid order and succession. The bone is then turned, as

ther instances recorded of the immense sacrifice of property upon a given axis, to bring into sight a fresh collection of parts."

"In practice, the bone, the os occipitis for instance, should be held steadily with the left hand, presenting to view the first-mentioned part in the table; the right hand should hold a probe, or some sharp instrument, to point out the parts. In the occiput the tubercle is the first part to be noticed; hence a posterior aspect of the bone is chosen: in this view we have exposed the first six parts in the table; then, by moving the bone a little, so as to bring the condyles uppermost, the remaining three parts on the external surface will be exposed: the bone must next be turned round to its internal surface, which turn alone will bring into view the remaining seven parts of the os occipitis." (*Preface*, p. iii.)

We have extracted these directions, as we think they may prove useful even to students who do not possess Dr. Witt's book. The following quotation, being a part of our author's description of the os occipitis, will show his method of applying these rules.

"OS OCCIPITIS.	*Deriv.* Occiput, ex ob et caput; the hinder part of the head. *Synonyma*, os Basilare, os Proræ, os Memoriæ, os Pixidis, os Nervosum, &c. Like the os frontis this is a single bone, therefore many of the parts occur double.
Situation.	Posteriorly and inferiorly with respect to the other bones of the cranium.
Connexion.	With 6 bones; viz. above, with the parietal bones by the lamboidal suture; laterally, with the temporal bones by the additamenta of that suture; in front, with the sphenoid bone at its basilar process; and below, with the first vertebræ of the neck by ginglimus.
Use	Defends and supports the posterior lobes of the cerebrum, contains the cerebellum, transmits the medulla oblongata, and various vessels and nerves.
External Surface.	Is irregularly convex, and internal surface irregularly concave.
TUBERCLE	*Tuber Occipitalis.* In the centre of the superior part of the bone, to which the ligamentum nuchæ is attached. In some instances this is a sharp projecting process, in others, there is merely a thickening at this part.
PERPENDICULAR SPINE.....	*Spina Occipitalis.* Descending in a straight line from the tubercle, and situated between the muscles of the opposite sides.
SUPERIOR TRANSVERSE RIDGE	*Arcus Transversalis Superior.* Extending across the bone, for the attachment of muscles.
INFERIOR TRANSVERSE RIDGE	*Arcus Transversalis Inferior.* A little below the former, also for the attachment of muscles.
THE OCCIPITAL FORAMEN.....	*Foramen Magnum.* For the transmission of the medulla oblongata, the exit e cranio of the anterior arteries of the medulla spinalis, and the entrance into the skull of the nervi accessorii, and vertebral arteries.

2 CONDYLES	*Processus Condyloidei.* Situated on each side of the foramen magnum towards its front part, by which this bone is connected with the atlas, around the condyles there are ridges for the attachment of the capsules of the joints, and various depressions for the attachment of strong ligaments, for the security of the articulation." (P. 8.)

We hope that a second edition will give our author an opportunity of correcting some of his Greek and Latin words; thus, at p. 39, he has "the pubis" for the pubes or os pubis, and "symphisis" for symphysis; and at p. 40 we have so monstrous and impossible a word as χοχχυξ:—impossible, we say, for the delicate ear of the Greeks, so far from allowing two χs to come together, would not permit them to commence two contiguous syllables. If physicians wish to be considered members of a learned profession, these things are not unworthy of their attention; if they are satisfied to be mere traders in prescriptions, the case, we confess, is different.

Our author's *Observations on the Mode of Preparing Bones for Osteological Purposes* have an air of truth and genuineness, and we therefore extract them entire.

"Having been repeatedly solicited by various friends, who have seen the bones in my collection, to explain to them the manner in which they were prepared, I now gladly avail myself of an opportunity of making it more generally known.

"About twelve years since my attention was particularly directed to this subject, by finding that some bones which I had macerated were unusually white, and free from smell. I continued for several subsequent years to macerate and prepare bones, as I conceived, precisely upon the same plan as that in which the maceration had been so successful; but, although some proved tolerably white, the majority were cleaned with much difficulty, and when the ligamentous attachments were removed by dint of hard scraping, the bones were ever after yellow at the extremities, and had a more or less offensive smell. After much thought on the subject, I could not discover wherein my method differed from that in general use, but the preparation of another skeleton, about four years back, furnished me with materials whereupon to build something like a tangible theory; and this theory having been verified by repeated subsequent trials, I feel confident in recommending the practice founded upon it, although perhaps the reasons advanced may not be altogether conclusive. Two words, however, if properly understood, will furnish all the information that is necessary, viz. *Uninterrupted Putrefaction*; for, if the putrefactive process be in any way interrupted, the bones will never be clean. In order to obtain this end, the following directions must be scrupulously observed: It is desirable to get the animal, of which a skeleton is to be made,

as few hours after death as possible, while the blood is in an almost fluid state, and having taken off the muscles tolerably clean, and separated every bone, they should be immediately thrown into cold water; the water should be changed every twelve hours for three or four days, until it becomes no longer tinged with blood. A tub, or large earthenware vessel, must then be procured; if a tub, it must be well made, to secure it from leaking during the long period required for maceration, and of such a size as to hold a sufficient quantity of water over and above that which covers the bones, to allow for the waste by evaporation. Evaporation entails two difficulties, for if it go so far as to leave the ends of some of the longer bones projecting out of the water, they immediately become quite black, and if fresh water be added to cover them, the whole putrefactive process is arrested: hence the vessel must stand in some covered outhouse, secure from the admission of rain, and from the danger of the water being drunk by rats. So far as I have observed, the vessels should be merely lightly covered over, as a certain access of air appears necessary; for, on one occasion, being without a convenient place, I buried some tubs during the usual period, when the bones proved the most offensive that I ever prepared, and it was an endless task to get off the ligaments.

"Should all go on successfully, and the process be in no way interrupted, either by evaporation or by leakage, in the space of about six months the bones may be washed perfectly clean with a common brush, the ligaments and muscular attachments may be pushed off like a cake from the ends of the bones, and then, if they be held up, a thick fluid will be seen to exude through every aperture from the interior, proving that the putrefactive process has gone on in the interior with the same happy result as on the exterior. It is hardly necessary to observe, that the internal and external putrefaction must go hand in hand in order to procure a clean bone, and this I apprehend to be the general source of difficulty. A vertical section of any of the cylindrical bones in my collection exhibits the interior even whiter than the exterior; and the cancellous structure is a beautiful white net-work, unsoiled by any medullary matter. After the bones have been well brushed, they should be soaked in clean water twenty-four hours, and then carefully cleaned with a scalpel from all ligamentous and cartilaginous matter that may be found still adhering, but the bone should in no way be scraped more than is absolutely necessary, as it is deprived of all its minute processes and distinctive characteristics. The long cylindrical bones should be placed upright upon their extremities for a short time, in order to allow of the entire escape of the medullary fluid. To cleanse them from any oleaginous matter, whether external or internal, I have generally soaked them for the next forty-eight hours in a solution of subcarbonate of potass, in the proportion of about a pound to each gallon of water, after which they should again be well washed and left for a short time in a large quantity of clean water, and then wiped

with a dry cloth. The bones after this should be carefully laid upon a clean deal board, and exposed for a few days and nights in the open air, taking the precaution to turn them now and then.

"As to the exact period for maceration, six months has been stated as a general time; but this is found to vary, as a set of bones will macerate in almost half the time during the summer months to what will be required in the winter. The bones of small animals, and of birds also, require a comparatively short period; and it may be observed, that the bones of the ruminating class of animals always macerate more speedily than those of the carnivorous." (P. 69.)

Illustrations of the Botany and other Branches of the Natural History of the Himalayan Mountains, and of the Flora of Cashmere. By J. FORBES ROYLE, Esq., F.L.S., &c. Part IV. London, 1834. Folio, pp. 32.

MR. ROYLE'S work on Indian botany is one of those the appearance of which we scarcely know whether to regret or hail; for the magnificence of the plates must circumscribe its sale, and confine its perusal very much more than could be desired, as it contains matter of general interest and importance. The execution of the figures is admirable: some of them are drawn, as we presume from the names attached, by native artists, and they give no contemptible idea of their skill. Each number contains ten plates, and the one before us gives representations of nineteen rare or newly discovered species. Of these, *Rheum spiciforme*, *Myricaria bracteata*, and *Lythrum Cashmerianum*, are very ornamental plants; and *Sibbaldia purpurea* and *Primula rosea* and *elliptica*, peculiarly elegant. The letterpress is critical, and indeed occasionally rather too much so to suit our taste. We had rather it had contained more of immediate local observation, and less of reference to long-published works; more copious extracts from the author's journal, and fewer from books consulted since his return. We are however grateful for what he has done; and it is the interest of his own original notes, when given, that makes us regret they are not more abundant.

The principal article in the present number contains an abridgment of the chief of our knowledge, or rather an exposition of our ignorance, respecting the plant or plants which afford the several kinds of tea: from this we shall make our extracts, as a favourable specimen of the work.

"The tea plant has been supposed to be indigenous in the mountains which separate China from the Burmese territories; but we are informed by Dr. Abel that he found a small shrub, of what

is commonly considered the green variety, apparently in its natural habitat, and near no plantation, at See-chou, in the province of Kiang-see, about N. lat. 26°, where the hills were covered with pines. Thunberg states that tea grows everywhere in Japan, both naturally (*sponte*) and cultivated, on the margins of fields. One species so named is described by Loureiro as found both cultivated and in a wild state in the northern provinces of Cochinchina; and the same author describes *T. oleosa* as common about Canton, both wild and cultivated. To the kindness of Mr. Reeves I am indebted for the information that there is a species of *Thea* growing wild in the neighbourhood of Macao, which is much larger in the leaf than either the black or green tea plants.

"But it has been made a question, whether the varieties of tea known in commerce are due to difference in species, or only to differences in soil, climate, culture, and mode of preparation. The latter appears to be the opinion of Kæmpfer, Thunberg, and Siebold, as they admit of but one species of *Thea*, and is that now generally entertained. Thunberg notices two varieties of *Thea bohea*, but says they can hardly be distinguished into species. Siebold states that the variety *viridis* of *T. chinensis*, D.C., is a shrub everywhere cultivated in Japan; but the variety *bohea* he had only seen in gardens, introduced from China. From this fact one would be inclined to conclude that they were distinct; and, as all the observations were made in Japan, it is probable they all three only saw one species cultivated there, as there is reason for believing that the opinion of Linnæus that two species of *Thea* yield the teas of commerce is the more correct.

"Dr. Abel, when passing through the tea country, had little doubt of there being two species of tea-plant; but he could not at the time define the character, and was unfortunate in losing his specimens in the shipwreck of the Alceste. But he mentions that the plants from the *black* and *green* tea districts differed in the form, colour, and texture of their leaves; those of the green tea being larger, thinner, and of a lighter colour than those of the black, though growing in the same soil; these differences he also observed in a large plantation near Macao. Dr. Hooker, in the Botanical Magazine, t. 3148, has given the characters of the two species. *Thea viridis*, which is the species figured, he describes as 'a large, strong-growing, almost hardy plant, with spreading branches, its leaves three to five inches long, very broadly lanceolate, pale green, singularly waved, with the margin reflexed; the flowers large, solitary, mostly confined to the upper axil. These appear in autumn, six weeks or two months earlier than those of *T. Bohea*, which is of smaller size, with remarkably erect stiff branches; leaves not above half or two-thirds the size of the former, perfectly flat, more coriaceous, of a dark green, bearing in the axils of numerous leaves two or three flowers, which are smaller, and have a slight fragrance, and are in perfection during winter. This plant cannot withstand the frosts of an English climate.'

"Mr. Reeves, whose opinions, from his long residence in China, and attention to subjects of natural history, are entitled to the greatest weight, is the most recent author who has referred to this subject; and he expresses his surprise 'that any person who has been in China, or, indeed, any one who has seen the difference in the colour of the infusions of black and green tea, could suppose for a moment that they were the produce of the same plant, differing only in the mode of curing; particularly as they do not grow in the neighbourhood of each other.' (*Loudon's Gard. Mag.*, v. ix. p. 713.) To this opinion, it will be seen, he still adheres, as, in a letter with which I have been favored, he informs me that he believes that the *Thea viridis* of the gardens is the plant from which the green tea of commerce is prepared, and that the plant which produces the black tea of commerce, as souchong, congou, &c., is not so common in England. Both may be seen in great perfection in the Messrs. Loddige's rich and extensive nursery-grounds at Hackney, where a green-tea plant has lived for many years in the open air. The first impression on seeing them, is that of surprise at their ever having been confounded, as nothing can be more distinct, than the large, membranous, light green, wavy leaf, with large and irregular serratures, and straggling habit of the green-tea plant, from the smaller, flat, thick and coriaceous, dark green leaf, with small and even serratures, and erect port of the black tea. Both plants have been figured in Loddige's Bot. Cab. t. 226 and 227, and the characters well given, as also in the above extract from Dr. Hooker. I would only add, that the flowers, though commonly, are not always single, in the axils of *Thea viridis;* and this, though earlier in flowering, is not so much so as described. The green tea being the hardier, is cultivated, as we shall see, in the northern, and the black tea in the southern provinces of China. The former is the only kind cultivated in Japan, according to Siebold, and is that figured by Kæmpfer, *Amæn. Exot.*, p. 607.

"Notwithstanding the above opinions, and the distinctness in the characters of the two species, as above given, there is an unaccountable discrepancy in the statements, as to the plants which afford the *green* and *black* teas of commerce, especially as Dr. Abel, after giving his opinion that there were two species of tea-plant, mentions that 'from persons perfectly conversant with the Chinese method, he learnt that either of the two plants will afford the black or green tea of the shops, but that the broad thin-leaved plant is preferred for making the green tea.' (*Journ. to China*, p. 222.)

"This is in conformity with the information communicated to Dr. Hooker, and also with that originally given by Mr. Pigou (*As. An. Reg.* 1802), on the authority of a Chinese, who had been eight times in the bohea country, remaining there from four to six months each time, and who stated that 'bohea may be cured as hyson, and hyson as bohea.' To this Mr. Reeves replies, in the letter to which I have alluded, that 'the Chinese manufacturers do not, and they say they cannot, convert black tea into green, and *vice versâ:* and

this I believe to be true; indeed, the colour of the infusions is alone sufficient evidence.' The discrepancy in the information Mr. Reeves explains, by adding, that 'there is a species of tea grown in the province of Canton of a pale-coloured leaf, (occasionally mixed with congou tea, to make the tea imported under the name of bohea,) and this tea can be coloured and made up to imitate various qualities of green tea, and large quantities are yearly thus made; but still it is only an appearance that can be given, the deception is detected as soon as it is put into water.' Owing no doubt to these mixtures is the difficulty in detecting the two kinds of leaf in the teas of commerce; but in good teas they may be distinctly recognised. Dr. Abel's information having been obtained from hearsay at Canton, most probably refers to the kind described by Mr. Reeves, as he most particularly distinguishes, and lays down on his map, the green and black tea districts; but, arguing upon the correctness of the information he had obtained, concludes that the differences observed may be produced by a due management of the heat used in drying the plant. Mr. Millet's account, Mr. Reeves says, he himself knows refers to some of this tea." (P. 109.)

Notwithstanding the arguments of our author, we confess ourselves still to be sceptical of the specific difference of the plants affording the black and green teas of commerce: that the variations exist between them which Mr. Royle dwells on we at once admit, but we do not think them to be more than sufficient to mark varieties of the same species. This opinion is supported by the fact, that the black and green trees are grown on different districts, as well as by the assertion made by the Chinese, that if green-tea plants be taken to the black-tea districts, they will produce, not green, but black tea, and *vice versâ*. The leaves of both kinds, when unrolled, are very similar in general characters; and this leads us to observe, in conclusion, that, however much doubt may rest on the subject, there is no doubt that the plant here grown as the black-tea plant, and called *Thea Bohea*, is not the plant that yields the black or bohea teas of China: it is totally and specifically distinct.

The Study of Medicine. By John Mason Good, m.d. *Fourth Edition.* By Samuel Cooper, Professor of Surgery in the University of London, &c.—London, 1834. 4 vols. 8vo. pp. 2486.

We recollect that a sprightly contemporary once asserted that Mason Good's Study of Medicine, and Cooper's Surgical Dictionary, were together a sufficient library for a practical man. Now, though we do not go quite so far as this, and hold with the poet, that "Dulcius ex ipso fonte bibuntur

aquæ," still we must own that the two works in question will go a long way towards the formation of a small select library, which is to be really read, and vigorously thumbed; and Mason Good's book, in particular, will stand in lieu of scores of those meagre twelve-shilling and nine-shilling, and slim seven-shilling volumes, which, when drawn up in long files, make very big lacunæ in moderate men's purses.

The excellent work before us is so well known, and so highly esteemed, that comment or extract may seem unnecessary; yet it may not be disagreeable to those of our readers who possess one of the earlier copies, if we give a few quotations from Mr. S. Cooper's very judicious additions.

Under the head of Relaxed Uvula, producing the Dysphagia uvulosa of Mason Good, his editor observes,

"The remedy on which Dr. Granville chiefly relies is a gargle containing lunar caustic, the strength of which should be varied, according to the state of the uvula itself, and the nervous irritation in the system. Another useful application, mentioned by the same physician, is a powder composed of equal parts of muriate of ammonia and nitrate of potash, with a quarter of Cayenne pepper. This produces great immediate irritation, followed by copious salivation, and expectoration of thick mucus. The powder should be rubbed on with a camel-hair brush twice or thrice a day. Gargles, made with a proportion of sulphuret of potash, are in common use amongst professional singers, for improving the defect of their voices, connected with relaxation of the uvula; and Dr. Granville thinks the practice justified by analogy; sulphuret of potash being known to have in croup the power of converting the stridulous voice into a deep full tone, and being, in fact, the remedy for which Buonaparte awarded a prize of one thousand Napoleons, during the epidemic croup which raged in Paris in 1812."* (P. 90.)

"*Case of Squinting.* It has been ascertained by experiment, that, in individuals who have a confirmed squint of this kind, one of the eyes is too imperfect to see distinctly. Of this, however, the patient is not always conscious, as was evinced in a young lady, whose case is related by Sir Everard Home. Neither she herself, nor her friends, believed that any defect of the eye existed; and, upon being asked if she saw objects distinctly with her eyes, she

"* *Lancet*, No. 377, pp. 280, 281. According to Dr. Granville, who was for several years physician to the Opera company, the uvula, in deep bass singers, is thick and cornuous, but thin and very pointed in the light, silvery, soprano singers. The observations of M. Bennati leave no doubt that the uvula and soft palate have considerable influence over the modulation of the voice; and he has demonstrated that these organs contract in proportional degrees to the ascent of the several musical notes. (See *Annali Universali* for June, 1830; *Bulletin des Sciences Méd.* for May 1830; and *Lancet*, No. 377.) —ED."

said, certainly, but that one was stronger than the other. To ascertain the truth of this, he covered the strong eye, and gave her a book to read, when, to her astonishment, she found she could not distinguish a letter, or any other near objects. More distant objects she could see, but not distinctly; when she looked at a bunch of keys in the door of a bookcase about twelve feet from her, she could see the bunch of keys, but could not tell how many there were. The obscurity of vision in one eye, then, is the cause of this common species of squinting, and may occasion this irregularity in the following way. The obscure image being so imperfectly formed in the weak eye as to excite little attention in the mind, the use of the eye, and its uniform direction to the same object with the other, may have been neglected from the beginning; for, as distinct vision was obtained at once by the perfect eye, the end was answered, and therefore there was no necessity for any exertion of the other; or, in the effort to get rid of the confused image, the muscles may have acquired an irregular and unnatural action. Under either of these circumstances, the eye is directed towards the nose, because, as Sir Everard Home remarks, this direction is determined by the superior force of the adductor muscle." (P. 184.)

Case of Tænia discharged from the Meatus Urinarius. "The editor, through the kindness of his friend, Mr. Docker, late of Canterbury, has been furnished with the particulars of a young woman, upwards of twenty years of age, who has been under the care of Mr. Law, of Penrith, in Cumberland, since October 1830, and has discharged several thousand portions of tænia from the meatus urinarius. In a letter, dated Penrith, August 29, 1833, Mr. Law states, that 'she first felt a sensation like that of a rupture of the bladder, when in the act of stooping to cut a corn in August 1829. From that time she had discharges of bloody urine occasionally, with the sensation of something moving in the bladder, (more particularly so after each evacuation,) and had concluded that this was a worm. However, no mention was made of this to any one, although her health was impaired, until I was called to attend her for an attack of laryngitis, in October 1830. Blisters being used, brought on retention of urine, with cystitis, which rendered the use of the catheter necessary. After this had been conquered, she mentioned her feelings and apprehensions to me, which for some time I treated as imaginary, till at length, from the greatly disturbed state of the mucous membrane of the bladder, evidenced by deposition in large quantities of a white sediment in the urine, I was led to try the exhibition of Spirit. Terebinth., both by the mouth and injection. Great irritation ensued, but a small portion (about eight joints) of tænia was discharged *per urethram* alive. This led me to the determination to try the effect of opiate solutions, frequently injected into the bladder, which, by keeping the worm constantly under its influence, might destroy it. This, persevered in for three days, an-

swered the purpose: all motion of the worm ceased; and, by an expansion of the urethra, its discharge was effected in large quantities, but in so decayed and broken a state, that its parts could not be numbered; but I am certain that there could not have been less than two thousand joints. With these there was much hemorrhage, also membranes, and other substances. From this date (January 1831,) to the beginning of April of the same year, there were no indications of more tænia; yet the urine was generally tinged with blood, and deposited the white sediment in less quantities than formerly. During this period, an anodyne injection had been used almost daily, as the irritation of the bladder was considerable. At this time she again felt the motion of tæniæ, and I again resorted to frequent opiate injections, but without success, for some days, and then determined upon the administration of Spirit. Terebinth. by the mouth, a teaspoonful of which was taken on the morning of the 18th of April, and which passed by the bladder in an hour and a half, bringing off some portions of the worm in a recent state, with a net-like membrane. From this date to September 20th, there were passed from the bladder *per urethram* 1239 joints, of different sizes, from one third to the eighth of an inch in width, and which were all preserved, with portions of a net-like membrane, and fungi, either like the liver or the muscles of a fowl, and sometimes of a fleshy fibrous substance, having the appearance of the muscular coat of the bladder, with a shaggy surface on one side, resembling the villous coat of the intestines. These were brought away almost daily, while the urine diminished in quantity, rarely exceeding four ounces in twenty-four hours. A pause ensued from the last date to November 16th, of the same year, during which time neither worm nor substances passed off; but the fluid discharged was bloody, and always highly offensive. On this day the Spirit. Terebinth. was again administered, and brought off in an hour two small pieces of net-like cellular tissue, with nine joints of middle-sized worm interwoven with it. From this time to January 18, 1832, there were 773 joints preserved, of different sizes; and these were generally accompanied with membrane and fungi of different kinds. From this date to March 27, there were no portions of tænia passed; but on that day the Sp. Terebinth. was again taken, and, before May 1st, 853 joints passed, making a total of 2865, now in my possession, besides a very small and apparently perfect worm of twenty-nine joints. During the period mentioned there have been at different times profuse hemorrhages from the intestines, surmised to arise from the ascending colon, which have reduced my patient to a very weak state. She is now (August 23) in tolerable health, but again bringing away, from the use of the Spir.Terebinth., more tæniæ. On the 21st instant, there came off four joints of a small worm, with two small fungi.

"Among the singular and unaccountable phenomena accompanying this affection, is the rapidity with which Spirit. Terebinth.

now passes from the stomach to the bladder. It is invariably felt in the bladder in less than twenty seconds from being taken; and its evacuation *per urethram* rarely exceeds two minutes: on one occasion it passed in one minute and a quarter; and, from the recent appearance of the worm and fungi, seems to separate them in passing.

"Mr. Docker is in possession of some specimens of the worm, fungi, and membranes." (Vol. iv. p. 354, *note*.)

After this follows another letter, dated April 15th, 1834, and containing additional particulars of this remarkable case, and tables giving the doses of turpentine administered, and the time when they were felt in the bladder: the period has diminished gradually from twenty-eight minutes to eight or ten seconds after taking the oil.

Treatment of Porrigo Favosa. "Two principal objects have generally been kept in view in the treatment of porrigo favosa: in some methods, the cure of the pustular inflammation of the skin, either rationally or empirically, is the main thing aimed at; in others, the evulsion of the hairs constitutes the chief measure. Amongst the former plans, what Rayer terms the antiphlogistic and derivative appears to him the best. The abstraction of blood is seldom necessary. Decoction of linseed, and emollient cataplasms, applied to the shaven scalp, loosen the scales, and diminish the inflammation; but, in order to bring about a cure, Rayer assists these means with two blisters on the arms, from which a discharge is to be maintained for two or three months. But, from the moment that the inflammation has extended to the bulbs of the hair, Rayer sets down every treatment that does not aim at producing either the evulsion or the falling-off of the hair, as ineffectual. For this purpose he prefers the depilatory treatment adopted by MM. Mahon, who pay particular attention to the following objects: 1. To that of cleansing the scalp, and keeping it as much so as possible. 2. To that of separating, without pain, the hairs whose bulbs are inflamed. They begin with cutting the hair, so as to leave it only two inches in length. They then loosen and remove the scabs with hog's lard or a linseed poultice; and afterwards wash the head with soap and water. This plan is continued for four or five days, at the expiration of which the second part of the treatment begins, and a depilatory pomatum is applied to all the affected parts of the scalp every other day. This practice is persisted in for a month, six weeks, or two months. On the days when the pomatum is not used, a fine comb is passed through the hairs, by which means they are detached without pain. At the end of a fortnight, a depilatory powder is sprinkled among the hairs once a week. The next day the fine comb is used, and the depilatory pomatum employed again. In a month or six weeks the first depilatory pomatum is discontinued, and another substituted for it, during a fortnight or a month; after which, the in-

unctions are made only twice a week, till the redness is completely removed. The comb, which is to be used on the days when the pomatum is not applied, is to be smeared with lard or oil, and only lightly pressed upon. MM. Mahon's depilatory powder and pomatum seem to owe their activity to their containing lime, with a small quantity of subcarbonate of potash, and charcoal. (See Rayer, tom. i. p. 508.) This depilatory treatment, which was deemed unnecessary by Willan and Bateman, is considered indispensable by Rayer; yet, at the Bloomsbury Dispensary, we cure all cases without it. The hair is kept short, the head gently washed or fomented every day, and, as soon as the inflammation has abated, and the scabs have been removed with a little lard, an ointment is applied, consisting of about 3½ grs. of oxymuriate of mercury, ʒj. of white precipitate, and ℥j. of lard. A few grains of subcarbonate of soda and rhubarb, with or without a small proportion of Hydrargyrum cum Creta, according to circumstances, are likewise given once or twice a day.—ED." (Vol. iv. p. 493, *note.*)

These quotations may serve to show the diligence with which Mr. S. Cooper has performed his arduous duty, and the success which has attended his endeavours to adorn the pages of this valuable text-book with all the modern improvements in the practice of physic.

The Elements of Anatomy. By JONES QUAIN, M.D., Professor of Anatomy and Physiology in the University of London. *Third Edition, revised and enlarged.*—London, 1834. 8vo. pp. 870.

IN reviewing a work like the one before us, our task is an easy and an agreeable one: we have merely to announce to our readers that an excellent book has again received the benefit of the author's revision, and to recommend those who are in want of a compendium of anatomy to procure Dr. Quain's Elements. Our only difficulty consists in selecting a passage for extract from a book of this kind; and we shall therefore quote our author's account of Mr. Kiernan's discoveries, although we gave them at some length in a former Number. Our readers will probably excuse this; for, as minute structure is not very easily comprehended from mere description, those who have not had the opportunity of seeing those hepatic ramifications demonstrated under the microscope, will be glad to have them presented again in an abridged form.

"The recent researches of Mr. Kiernan give a very clear view of several points connected with the distribution of the vessels in the liver, and particularly of the structure of the lobuli. It is obvious that the interior of the organ is channelled or hollowed into

two sets of canals; the one giving lodgment to the hepatic veins, the other to the portal vein, its branches, and the accompanying arteries and ducts. At the transverse fissure, the vein, duct, and artery divide into branches which enter the portal canals. These divide and subdivide into smaller branches, which enter the smaller canals; and every canal, however small, contains an offset from the portal vein, the hepatic artery, and the duct. These are enclosed by Glisson's capsule, which lines the portal canals, and forms sheaths for the larger vessels, and a web in which the smaller vessels ramify; it enters the interlobular fissures, forming capsules for the lobules, and finally extends into their interior, and, with the blood-vessels, expands itself over the secreting biliary ducts. 'The capsule thus presents three portions,—a vaginal, interlobular, and lobular portion; and, as the vessels ramify in the capsule, their branches admit of a similar division.'

"The hepatic ducts can be traced along the canals, in the fissures between the lobules, and into the lobules, where they form plexuses. 'These may be called the lobular biliary or secreting plexuses, as being the immediate agents in the secretion of bile.' The branches of the portal vein, and the hepatic arteries, also enter the lobules. The venous branches form a plexus, which communicates with the incipient radicles of the hepatic vein; and the arteries, which are very few and very minute, are the nutrient vessels of the lobules, and probably terminate in the plexus of the portal vein. The branches of the artery ramify freely upon the coats of the portal vein, and on the hepatic ducts, furnishing materials for the nutrition of both, and to the latter for the secretion of mucus which lubricates their interior.

"The trunks of the hepatic veins are lodged in the 'hepatic-venous canals.' Their incipient radicles commence in the interior of the lobules, so that each lobule may be said to be 'sessile' upon a minute venous branch. Hence, when a hepatic vein is laid open, the orifice of each minute branch which terminates in it is seen to come out of the middle of a lobule; but the branches of the portal vein, when viewed in the same way, correspond with the interstices between the lobules.

"*Structure of the Lobules.* Each lobule is found to consist of a reticulated plexus, formed by the minute radicles of the biliary ducts. For these, when examined with a high magnifying power, are seen to divide and subdivide, so as to form a mesh in its interior, which is supported by a nidus of cellular tissue furnished by Glisson's capsule. Upon this mesh or plexus is disposed another, formed by the terminal branches of the portal vein. This is the 'lobular venous plexus,' from which that formed by the ducts can be distinguished, as the latter presents somewhat the appearance of cells. The branches of the venous plexus converge from the circumference of the lobule towards its centre, and communicate with the incipient radicles of the hepatic vein.

"It is difficult to inject the ducts, owing to their being filled with

bile. Mr. Kiernan succeeds by first tying the portal vein and hepatic artery in a living animal, after feeding it. By this expedient the secretion of bile is suspended, and that which the ducts contain is discharged. The ducts cannot be injected directly from the hepatic vein, for no branches of this vessel ramify on their coats. Whenever it does reach the ducts, it is only through the branches of the portal vein which spread upon them; and, even when the ducts are injected from the portal vein or the hepatic artery, the fluid gets into their interior, by rupturing their lining membrane.

"The residue of the blood conveyed by the hepatic artery to the lobules, to the different vessels, and the ducts, for their nutrition, is taken up by minute veins, and conveyed into the portal vein, so that part of the blood from which bile is secreted is derived from the liver itself." (P. 650.)

We quote the following passage, as it gives us an opportunity of correcting some common but mistaken opinions as to the doctrines of the ancients.

"*Artery, Arterial Tissue, Arteria.*—The term 'artery,' in its original acceptation, meant a tube containing air, (αηρ, air; τηρεω, to contain,) or some subtile agent, whether called archæus or vital spirits. It was at one time supposed that veins alone carried blood, as they were observed at all times to contain it, in the dead as well as the living; but as arteries were always found empty after death, they were imagined to be the conductors during life of something more refined and ethereal. Though this hypothesis has been long forgotten, the term to which it gave rise is retained even now, notwithstanding that centuries have elapsed since a very different doctrine has been completely established." (P. 69.)

We say nothing of the derivation of αρτηρια from αηρ and τηρεω, though it is an erroneous one, and belongs to an erroneous class, as αρτηρια is certainly derived, with its kindred word αορτη, from αειρω, *to lift.* The error we would wish to correct consists in supposing that the ancients were ignorant that the arteries contained blood; yet what says Aretæus, in his chapter Περι αιματος αναγωγης, *On the bringing up of blood?*

——— "μετεξετεργσι δε και απερραγη τα αγγεια . τω πληθει δε ἡ διαφορη της αναγωγης, και ει εξ αρτηριης, η φλεβος αναγοιτο . μελαν μεν γαρ και παχυ, και ρηιδιως πηγνυμενον, ην απο φλεβος, και ἡσσον ες κινδυνον ρεπει, και επισχεται θασσον · ην δε απ' αρτηριης, ξανθον και λεπτον, και ου μαλα πηγνυται, και ὁ κινδυνος ωκυτερος, και ἡ επισχεσις ου μαλα ρηιδιη · ἁι γαρ διασφυξιες της αρτηριης αιμορραγιης προκλησιν ποιεονται, και το τρωμα ου συμφερει τῃ πολυκινησιῃ, κ. τ. λ." (*De Causis et Signis Morb. Acut.*, lib. ii. cap. 2, p. 13, edit. Boerhaavii.)—*i. e.* "In other women there is a rupture of vessels; but there

is a difference in the quantity thrown up, and it differs also according as it may come from an artery or a vein. For the blood is black and thick, and easily coagulable, if it proceeds from a vein, and is less dangerous, and more quickly restrained. But, if it comes from an artery, it is light-coloured and thin, and not so very coagulable, and the danger is more urgent, and the flow is not so easily stopped; for the pulses of the artery excite the hemorrhage, and the wound does not unite, on account of the frequency of the motion," &c.

Nor is this the only passage of the kind: towards the end of the chapter, Aretæus again mentions the darker colour and greater coagulability of venous blood; and, in his chapter on the cure of headach, he recommends bleeding from the arteries behind the ear, which may be distinguished, he says, by their pulsation. (*De Morb. Diut. cur.*, lib. i. cap. 2, p. 115, ed. Boerh.)

Those of our readers who may choose to embellish their leisure hours, by studying the writings of the classic physicians, will be astonished to find how groundless are the assertions respecting them which are to be found in modern works. The reason may probably be, that the original is rarely consulted, and consequently the scraps of ancient lore copied from book to book, without examination, are encumbered with additional mistakes at each transplantation, till they lose all resemblance to the archetype: like a drop of some pungent juice ten times poured from one homœopathic phial into another, and diluted each time with a hundred waters!

We again recommend Dr. Quain's Manual for general use, and are of opinion that it is one of the few books which really deserve a place in the library of every medical student.

A Popular View of Homœopathy. By the Rev. THOMAS EVEREST, Rector of Wickwar, Gloucestershire.—London, 1834. Small 8vo. pp. 95.

THIS is a very clever little treatise, sparkling, pleasant, readable; yet does its author fall into three enormous mistakes. The first is, in supposing that medical men wish to persecute him and his hobby; or, to use a common phrase, that the doctors want to make a dead set at him. The second is, in imagining that very little progress has been made in modern times in the practice of physic. Our author's third mistake (the most astounding and incomprehensible of the three,) consists in the supposition that physicians are averse to

novelties; that they are quite satisfied with the art of healing as it stands, and reject any attempt to improve upon the orthodox treatment, as a schoolman of the middle ages would have scouted the would-be refuter of Aristotle. This is not a mere slip of the good rector's pen, for it occurs more than once. Thus, at p. 20, he says, "However, this may be denied by those on whom education and interest have combined to impose the belief that human intellects are incapable of admitting any more knowledge on the subject of medicine than has been already revealed to the members of the College of Physicians," &c. Again, at p. 37 he copies Hahnemann, and declares that

"First of all, certain general therapeutic qualities are attributed to particular substances. One is still, as it was said to be in the time of Dioscorides, seventeen hundred years ago, a diuretic; another a sudorific; a third an anodyne; a fourth an anti-spasmodic, &c. And supposing all this to be literally true, (which he asserts that it very rarely is when brought to the test of experiment,) what has been learnt excepting one property of each medicament? Nothing whatever is known of the action of any one on the rest of the organism; nothing of its special and peculiar power of affecting the rest of the frame; nothing of its influence and action on that part of the organism which is already affected, or on that which is not affected. Taken in large quantities, such and such a substance for instance is an anodyne. Thus much is supposed to be known, and it is prescribed and taken accordingly. A very desirable end, no doubt, to relieve pain! But who knows what symptoms of other kinds it is exciting all the while? Who knows what suffering it is preparing in return for the pain it has temporarily extinguished? If new symptoms follow the use of it, they are referred to the disease perhaps, or perhaps looked on as imaginary, and the patient declared to be affected with that curious complaint which baffles medicine, hypochondria!"

And then, at p. 80, he treasonably insinuates that doctors do not read Journals. Hear him!

"If such a man, so loaded with onerous duties, with such grave responsibilities, and such solemn consequences depending on him, were well aware of the nature of his office, he would shrink from the notion that he had already exhausted all information on the subject of healing; he would doubt his own powers; he would distrust his own judgment; he would weary Heaven with prayers for light and knowledge; he would deem it criminal to waste in indolent acquiescence an hour that might have been employed in investigation, and a sin against the Majesty of heaven to reject one single assertion connected with the science of healing, until he had convinced himself by actual trial of its falsehood. The four winds would bring him tidings of all new discovered simples; and not a

finger-ach could be cured above the line of perpetual snow, but, like Fine-ear, in the tale, he would catch the whisper of it along the earth." (P. 80.)

Now we affirm that doctors read Journals most diligently, and consequently obtain tidings of all new-discovered simples, at a much smaller expense than that of keeping Eurus and Boreas in pay: yes, and these useful repositories may be considered in the light of acoustic tubes, conducting the faint sounds of distant knowledge into the auditory meatus of persons who have no pretensions to be *Fine-ears.* Surely, Mr. Everest (who evidently takes in the Medical Gazette,) cannot open a number of our excellent contemporary, without seeing some new discovery in the art of healing; but he will very rarely indeed find any attempt to crush the novelty by the mere weight of authority.

We shall not give an analysis of Mr. Everest's work, as we have so frequently detailed the merits and demerits of Hahnemann's theory, and gave a long account of his Organon, in our first Number, but shall content ourselves with one more quotation. The following observations on what might be called *druggery,* by which a human stomach is turned into an ill-assorted apothecary's shop, are far from bad.

"How much of the disease at present existing in the world has been produced by natural morbific causes, and how much resulted from the improper use of medicine, it might be difficult to determine. We cannot err, however, in asserting that every grain of medicine taken beyond what was necessary to effect a cure, has been productive of suffering, for which they who prescribed it are alone responsible. When we recollect the wasting deluge of drugs with which the uncertainty of the art of medicine has enabled every wretched empiric to flood this country, the pocket-book recipes, grandmother nostrums, family receipts, domestic formulæ, patent medicines, family medicine chests, and other perennial and inexhaustible fountains of mischief,—the multitudinous compounds of modern pharmacy, the random mixtures, the multiplied bottles and boxes which, unlike Pandora's, have not even hope at the bottom, and the utter recklessness in drug-swallowing, which has been confirmed, if not originally introduced, by the colossal doses prescribed by physicians, we cannot but believe that much of the suffering to be found in this island is due to the abuse of those very substances which a kind Creator has provided for man's restoration." (P. 34.)

Appendix I. contains two cases cured homœopathically.

A. B. (apparently our good rector,) was suffering under dyspepsia of long standing, abscesses on the toe and thumb, a whitlow on the finger, a spreading ulcer on the chin, and

another on the ear. He began taking his decillionths of belladonna on the 8th of December, and was cured by the 3d of January.

A child, aged two years, who had been afflicted from her birth with very obstinate constipation, was cured in a few weeks by homœopathic treatment. It is not stated what were the remedies used.

We would now give our worthy author two serious pieces of advice. First, let him send his homœopathic benefactor, who healed his ulcerated ear, &c., or some of his disciples, into our London hospitals, and let them cure half a dozen bad cases in the presence of the sages of physic: this will do the Meissen doctrine far more good than a thousand exhortations to the incredulous to put it into practice. Secondly, let Mr. Everest bring up all his sons, nephews, and younger brothers, to homœopathy; for, if one half of what he says be true, some ten years hence homœopathy will be considered to bear the same relation to allopathy that a case-full of Lucifer matches does to a tinderbox; homœopathy being a cheap and easy method of diffusing the light of health, and allopathy being too apt to seduce the operator into giving himself very severe raps on the knuckles.

Lectures on the Ordinary Agents of Life, as applicable to Therapeutics and Hygiene. By ALEXANDER KILGOUR, M.D.—Edinburgh and London, 1834. 8vo. pp. 359.

WE recollect, some years since, reading the travels of a hard-working, pains-taking German, one Dr. Stein. Among other places, Dr. Stein visited London, and, among other observations upon that celebrated city, he remarks, that there are no bells that can be pulled outside the houses. Whether this unaccountable assertion was the offspring of a bad memory, or whether the doctor has a special amaurosis with regard to those metallic processes called bell-handles, we know not; but certain it is that the observation stands in his book, and may be found by any one who will take the trouble to read his "Reisen nach den vorzüglichsten Hauptstädten von Mittel-Europa." Now, Dr. Kilgour is afflicted with a like cecity in the matter of hygienic precepts: the profession know little or nothing, he says, about the advantages of fresh air and regulated diet; and, if you want to pose your doctor most cruelly, you should ask him a question about roast or boiled—*teste Kilgouro.*

"A free ventilation might soon put him on his legs, and it would for certain expel effluvia; but open windows let in the cool air, and

cold air is better felt than contagious effluvia; so the windows being kept shut, and the bed-curtains drawn close, the patient has the happiness of dying in an atmosphere of his own creating, raised to a proper putrifying temperature by means of a blazing sea-coal fire. What can we think of the man who, in circumstances like these, calls for paper, pen, and ink, in order that he may scrawl a receipt in indifferent Latin for worse medicine, and knows not to order that which would relieve the patient without pain or expense? He is not only guilty of the patient's death, but of his death aggravated by severe torments. Fortunately, there are occasions when this ignorance is discovered; and he who piques himself on knowing thoroughly the patient's complaint, and on writing a most scientific prescription for it, often looks blank enough when the simple but important question is put, What is the patient to be allowed to eat?

"Having therefore seen where we will most likely discover the cause, and not only this, but furnish the cure, or, at any rate, a most powerful ally or enemy of the disease, it must appear singular that so little attention should be given to this branch of science." (P. 4.)

Again, it is a capital thing to be curried: we do not mean in a dish with the Pulv. Pip. Cayenn. comp., but to have your skin curried with a brush. Every one knows this: Celsus knew it; Bichat knew it; the people who shampoo and are shampooed at Brighton are quite aware of it; in short, to use a familiar phrase, all the world is up to it, except one deaf and blind set of men—your learned physicians. They turn up their noses at anything that does not come out of the chemist's shop, and believe that Hygeia, like Truth, is only to be found at the bottom of that small well, a draught phial. Here is our authority.

"What makes the jockey so careful to curry his horse, but that he knows it is necessary for his beauty, his fleetness, his strength, and his health; for the horse exudes a large quantity of solid matter in his perspiration, and this retained in his hair would soon destroy him were the currying comb not frequently used. The professed 'Rubber' often meets with the *nasus aduncus* of the school-learned physician; but it would be well if this last learned gentleman would turn his scholarship to reading the many histories of cures by means of friction; and that he would recollect what Fuller says, that 'Exercise is to physic as a bandage is to surgery, an assistance or medium, without which many other administrations, though ever so noble, will not succeed.' Your regular pill, powder, and draught gentleman has a great contempt for rubbing; the effect of his ignorance." (P. 200.)

Now we believe that medical practitioners, so far from being ignorant of these matters, are remarkably well versed in them, and that Dr. Kilgour, in addressing his work to

them, has acted as Dr. Stein would have done, had he imported a few tons of bell-metal into London, forgetful of Birmingham.

The plain truth is, (in spite of the author's protestations,) that these lectures are intended for unprofessional persons; and we think that this may form an amusing book enough for them to turn over at breakfast-time, when parliament is not sitting, and the newspaper is more than usually dry. The last lecture is needlessly and flippantly coarse, and will cause many to think but lightly of Dr. Kilgour's understanding. What philosopher, or what physician, ever before discussed the intercourse of the sexes in such a tone?

As we do not wish to part from our author in ill humour, we will conclude by extracting his account of training, as being a good compendium of that athletic education.

"As an example of the great effect of exercise on the body, we may here notice the practice of training. The horse is trained for the race-course, as is also the jockey that is to mount him. The pace and the wind of the horse are astonishingly improved, and the rider can be brought to any weight. The champions of the ring are regularly trained previous to the fight, so that they may be in good or prime condition, that the bone may be strong, the muscle firm and hard, and the wind long. The most flabby and shaking sot of a taproom will be, in three or four weeks' training, made as pretty and powerful a man as can be seen of his inches. All this is achieved by pure air, by nourishing food, and by exercise. The trainer takes his man to an open, and if possible, a hilly country, he cleans out his stomach and his bowels once or twice with an emetic and a warm and resinous purgative, he takes him from bed every morning at six, and exercises him in walking, running, leaping, riding, or a part of all, for three or four hours at least, he then breakfasts him on a beef steak, stale bread or biscuit, and a little tea or milk. Exercise is again had recourse to, either as before, or with the gloves, the ball, the dumbells or quoits. The dinner is beef steaks, or joint of mutton, or lean chop, stale bread, and a little beer. Exercise is again followed for three or four hours in the open air, and then supper of steaks and stale bread. The bed is hard, and the length of sleep not above seven hours. He has no idleness of mind or body; he must be always occupied, and it is best to engage his mind with the exercises of his body. He eats but three meals a day, and the solids must be nothing but the lean of fat beef, mutton, or venison. The legs of fowls are sometimes allowed for variety, but no veal or pork. The meat must always be broiled and under-done. Stale bread is almost the only vegetable substance allowed; sometimes a little potato, but no herbs. Eggs are occasionally taken, but no cheese, nor butter, or fat of any kind. The quantity of solids allowed during the day will depend upon the stomach and constitution of the individual,

but must always be rather below his usual quantity; seldom, in any case, above twenty-four ounces. No condiments are allowed, with the exception of salt, and that only in a very small quantity. Fluids are considered as injurious. No food is given in this form: and, for the purposes of alleviating thirst and supplying the necessary waste of the fluids of the body, soft spring water is the best. No spirits are allowed, but occasionally a little porter after dinner or supper. The quantity of fluid, of any kind, taken during the twenty-four hours, must not exceed, in all, three English pints. Exercise of that kind in which the trained person is to exhibit, must form a large part of his daily occupation." (P. 206.)

The Surgeon's Practical Guide in Dressing, and in the Methodic Application of Bandages. Illustrated by numerous Engravings. By THOMAS CUTLER, M.D., late Staff-Surgeon in the Belgian Army.—London, 1834. 12mo. pp. 195.

IN the present bookwriting days, it is a hard matter for an author to find an excuse for his work, or, at least, one with any share of novelty; and the consequence is, that the same hacknied sentence is transferred from volume to volume, without any examination as to its applicability to its new situation. Dr. Cutler commences his preface with the following statement:

"A pocket manual, calculated to improve a department of surgery which unfortunately has been too long neglected in this country, and spare the practitioner the sacrifice of much valuable time, cannot but be deemed a great desideratum."

Too much neglected in this country! Shade of Baynton, hear him! Where can Dr. Cutler have studied surgery, that he can venture on such an assertion? Has he never heard of Pott, Astley Cooper, Cline, and Amesbury? or has he so little acquaintance with the subject on which he writes, as to be ignorant of the various apparatus to which their names are affixed?

After reading his work, we readily acquit him of these charges, as he has not only very carefully described them, but attributed each to its respective inventor. It is quite clear, then, that our author never meant that this department of surgery was really neglected in this country; but he has adopted it as a convenient ready-made sentence, without examining whether it exactly fitted his subject. So far, indeed, is he from the truth, that we have no hesitation in affirming that there is no country where so much attention is paid to bandaging and dressing as in our own, and none in which they are brought to such great perfection. Nay, we will go

further, and challenge Dr. Cutler to name one celebrated English surgeon who has not either invented or improved some mechanical apparatus.

We would not however quarrel with our author for seeking an excuse for his work: we grant that every author does, or ought to, think his book a desideratum; but we are not pleased that our country, and its reputation in the arts and sciences, should be libelled, in order to turn a neat sentence, or to form a graceful opening to a preface.

But to proceed to the work itself. When a surgeon undertakes to write upon a very confined subject, it is to be expected that the minuteness with which he enters upon it will serve as a substitute for more extended views. Accordingly, when a book with the title of the "Surgeon's Practical Guide in Dressing and in the Methodic Application of Bandages" was first placed in our hands, we were indeed disappointed to find little else but a *catalogue raisonnée* of a few surgical instruments and apparatus; not a single new invention, not even an improvement suggested by the author.

Dr. Cutler is evidently a disciple of the French school of surgery; he seems perfectly at home with their method of dressing and with their apparatus, but he does not appear to be equally well acquainted with the ordinary surgical machinery employed in his own country. For instance, in that portion of his work devoted to the means of reducing and retaining in due position fractures of the leg, we find no mention of the junks, one of the best and most common means of treatment. Again, in detailing the various kinds of trusses, he has omitted the spring truss in general use, the Maidstone truss, Egg's, and many others, and has contented himself with describing Salmon and Ody's, and Adam's graduated pressure trusses, which, though excellent in some cases, are open to several objections in others. In short, there is not a single portion of the work in which there are not gross omissions, even when looked upon in the humble light of a catalogue; but, when examined as a guide in the application of bandages, the descriptions are so short and superficial, that the reader, failing to trace even a resemblance to such a thing, turns to the title-page to ascertain if he has not misunderstood the author's intentions.

It would be injustice, however, to Dr. Cutler to close our notice of his book without mentioning the excellence of his drawings; to the description of each apparatus one or more illustrations is affixed, representing the mode of its application, and assisting the reader greatly in comprehending its pre-

vious parts and uses. These alone are worth the price of the whole.

We have thus stated our opinion freely of the beauties and errors of this work; we fully approve of its design, and, though we do not believe mechanical surgery to be neglected in this country, yet think a good manual a desideratum. Dr. Cutler appears, by his skill in drawing, and by the attention which he has paid to the bandages in use upon the continent, to be well fitted for publishing on the subject with success; but, ere he can expect to do so, he must spend some period in visiting the different hospitals of the metropolis, make himself acquainted with the various apparatus employed in each, with their relative advantages and disadvantages, and afterwards bestow a little more attention in describing the minutiæ of their application.

The Medical Pocket Book, for 1835. By JOHN FOOTE, Jun. London: small 8vo. pp. 166.

The Medical Almanack, for 1835. London. 12mo. pp. 72.

THE Medical Pocket Book is a handsome little work, and contains many useful memoranda. About a hundred pages consist of a diary and case-book, leaving, as we think, too little room for the various lists required. Mr. FOOTE has given a good abstract (intermingled with some errors) of the nature of our medical corporations and societies; and his account of new medicines will be serviceable. We wish he had entered into this part of pharmacology more fully, and had omitted the abstract of the pharmacopœia.

The Medical Almanack is very rich in lists, but they are unfortunately often obsolete. Thus we find, at p. 23, Sir Wm. Franklin (long since deceased,) put down as belonging to two societies; and, at p. 28, Dr. Bradley and Mr. Chevalier are enumerated among the officers of the Westminster General Dispensary. The list, too, of the College of Physicians, given at p. 16 et seq. is not the last one. There is a strange mistake at p. 72; Dr. Jenner is stated to have died in 1798—now this is the year in which he promulgated his great discovery: his death took place in 1823.

Both these works will be improved by being enlarged. A copious abstract of the laws relating to medical practitioners would be useful; (the Almanack gives half a page;) and the tax tables are much required. When the young doctor finds his income rising to a point which to the esoteric is £100 a year, but to the exoteric £1000, a cab is not merely a comfort, but, according to many grave and learned autho-

rities, a necessary of life, more indispensable than coals or candles; and how pleasant, then, to know beforehand how much he is required to contribute to the state from the superfluous wealth indicated by his vehicle and its tiger!

The plan, both of the Pocket Book and the Almanack, is good; but Mr. FOOTE's work is certainly superior in the execution.

An Essay on Clinical Instruction. By E. Ch. A. LOUIS, M.D. Physician to the Hospital of La Pitié. Translated by PETER MARTIN, M.R.C.S. London. 1834. 8vo. pp. 33.

THIS Essay is divided into two parts; the first treating "of the study of particular facts, or of diseases considered in an isolated manner;" and the second, of the "resumé of a clinical course, or an inquiry into general facts."

The former part contains some hints on the method of examining patients, and investigating the history of their ailments; but we shall pass them over, as they are sufficiently familiar to every well-educated practitioner. This reminds us that an able physician, our late excellent friend Dr. George Pearson, drew up *a plan for the examination of patients*, which was not only a valuable help to beginners, but might be consulted with advantage by many experienced physicians. How often do we see, that, for the want of a sufficiently searching investigation at the first visit, some important fact comes to light, after a fortnight's medication, which ought to have been known ere a single draught had been swallowed!

In the second part, M. Louis insists very strongly on the advantages of what he calls "the numerical method;" or, in other words, on the advantages resulting from classing symptoms, and post-mortem appearances, with strict reference to their relative frequency. Thus, he says,

> "If there exists an exception to a general law, the most general possible under the point of view which we are now considering, I mean the just appreciation of the symptoms, how are we to know it, except by means of the numerical method? Rusty, viscous, semitransparent sputa from one of the most remarkable and constant symptoms of pneumonia, and are very rarely absent, at least when the disease attacks a person previously in good health, and of mature years. Still this symptom has been absent, and in the circumstances just indicated; but in what proportion of cases? What is the value of this exception? It is not known, the numerical method has not extended so far." (P. 23.)

This fact may be illustrated by an instance from ms. notes of Louis's Lectures.

In his lecture on Pneumonia, after analysing the facts, he arrives at the following conclusions:

"Of thirty-seven cases, seven proved fatal. The mean age of those who recovered was forty-seven, of those who died, sixty-three. In seventeen cases the superior lobe was affected, and the mean age of the individuals was fifty-four, in twenty cases the inferior lobe was affected, and the mean age was thirty-five. Of the fatal cases the superior lobe was affected in five, the inferior in two. In twenty-seven of the cases the individuals were previously in good health, and in one half of the cases, the local symptoms were preceded by general symptoms, not referrible to any local cause."

"Again with regard to erysipelas. There were observed at La Pitié during a certain time, twelve cases of erysipelas, all of which terminated well; eleven commenced with shivering; in five there were general symptoms preceding any local symptoms. In six cases the nose was first affected, in four the cheeks, and in two the eyelids."

M. Louis concludes by saying that he has not placed among the difficulties of observation those which are supposed to arise from the slowness of the education of the senses, because he thinks that the exercise of the judgment has been confounded with that of the senses, which are only its instruments; and he believes that the ear is not less fine or less perfect in a beginner, than in one who is finishing his studies; "nor in him who interprets ill the phenomena of auscultation, than those who are most skilled in this art. Both hear the same sounds in the same subjects," &c. p. 32. This celebrated physician is here clearly in the wrong; nothing is more certain than that a novice cannot hear the sounds which can be distinguished by a proficient in the use of the stethoscope; and, moreover, that by time, and a series of efforts, he may learn to hear. Dr. Wollaston mentions his having known several persons, who, though not otherwise deaf, were insensible to some acute sounds, as, for example, the chirrup of the cricket; now it appears to us as certain that many of these *surdastri* might have been cured by directing their attention to sounds of gradually increased acuteness, as it is that a flabby townsman may be taught to raise the maximum of his walk from five miles to fifty.

This little treatise will be very useful to the zealous student; it will not merely furnish him with many valuable hints, but what is of still greater importance, will supply him with ample materials for thinking.

Outlines of a New System of Philosophy, being a View of the System of Sciential Medicine: or Medicine (and all Human Knowledge) as proveable as Geometry. By THOMAS EDEN, M.R.C.S. London. 1834. 12mo. pp. 262.

AMONG the oddities which foreigners have remarked in our national character, few seem to have struck them more than the propensity of every true-born Briton to lay wagers; and they mention with surprise that a sum sufficient to purchase a French dukedom is often staked on an event, which, however interesting, must be allowed to be of minor importance; such as a race between two maggots, or the like. The Prince of Wales and Mr. Fox once laid a bet as to which should make the worst pun; and we cannot help thinking that the queer nothingness, the expanded zero, in the shape of a book, with which Mr. Eden has favoured us, owes its existence to a similar agreement; the bet was probably to be won by him who should write the most foolish book of the season; and impartiality obliges us to confess that our author has immeasurably distanced every competitor—he wins at a canter. The grand gist of the book consists in a perpetual talk about "science," a word which occurs half a dozen times in a page; though the thing is as much like a scientific treatise as Bombastes Furioso is like a great general, or the Sir Frederick Fineer of a set of Twelfth Night characters resembles a man of fashion.

There is a very pleasant section in the book, where Mr. Eden gives an abstract of the unanimous opinion of the profession about himself and his science; but we should rather take it to be a prophetic glimpse of a hundred reviews of the book, in case it should be our author's destiny to be immortalized in so many.

"Ill thinkers who look not to truth have ever thus referred new doctrines to their preconceived notions, and have tolerated or condemned, by their mere pre-judgings; such a decider has human nature ever been, most censuring that which least accords with error, and most condemning that truth which is the most corrective. And soon as the name of sciential medicine had been uttered, before one doctrine had been whispered, sudden condemnation was past upon the science and myself; from every person to whom the name had gone sudden censure was received; condemning epithets soon poured thickly in; 'stuff;' 'all moonshine;' 'silly notions;' 'mistaken notions altogether;' 'nonsense;' 'arrant nonsense no doubt;' 'doctrines founded, no doubt, on some fundamental error;'

'great folly;' 'doctrines which he dare not openly advance;' 'which he dare not give a glimmering explanation of;' 'quackery;' 'silly doctrines which I will undertake to refute and expose in a moment;' 'a silly man;' 'led astray by some error;' 'whose head is full of mistaken notions;' 'a well-meaning young man that I am sorry for;' 'that I pity;' 'a person who ought to be put under the care of his friends;' 'a poor fellow who has no friends to take care of him;' 'a junior practitioner led astray by the ardour of his feelings;' 'an enthusiast;' 'a violent enthusiast:' 'a visionary;' 'a great visionary;' 'a fool;' 'a prating fool;' 'a contemptible fool:' these are some of the many epithets which I have heard of; and there is no scoffing epithet of common contempt, nor any sneering epithet of derision however high, which 'my dearly beloved brethren' of the profession have not, by their whisperings and mutterings, already thrown upon sciential medicine and myself." (P. 24.)

This is a very fair parody, our readers must allow, on the manner of those nervous beings who meet misfortune half-way, and anticipate what the critics will say of them; but our author abounds in these imitations. For instance, it is very common for the unreadable to cry out, that as Milton was neglected, so are they; just as a pig-stealer might say "Aristides was banished, so am I:" and thus our author exults in the neglect of "sciential" medicine.

"Thus you see sciential medicine has already on its head many of those leaves without a crown of which no corrective truth ever went triumphantly forth: the science is already under the invigorating auspices of that same patronizing power which has ushered into the world and attended the infancy of the greatest discoveries which philosophy ever gave birth to." (P. 26.)

If we wished to give our readers the best notion of this ebullition of nonsense, we should call it a very grotesque parody on logical and metaphysical writers. Here is a delicious bit of definition.

"A science, or a portion of knowledge, or a truth, of the individual, or of the few, or of the many, or of the multitude, is of, or belonging to, science, knowledge, truth." (P. 160, *note.*)

Or take the first and second positions of sciential medicine.

"Whatever individual thing does, according to your individual power to know, exist, does exist according to truth; and whatever individual thing does not, according to your individual power to know, exist, does not exist, according to truth." (P. 107.)

"'Whatever individual thing does, according to your individual power to know, exists in a specific time, place, combination, &c., does exist in that time, place, combination, &c., according to truth;

and whatever individual thing does not, according to your individual power to know, liably exist in a specific time, place, combination, &c., does not exist in that time, place, combination, &c., according to truth." (P. 156.)

Or this agreeable specimen of a 30-page dialogue between those obstinate persons, Messrs. Pro and Con.

"*Con.* Then, I appeal in the same manner to a person (my teacher) who knows what I do not know.

"*Pro.* Then I give (distributing names differently) the same reply.

"132. *Con.* According to my power to know! according to his power to know! according to troy! according to avoirdupois! I know the decisions are different, but truth must be something independent of us, and of our decisions; the matter is for men to get at the truth, not for them to decide anyhow, as you teach.

"*Pro.* Sciential medicine teaches but one manner of decision. Do not delude yourself by such words as 'men,' and 'get at the truth.' By 'men' you mean, men one after another, that is, some men first. There is no truth, but what some men are at; for truth is always a mental affection; it never is 'independent.'

"133. *Con.* But some mental affections are right, and some are wrong.

"*Pro.* And you have undertaken to show that the mental affections, obtained by the rules of sciential medicine, are wrong." (P. 117.)

Our readers will allow that in this style Mr. Eden is unrivalled, and does his splutter more completely than any one within the memory of man; he should keep to this, and never attempt a real book; "motley is his only wear." Our author is on the look out for ten thousand antagonists: he imagines that the "professors of acephalous medicine," i. e. all the doctors, great and small, will be eager to refute his babble, and will pester him with unpaid letters. But let him fear nothing; every one will accept our explanation of the nature and origin of his essay; and the doctors will no more write to Mr. Eden to shew that his fun is not philosophy, than they do to clown and pantaloon, to tell them that their complexions are not genuine.

ORIGINAL COMMUNICATIONS.

RETROSPECT OF THE LATE IMPROVEMENTS IN MEDICINE, SURGERY, &c. By the Editor.

It is hardly necessary to premise that the short Retrospect which we are about to attempt makes no pretensions to be either a history of medicine, or a comparison of what has been done with what might have been done. We shall merely venture to execute the humble, but perhaps useful, office of pointing out a few of the more recent improvements in the art of healing, together with such discoveries in anatomy and physiology as may be interesting, either from settling some long-disputed point, or from their having some tendency to improve the practice of physic. We regret that we cannot commence this summary by announcing that a specific, or at any rate a tolerable method of treatment, has been discovered for the most frightful disease, the nearest approximation to a pestilential epidemic which has been known in this country for many generations: the Asiatic cholera, though less fatal in 1834 than in 1833, and less fatal in 1833 than in the previous year, seems scarcely to be under the influence of medicine. It would be endless to recount the various methods of treatment which have been tried since the first invasion of the epidemic. Laudanum and brandy, calomel with cold water, salt-and-water emetics, saline medicines, and that desperate resource—injection into the veins, have all been employed with a success which has amply satisfied a few patrons of each method, but has been extremely unsatisfactory to the profession at large. Now, this is not the case when any thing excellent, or good, or tolerable, is brought forwards. The use of iodine in bronchocele, of colchicum in gout, the substitution of the sulphate of quinine for bark in substance, leave many dissatisfied; but the real worth of these several remedies overwhelms opposition, and a few failures are not sufficient to condemn a medicine before so impartial a tribunal as the medical public.

It is therefore to be feared that the practitioners who have hitherto extolled various remedies as specifics in cholera, have been mistaken, not indeed as to the fact of their patients surviving, but as to the nature or intensity of the disease: for if any plan of treatment, that by calomel and cold water for instance, were gifted with the attributed efficacy, it is difficult to suppose that it would not spread. The neighbouring practitioners would be compelled, for very shame, to adopt the use of the specific, and their accumulated evidence daily in-

creasing in quantity and respectability would bear down all opposition. There is one remedy which has been used in Germany with considerable success, and which has a very plausible theory in its favour. This remedy is the sulphate of quinine, and it is recommended from the obvious resemblance of the Asiatic cholera in many points to an ague of the greatest intensity. Our readers will find the particulars in our second number.

Homœopathy. We foresee that many will censure us for devoting a page to homœopathy in an essay on *improvements* in the practice of physic; and it may be objected, moreover, that we are performing a work of supererogation, as we have already explained the principles of infinitesimal medicine. To this we would answer, that a retrospect of this kind being chiefly intended for those who live remote from the great foci of knowledge, an account of any sweeping changes in the practice of physic, however dubious their merit, cannot be wholly uninteresting; and that a compendium of the subject may be advantageous to those who have neither time nor inclination to read a long review of the *Organon der Heilkunst*. The principles of homœopathy are two; the first is, that, to cure a disease, we must administer a remedy which would produce that disease in a healthy person: this rule requires of course to be understood liberally and indulgently, as it is not very easy to find a drug which will produce gout for instance, or scarlatina, in a healthy person. It seems sufficient therefore if the remedy will produce some of the more striking symptoms of the disease to be cured; thus, belladonna, say the homœopathists, will bring out an eruption like that of scarlatina, as well as some other symptoms of the disease, and therefore is its appropriate remedy. The second principle is, that medicines are to be given in doses infinitely small; a drop of tincture of belladonna is to be diluted with 100 drops of water, and a drop of this diluted solution is again to be diluted with 100 drops of water, and so on for 6, 8, or 10 times; and then a fraction of a drop of the last and weakest solution is the dose. So that there is no danger of the patient being poisoned.

It must be confessed that these principles have at first sight something rather ludicrous about them, and might have been mistaken for a new way of curing disease sent forth from the Academy of Laputa. Yet this theory, though strange and fantastic, deserves the attention of the most enlightened practitioner; partly because it is now put into practice by a host of continental physicians, and partly because it is an undoubted fact that myriads of patients who have taken nothing but these infinitesimals, these ghosts

of departed medicines, as we once before called them, do nevertheless get well. How do they get well? Not, we think, by the decillionths of aconite or pulsatilla, but by the *vis medicatrix naturæ*. It is to this renovating power which resides in every unbroken constitution that the followers of Hahnemann owe their success, and it is to this that we would have the physician trust more frequently in those chronic cases where delay is less dangerous than mistake. Thus it would be better that a patient should take the infinitesimals appropriated to an enlarged liver, rather than pass through what Dr. Abercrombie calls "long and ruinous courses of mercury," especially if the existence of the said enlargement were rather dubious. There is a curious paper on the relative advantages of aconite and bleeding in the treatment of inflammatory diseases, which was read before the "Société Homœopathique Gallicane," last autumn. The author does like to reject bleeding altogether, as homœopathy bids him, and therefore without giving up aconite, (the certain remedy, it seems, for inflammation,) he wishes to premise venesection. It will be objected, he says, that by thus joining a bit of the old and a bit of the new system of physic, it will not be known which ought to have the honour of the cure. This is of no importance, replies M. Chuit; the great point is to cure as quickly as you can, "and I care not, if allopathy says, it is the bleeding that has cured the patient; and homœopathy declares, that it is the aconite; the only object is the cure."

The *Bibliothèque Homœopathique*, to which we are indebted for Mr. Chuit's paper, contains extracts from a German journal devoted to the same system. They relate instances of homœopathic cures, some given at length, and others with a more than laconic brevity. Thus, "a black vomit (*melæna* 2) was completely cured in six hours by *ver.* $\frac{000}{iv}$." "Hromada says, that he has cured a tuberculous phthisis with *cortex sambuci* 3; he wishes this substance to be tried again, as well as *urtica urens*, a popular remedy in the same disease."

Let us not omit to add that Andral has tried Hahnemann's system at Paris, in a considerable number of cases, but it was found to fail entirely. The *Bulletin Médical Belge* for November, 1834, contains three cases of inflammatory disease treated homœopathically, by way of experiment. Aconite was the medicine given, but without success; and the increasing violence of the symptoms rendered the abstraction of blood necessary in each case.

Functional Diseases of the Spine. It may seem superfluous to touch upon this subject again after having given so long an analysis of Messrs. Griffin's work in this very num-

ber, but the topic is so important, and the improvement in practice so considerable, that an account of the recent progress of physic would be incomplete were it omitted. We must therefore stand excused for mentioning it again, and giving, as it were, a second distillation of the admirable Treatise in question. Dr. Griffin has found, by repeated experience, that a morbid irritability of the spinal marrow is attended by an increased sensibility of the structure which lie above it, and may thus easily be detected by pressure; and the train of symptoms depending on this irritability may, in most instances, be successfully treated by counter-irritation applied to the tender spot. The symptoms of course vary according to the part of the spine which is affected; the cervical, dorsal, and lumbar nerves, separately or in conjunction, having the power of stimulating the thoracic, abdominal, and peloric viscera, into diseased action, which is continually mistaken by hasty practitioners for the result of inflammation. Instances are given by Messrs. Griffin where blisters to the back relieved pain in the chest, when blisters applied to the chest itself were ineffectual.

Belladonna in Hooping-cough. The use of belladonna in hooping-cough is by no means new, but it has not been generally adopted; perhaps from practitioners having been disappointed in its effects when the drug was adulterated, and alarmed at its effects when the drug was genuine. Dr. Jackson, who has lately written a paper on this subject in the American Journal of the Medical Sciences, was at first baffled, owing to the falsification of the drug employed, which in some instances appears not to have been belladonna at all. The genuine extract of belladonna may easily be distinguished by its power of dilating the pupil; hyoscyamus, it is true, will do the same, but in a much less degree. Dr. Jackson's subsequent experiments with the genuine extract were perfectly successful; and he advises us to give it in doses of $\frac{1}{6}$ of a grain to infants three months old, every three hours from sunrise to sunset, until the pupil be dilated. If the extract is very good, we should conjecture that this dose would be too large.

Iodine in Syphilis. This plan of treatment has been adopted of late by many eminent practitioners; among others, by Mr. Tyrrell, who informs us that he is perfectly satisfied with the results, and that he has used it even for the primary symptoms with great success. We would warn our readers against the common error of giving iodine in too large doses; if this be avoided, it is one of the safest, as well as most useful remedies we possess. Perhaps the best method of ad-

ministering it is to dissolve half a grain of iodine and one grain of the hydriodate of potass in eight ounces of distilled water; and this may be the daily dose.

Discovery of the Itch Insect. It has long been a subject of doubt whether an insect exists in the vesicles of the itch. This doubt has at length been cleared up by M. Renucci, an Italian student at Paris, who has succeeded in extracting the insect from the small epidermic canal terminating in the vesicle, in which the insect is generally lodged. It is sometimes, though rarely, situated in the vesicle itself. This discovery has been confirmed by a host of other observers; and M. Renucci is consequently entitled to the reward of 300 francs long since offered by M. Lugol.

Antidote to Arsenic. From some experiments which have lately been instituted by MM. Bunsen and Berthold, at Gottingen, it would appear that the hydrated oxide of iron is an antidote to arsenic; but we are sorry to learn that Mr. Brett, who has performed similar experiments in this country, has found the supposed antidote inefficient.

Creosote. This substance was discovered by Reichenbach, who procured it first of all from pyroligneous acid, and afterwards from tar. It is antiseptic, as its name implies, which is derived from κρεας, flesh, and σωζω, to preserve. Creosote is also stimulant and caustic, and possesses the property of instantly coagulating albumen; and hence is a styptic. When fresh meat is soaked for an hour in a solution of creosote, and afterwards dried, it may be exposed to the heat of the sun without putrefying; it hardens in about a week, and acquires the smell of good smoked meat, its colour changing to a reddish brown. Fish may be preserved in the same manner; and birds killed by creosote have kept for six weeks without becoming tainted. Dr. Miguet, from whom we have borrowed this account, tells us that he has a bird left which is quite dry, and shows no tendency to putrefaction. Creosote forms two different combinations with water, the first being a solution of one part of creosote in eighty parts of water, and the other a solution of one part of water in ten of creosote.

When pure creosote is applied to the tongue it causes violent pain, while the taste of smoked meat is perceived in the mouth and pharynx, and penetrates into the nasal fossæ; when applied undiluted to the skin it causes a sensation like that produced by a slight burn; the epidermis becomes red, and falls off in small scales.

Plants die if sprinkled with creosote, and a few drops poured on a rose immediately made its colour paler, and soon turned it yellow. A few small fish, some flies, and a spider,

were put into two ounces of water, in which a few drops of creosote were suspended; they did not survive more than two minutes. Dr. Miguet remarks, with great justice, that this poisonous action is probably owing to its power of coagulating albumen, and thus destroying the circulation of the blood, by diminishing its fluidity.

A dog two months old took, in the space of a week, eight ounces of distilled water, each containing four drops of creosote. The quantity was doubled during the following week, and produced slow and painful walking, frequent nausea, subsultus tendinum, and occasional tremblings. Another dog was killed by two drachms administered in half an ounce of water. A case of poisoning by creosote is easily distinguishable, as the substances found in the stomach coagulated albumen, and moreover its peculiar odour cannot be mistaken.

Every one has heard of the extravagant panegyrics lavished on *tar-water* by Bishop Berkeley. In one place, he says: "I found all this confirmed by my own experience in the late sickly season of the year 1741, having had twenty-five fevers in my own family cured by this medicinal water drunk copiously. The same method was practised on several of my poor neighbours with equal success. It suddenly calmed the feverish anxieties, and seemed every glass to refresh and infuse life and spirit into the patient. At first some of those patients had been vomited; but afterwards I found that without vomiting, bleeding, blistering, or any other evacuation or medicine whatever, very bad fevers could be cured by the sole drinking of tar-water milkwarm, and in good quantity, perhaps a large glass every hour, taken in bed. And it was remarkable that such as were cured by this comfortable cordial recovered health and spirits at once, while those who had been cured by evacuations often languished long, even after the fever had left them, before they could recover of their medicines, and regain their strength.

"In peripneumonies and pleurisies I have observed tar-water to be excellent, having known some pleuritic persons cured without bleeding, by a blister early applied to the stitch, and the copious drinking of tar-water, four or five quarts, or even more in four and twenty hours. And I do recommend it to farther trial, whether in all cases of a pleurisy, one moderate bleeding, a blister on the spot, and plenty of tepid tar-water may not suffice without those repeated and immoderate bleedings, the bad effects of which are perhaps never got over. I do even suspect that a pleuritic patient betaking himself to bed betimes, and drinking very copiously of tar-water, may be cured by that alone without bleeding, blister-

ing, or any other medicine whatever: certainly I have found this succeed at a glass, every half-hour." (Siris, 2d edit. p. 36.)

And in his second letter to Thomas Prior, esq. the good bishop frankly avows his suspicions that tar-water is a panacea: "I do not say it is a panacea, I only suspect it to be so. Time and trial will shew." It is probably in consequence of these unmerited panegyrics that tar-water has fallen into unmerited neglect; we trust that this may not be the case with the kindred remedy, creosote. We find in Dr. Miguet's work that it has been successfully used externally when diluted, in cases of burns, itch, and other cutaneous diseases, excoriations, gangrene, caries, toothach, whitlow, scrofulous and syphilitic ulcers, &c.; and internally in hemoptysis, and as a fumigation in phthisis, and other pulmonary diseases. We argue better for the fate of creosote than of its elder brother, partly because though extolled in many maladies, it is not called a panacea; and still more because, in the present instance, the eulogies have proceeded from practitioners qualified to understand the diseases they were treating; the tar-water was chiefly employed by the laity. Should the virtues of creosote be confirmed by longer experience, it would be well to return to the use of tar-water, as being not only cheaper but safer.

Creosote may be employed externally, dissolved in eighty parts of water, or a few drops may be poured on a poultice, or in some cases it may be used pure. When used for friction or lotions, from two to six drops are to be dissolved in an ounce of distilled water, or mixed with an ounce of axunge. For internal use two or three drops may be taken three times a day, made up into an emulsion with mucilage and water. To employ it as a fumigation it is only necessary to soak some folds of linen in the creosote, and place them in the apartment of the patient.

The Ioduret and Hydriodate of Iron. These preparations have been introduced into practice by Dr. A. T. Thomson, who extols the latter as a remedy of great efficacy in scrofula, chlorosis, and syphilis; and even gives a case of carcinoma which seems to have been cured by it. The solution, he says, is best fitted for medicinal use when each drachm contains three grains of the hydriodate. This quantity may be taken three times a day, as an ordinary dose. A great, and, we fear, a fatal objection to the use of this remedy consists in the extreme facility of its decomposition; besides a host of medicinal substances which decompose it, light, and the small quantity of saline and earthy carbonates contained in common water possess the same power. This would be a matter

of comparative indifference if the hydriodate of iron, like many other medicines, became inert by its decomposition; but unfortunately, far from this being the case, when its elements are disunited, one of them, the iodine, becomes poisonously active. We once prescribed the solution of the hydriodate in the dose of a drachm twice a day to a young man, in whom the symptoms of secondary syphilis were fast disappearing. He stayed away a week, and then returned, complaining of the headach, and other troublesome ailments which had been caused by the medicine. In this case we had every reason to believe, from external evidence, that the hydriodate had been decomposed. It will be the duty, therefore, of every one who ventures to prescribe the hydriodate of iron to ascertain its purity, and watch over the first signs of its decomposition with a care which perhaps no other medicine requires.

Veratria. This potent alkaloid has of late been extolled as an external application, in an *ex-professo* treatise on the subject, in a strain which has made sober people smile and doubt, and do everything but applaud. If we were to credit the fervid panegyric just mentioned, *(the Currus triumphalis Veratriæ,)* this alkaloid is not merely efficacious in those diseases which are often benefited by external stimulants, but is a panacea in more than half the ills that flesh is heir to, including dropsy, and organic disease of the heart. It is to be exhibited in the form of an ointment, containing twenty grains or more of veratria to the ounce; and though, in the hands of other physicians, this would cause violent excoriation, the vaunter of veratria has never met with this accident. The plain fact appears to be, that veratria like any other unsparing stimulant may be occasionally useful, when applied externally; but unfortunately it is not from the worshipper that we can learn the faults of the idol; nor is it from the writer of the indiscriminating and unscientific treatise in question that we can hope to ascertain the cases in which other and safer stimulants are to be preferred. There is one obvious objection to the general use of veratria—its price. We are informed by Mr. Garden, that this alkaloid, though cheaper than it was, still costs eighteen shillings a drachm, or six guineas an ounce.

Extract of Artichoke. This extract has lately been tried in rheumatism, and it is said with some success. It has the recommendation of being harmless, and may therefore be admitted into the endless list of remedies against the perplexing disease for which it is prescribed.

Smilax Aspera. This is a species belonging to the same genus as sarsaparilla, and used in the same diseases. The

concentrated syrup is sold at exactly one half the price of the concentrated syrup of sarsaparilla,—a consideration of no mean importance. We have observed, or think that we have observed, that, although the recently-introduced syrup is far more aromatic than the old one, yet that, when diluted with water, the old one imparts more flavour. May not a similar practical paradox be observed in some wines when diluted? It seems to us that, though claret has not by itself a stronger taste than port, yet that it imparts more flavour to water.

New Method of Preparing Prussic Acid. Mr. Laming has introduced a method of preparing prussic acid, by decomposing the cyanuret of potassium with the bitartrate of potass. We do not know that this possesses any particular advantage over other methods, excepting in the facility which it affords of extemporaneous preparation. Indeed we have been assured, by an eminent practical chemist, that the acid prepared in this manner is not so pure, being always mixed with more or less of the tartrate of potass.

Lithotrity. M. Blandin, in his late work, entitled *Parallèle entre la Taille et la Lithotritie*, traces the latter operation as high as Celsus! because the Augustan physician mentions one Ammonius, surnamed ὁ λιθοτομος, not on account of his cutting for the stone, but on account of his cutting the stone itself; but, as Ammonius did not do this excepting when he had attempted lithotomy, and the perineal incision had proved too small, we fear that he can lay but little claim to be the first lithotritist. Perhaps the first person who really performed lithotrity was Gruithuisen, a Bavarian physician, who, in endeavouring to realize the hope which sprung from the labours of Fourcroy and Vauquelin, that stones in the bladder might be chemically dissolved, contrived to drill holes in them, in order to increase the points of contact between them and the solvent. Yet even this was hardly lithotrity, as we now understand the word: the honour of discovering at least the theory of lithotrity must, we think, be given to Mr. Elderton, whose paper on the subject was printed in the Edinburgh Journal for April 1819 (No. lix. p. 261 *et seq.*) He proposed to use a kind of masked file, or, as he calls it, a rasp; and the whole instrument, he says, "bears a strong resemblance to a common, full-sized catheter."

Within the last ten years, the improvements in lithotrity, and lithotritic instruments, have been so numerous, that it would require a volume, rather than the fraction of an essay, to particularize them. We will just mention that the drill and the *percuteur à marteau* are both growing rather obsolete, and Weiss's screw lithotrite is deservedly superseding them.

This instrument is a revival, with improvements, of one invented by Weiss ten years ago. It was tried in 1824 by Sir Benjamin Brodie, on a very hard calculus, the pieces of which broke asunder with so much violence, that he recommended some alteration to be made in the instrument. The spring-saw was accordingly added; but the fact is, that, if the bladder be sufficiently injected, (the great secret in every variety of lithotrity,) the impetus of the fragments need not be feared.

It is remarkable that the application of the screw to lithotrity, which was made ten years since by Mr. Weiss, has lately been claimed by a Mr. L'Estrange, of Dublin, as a recent invention of his own. But Mr. Weiss's instrument stands first, not only in date, but in merit: its superiority to L'Estrange's is so obvious and glaring, as to make a detailed comparison superfluous.

There is one point concerning lithotrity which the impartial critic must never attempt to evade, and that is, that the deaths resulting from this operation are fully as numerous as those following the more dreaded one of lithotomy.

Among other new instruments which we saw a few days since at the shop of the ingenious inventor of the screw lithotrite, we may mention Mr. Shepherd's forceps for the extraction of stumps; Gräfe's apparatus for passing a ligature round polypi, &c.; and a model of a revolving bedstead, invented by Dr. Leo Wolff, of New York. It should rather have been called a revolving bed than bedstead, the object being to turn a patient round together with his bed, the coverlet of the bed being made to support him; and thus the surgeon is enabled to dress or examine the back with the least possible disturbance of the patient. A small umbilical truss, which may be annexed to the busk of the stays, and a spine-splitter, for post-mortem examinations, also seemed to us worthy of note.

Anatomy and Physiology of the Thymus Gland. Sir Astley Cooper's work on this subject was published in 1832; but, as productions of this kind have necessarily a very limited circulation, we believe that few of our readers will disapprove of our giving a couple of extracts containing some of Sir Astley's discoveries in the anatomy of the thymus, as well as his opinions on its physiology.

"From what I have said of the structure of the thymus, its composition will be found to be as follows:

"*First.* It is composed of a gland on each side, united only by cellular membrane.

"*Second.* It is formed of two ropes, which can be, with care, unravelled; and they are of considerable length.

"*Third.* The ropes are constituted of small and large lobes, which appear as knots upon the rope.

"*Fourth.* These are disposed in a spiral or serpentine course, from the upper part of the cervical, to the lower extremity of the thoracic portion.

"*Fifth.* Each portion of the rope is a secretory structure.

"*Sixth.* The lobes contain secretory cavities or cells, which may be readily shewn by filling the gland with alcohol, air, gelatin, or even wax.

"*Seventh.* A pouch of communication exists between the lobes and the reservoir.

"*Eighth.* The gland has a central cavity or reservoir.

"*Ninth.* This cavity is not straight, but spiral or serpentine.

"*Tenth.* The reservoir is lined by a very vascular mucous membrane.

"*Eleventh.* The ropes of the gland pass in a spiral or serpentine direction around the mucous membrane, which lines and principally forms the reservoir; and these ropes being united by that membrane to each other, assist in forming the cavity." (P. 32.)

"The office which the thymus is designed to perform is evidently connected with the fœtal stages of existence, as it gradually lessens soon after the child is born; and even when the gland remains of considerable bulk, its secretory cavities are much diminished.

"It has been already stated, that this gland secretes a great abundance of white fluid; that it is situated between the veins in which the great absorbent trunks of the body terminate; that to each cornu is attached a large absorbent duct in the fœtal calf, capable of being filled with coarse injection, and that this vessel terminated at the junction of the jugular veins in the vena innominata." (P. 38.)

"As the thymus secretes all the parts of the blood, viz. albumen, fibrin, and particles, is it not probable that the gland is designed to prepare a fluid well fitted for the fœtal growth and nourishment from the blood of the mother before the birth of the fœtus, and consequently before chyle is formed from food, and this process continues for a short time after birth, the quantity of fluid secreted from the thymus gradually declining as that of chylification becomes perfectly established?" (P. 44.)

This ingenious conjecture had previously been published by Dr. Bow, as we observed at p. 112 of our last number; but we believe that the merit of showing its probability, and almost demonstrating its truth, belongs exclusively to Sir Astley Cooper.

Bellingeri's Account of the Function of the Nerves. Bellingeri's physiology of the fifth and seventh pair of nerves has lately been brought forward and advocated by the Edinburgh Medical Journal, as well as by Dr. Negri in the Medical Gazette. As an anatomist, no praise can be too high for Bellengeri; but as a physiologist, though ingenious, he is wrong. He not only attributes both sense and motion to the facial nerves, (an error long since exploded by Mr. Mayo,) but in addition he bestows the same endowments on the seventh; drawing very curious but false distinctions between the supposed endowments of the two. Bellingeri moreover imagines the anterior roots of the spinal nerves to be the source of flexion, and the posterior roots of sensation and extension jointly. Mr. Mayo, to whose letter in the Medical Gazette we are indebted for these particulars, has subjoined the original passages by which they are confirmed. It should be observed, however, that Bellingeri's theories, though now brought forward and discussed for the first time in this country, appeared in Italy in 1818.

Mr. Kiernan's Anatomy of the Liver is above all praise, but as our readers will find an abstract of his discoveries in our review of Quain, in this number, it is unnecessary to repeat it here.

Dr. Carswell's Illustrations of Pathology conclude an era in the history of morbid anatomy; his book overtops all its contemporaries, and forms the *fluctus decumanus* in the vast ocean of works on the subject. It will be in vain to expect any thing better in the same style; but, if we mistake not, another era is approaching in morbid anatomy, when the most minute structure will be studied, and the very essence of disease will be laid bare before the eye of science.

On the Formation of Artificial Pupil, without injury to the Crystalline Lens or its Capsule, by FREDERICK TYRRELL, Esq. Surgeon to St. Thomas's Hospital, and to the London Ophthalmic Infirmary, Moorfields.

AMONG the numerous cases of blindness from obstruction, obliteration, or destruction of the central aperture of the iris, (called the pupil,) there are very many in which the crystalline lens, or its investing membrane, are affected, when any operation to effect restoration of vision must necessarily implicate these structures; but there are also many instances in which the lens and its capsule retain their original integrity and perfection.

Hitherto, as far as my inquiries and observation have

enabled me to ascertain, there has not been any plan devised by which the surgeon could form an artificial pupil, without at the same time injuring the crystalline body; so that, if it were previously sound, it would be rendered opake by an operation for forming an artificial pupil, and consequently its removal would be necessary, to make the artificial pupil serviceable.

The loss of this highly important structure is not the only evil resulting from injury to it, for such injury often produces consequences fatal to the formation of the new pupil itself, and is sometimes destructive to vision altogether.

Thus the opake lens, or some fragments of it, by pressing on the iris, often create and maintain an inflammatory action in the iris, under which the artificial opening closes; or the inflammation thus excited extends to the deeper seated tissues, (as the choroid and retina,) and produces such changes as destroy their functions, and occasion organic amaurosis.

It is my intention, in the present paper, to describe an operation which I have practised for several years, and of the value of which I now feel confident, as it has enabled me to avoid the evils I have described. It leaves the lens and its capsule uninjured; it creates little risk of inflammation; and the restoration of vision by it is in most cases perfect, without any artificial aid, which must be resorted to when the lens has been destroyed.

First, I shall describe the cases to which the operation is applicable; and, secondly, explain the mode of performing the operation.

An aperture penetrating the cornea, whether created by wound or by ulceration, immediately permits the escape of the aqueous fluid, and is usually followed by a prolapse of the iris; and if the aperture be large, so much of the iris is sometimes protruded that the pupil becomes exceedingly diminished or destroyed; and in the reparation of the mischief, the iris becomes adherent to the cornea, and embedded in the cicatrix, constituting *synechia anterior*. In the cases in which the pupil is nearly destroyed the remaining part is often useless, in consequence of the portion of the cornea which covers it becoming opake in the process, by which the injury to the cornea is repaired.

When the opacity of the cornea is irremediable, and the remaining part of the pupil is so small that the influence of belladonna cannot increase it, an operation is as necessary to restore vision, as in those cases in which the pupil has been entirely destroyed from a similar cause.

When under these circumstances, one third or more of the

cornea retains its transparency and natural character, and the subjacent portion of the iris is of healthy aspect, the patient will probably have a distinct perception of light, and a perfect result may then be anticipated from operation; but when less than one fourth of the cornea is free from disease, a less favourable termination to operation may be expected: we may hope to restore useful, but not perfect vision.

When the iris is discoloured or dull, it has been inflamed, and it may be adherent to the anterior capsule of the lens, and the capsule itself be opake. The evidence of previous inflammation of the iris, therefore, renders the prognosis of the case, as regards the result of an operation, very doubtful; but it should not deter the surgeon from its performance, for I have restored good or useful vision when I have had little prospect of success.

If the patient can distinguish light from darkness, I always consider the operation warrantable, as affording a chance of benefit, even when the features of the case are otherwise most unfavourable.

The operation is then applicable to all cases in which the pupil has been entirely destroyed, or so nearly so as to be useless, in consequence of prolapse of the iris, provided that a portion of the cornea remains clear, and the patient has a perception of light.

It sometimes happens that the natural pupil becomes obscured, and rendered almost useless, by the formation of a dense and large central opacity of the cornea, as the result of cicatrization of an ulcer, or from the effect of an escharotic, and the opacity is permanent. In such a case vision may be improved or made good, by altering the position of the original pupil, which can be readily effected by the operation I am about to describe.

The instruments required in the performance of the operation are, first, a knife or needle, to make an aperture in the cornea of sufficient size to admit of the introduction of a hook. As it is desirable that the opening in the cornea should not be much larger than is sufficient to admit the hook, I prefer a needle of a diameter rather larger than the hook, to a knife.

Secondly, a hook of the form delineated in the margin; the extremity of the curved part of this instrument must be perfectly smooth.

In forming an artificial pupil on the nasal side, I have found it necessary to have the stem of the instrument bent nearly at a right angle, to enable me to avoid the nose.

Thirdly, a fine pair of scissors, to cut off the portion of the iris to be brought out of the opening in the cornea by the hook.

Fourthly, a pair of fine dissecting forceps.

The operator has not usually much choice of position for making the artificial pupil, as it must of course be formed under the transparent part of the cornea, which is frequently very limited; but he should at all times, as far as circumstances will admit, form it towards the inferior part of the cornea, vision downwards being of much greater service than upwards.

During the operation I prefer having the patient recumbent, with the head slightly raised, and with the light falling rather obliquely on the face. Then seating myself at the head of the patient, so that his head rests against the lower part of my sternum, I can command the superior eyelid of either eye, and hardly require the aid of an assistant.

In elevating and fixing the superior palpebra, the forefinger should be placed near the centre of its free margin, so that the extremity of the finger touches the surface of the globe, and the cilia are pressed outwards: by very moderate force the lid can then be elevated, but, in effecting this, the forefinger must not only press against the eyebrow or superciliary ridge, but also slightly against the surface of the globe, or the eyelid will probably evert. At the same time the point of the middle finger should be placed on the globe, near the inner canthus.

The left hand should be used to the right eye, and the right hand to the left eye, when the surgeon occupies the position described; but, if not ambidexter, he must change his position, and employ an assistant when operating upon the left eye.

By well regulated pressure with the points of the two fingers, the surgeon can in great measure command the motions of the globe, in most instances, and thereby facilitate the operation.

The superior lid being elevated and fixed, and the globe under command, the needle is to be passed through the cornea, close to its junction with the sclerotic, at the point previously determined upon; it should freely enter the anterior chamber.

On withdrawing the instrument, a part or the whole of the aqueous fluid usually escapes; and, if the iris has been previously free and unaffected, (as in the simple case of dense central opacity of the cornea,) a small part of it may pro-

lapse; and I always endeavour, by firm pressure with the fingers placed on the globe, to effect such a protrusion.

A prolapse of the iris, however trifling, immediately occasions an alteration in the figure and in the position of the pupil; and thus, the puncture of the cornea being followed by a spontaneous protrusion of the iris, sometimes effects all that is desired in such a case, by bringing the pupil under a transparent part of the cornea.

If under these circumstances the prolapse of the iris be not sufficient, the projecting part should be seized by a fine pair of forceps, and drawn from the wound, until sufficient has been pulled out to effect the desired change in the position of the pupil.

Supposing that the iris does not prolapse when the anterior chamber has been opened, in the case of dense central opacity, or when the operation is resorted to, in consequence of the original pupil being nearly destroyed, the further steps of the operator will be similar.

The patient being allowed a few moments' rest after the use of the needle, the upper eyelid should be again elevated as before, and the hook be carefully passed through the opening effected by the needle into the anterior chamber, and carried on, until the point enters the pupil. In passing the hook, the curved part should be kept towards the cornea, until the extremity has entered the pupil, when the instrument should be rotated, so that the hook may receive the free margin of the iris.

The iris being caught by the hook, the instrument should be steadily withdrawn, and when the curved part arrives at the aperture in the cornea, if it is arrested, the instrument must be again rotated, to turn the curved part towards the cornea, otherwise there may be some difficulty in getting it out, in consequence of the extreme part of the hook catching against the inferior edge of the aperture. The hook brings out a portion of the iris, and produces an immediate alteration in the position of the natural pupil, or an enlargement of that previously diminished by disease; and by gradually withdrawing the instrument from the aperture, a further portion of the iris may be generally pulled out, until the desired effect on the pupil is produced. The protruding portion of the membrane may then be removed close to the aperture in the cornea by the scissors. If the hook tears through the part of the iris which is brought out of the anterior chamber by it before a sufficient portion has been drawn out, the protruded part should be seized with the forceps, and a further portion withdrawn and cut off.

Supposing that the original pupil has been entirely destroyed, it is necessary to make a small aperture in the iris as well as in the cornea, for the passage of the hook; and this is the only respect in which the operation in such a case would differ from that described. The opening in the iris should be made by the same instrument by which the cornea is penetrated; and, if a needle be employed, the opening in the iris can be effected without increasing the size of that in the cornea. After therefore the needle has entered the anterior chamber, the point should be very carefully directed to the part at which the iris and cornea are adherent, and passed through the former close at its junction with the latter; a very small opening suffices. In puncturing the iris the operator must direct the point of the needle to the cornea, for there is usually in these cases so little space of posterior chamber, that the capsule of the lens may be easily injured if the point of the needle be passed at all backwards. The subsequent steps of the operation in such a case should be as I have already described.

If in the performance of the operation an effusion of blood takes place into the anterior chamber from the torn iris, it of course obscures all view of the opening effected; the surgeon should then be content to separate as much of the iris as he considers requisite, provided it can be done easily; but, in case of any difficulty, I would strongly recommend him to leave the case, and complete the work by a second operation, after the eye has perfectly recovered from the effects of the first.

Under mild antiphlogistic treatment, and cooling applications, the effused blood becomes rapidly absorbed.

This evil most frequently happens when the iris has been previously inflamed, and a recurrence of iritis is to be dreaded as the effect of the operation, or from the pressure of the extravasated blood. I therefore usually give mercury, unless there be some cause generally to forbid its use, for the purpose of checking the iritis, and promoting the absorption of the effused blood. The early exhibition of mercury in moderate doses, once or twice in the day, will always expedite the absorption of the blood, and in my opinion often tends to prevent the development of iritis.

When the artificial pupil exposes an opake lens or capsule, it should be left until the patient has quite recovered from the operation for artificial pupil, and be afterwards removed by the use of the needle.

After the artificial pupil has been formed by considerable laceration of the iris, the belladonna has little or no influence.

I have very frequently employed it, but have never seen any decided effect from it; the orbicular fibres of the iris being in great measure destroyed, the radiating fibres contract, and remain afterwards fixed, the opposing power being lost.

I think it unnecessary to illustrate the paper by the introduction of cases, as I do not believe that they would render my explanation more distinct. The operation has been performed by me so frequently at the London Ophthalmic Infirmary, and at St. Thomas's Hospital, and with such beneficial results, that there is sufficient testimony of its merits.

My object, in offering this paper for publication, is to contribute my mite to the advancement of one of the most interesting branches of surgery which has within a few years been rescued from obscurity and empiricism, and, under scientific cultivation, is rapidly attaining a degree of perfection scarcely surpassed in any other department.

17, *New Bridge Street, Blackfriars;*
December, 1834.

Cases extracted from the Note-book of HENRY DAVIES, M.D.
Physician to the British Lying-in Hospital, &c.

CASES OF RETAINED PLACENTA.

I.

FEBRUARY 4, 1828. I was requested to see a young woman, some distance from town, who had been delivered of her first child early in the morning, after a natural but somewhat protracted labour. The placenta not following in a moderate space of time, repeated but fruitless attempts were made to extract it. The discharge was copious, but not so great as to be alarming. The patient being in considerable pain, an opiate was given her.

I saw her at two in the afternoon, eight hours after the birth of the infant. An enema had recently been given, and she was then tolerably tranquil, except that she was uneasy on account of the afterbirth (as she expressed it) not having come away; and her husband and friends were anxious and alarmed. The uterus was firm and contracted. I explained to them the nature of the case. Having taken the usual preliminary measures, and placed her *close to the edge* of the bed, and had a moderate pressure made by a bandage on the abdomen, I introduced my hand determinedly but cautiously into the uterus, and slowly detached the placenta from its upper and posterior part, and allowed the placenta to be expelled with my hand from the uterus. The operation occupied rather more than an hour from its commencement

to its termination, the patient suffering a proportionate degree of pain.

She was now put to rights, and took a full dose of laudanum in a saline draught; which was repeated in moderate doses, and at distant intervals. She recovered without a bad symptom.

II.

September the 10th, 1833. I was requested by a midwife to see a patient, in the neighbourhood of Tottenham-court Road, who had been delivered between one and two o'clock in the morning, and in whom the placenta still remained undelivered, though repeated attempts to remove it had been made by the midwife and a neighbouring practitioner. As I was at the moment unable to attend, I wrote a note to a friend who resided near the patient, to request that he would see her in the mean time; and, when I got to the patient at one o'clock, I found that gentleman, with another, present, making great but unsuccessful exertions to pass his hand into the uterus, the patient expressing most agonizing pain. As I had been a witness of Mr. ——'s manual dexterity on former occasions, and as the external parts were very much swollen, and exquisitely tender, and the uterus firmly contracted, I did not deem it right to attempt to deliver the placenta; but it was agreed, in consultation, to give the woman, who was much exhausted and fatigued, a full dose of laudanum (ʒss. of Tr. Opii) in a saline draught, and follow it up with moderate doses through the night, to keep her tranquil, and to apply a large bread and water poultice to the pudenda. Early in the morning she was ordered an active aperient, (the compound senna draught,) which was to be repeated in four hours, if necessary; and, if this failed to act on the bowels, an enema was to be administered. By this treatment it was presumed that the patient would be composed, and that the uterus, having recruited its powers, would be induced to act sympathetically with the bowels.

There was one alvine evacuation before twelve o'clock, which was followed by some uterine pain, and about one o'clock the whole placental mass was expelled, with considerable pain, thirty-six hours from the time of the delivery of the child: it was entire and very large.

The pudenda were still poulticed, and it was requisite to draw off the urine for several days: the discharge copious and fœtid. On the third day she had a smart febrile attack, preceded by some rigor, and accompanied by an accelerated pulse, and abdominal pain. A dozen leeches were applied

to the abdomen; three grains of calomel, with one of opium, were given every fourth hour; the Liq. Ammoniæ Acetatis was also administered; and the bowels were opened with Ol. Ricini.

These symptoms subsided on the fifth day after delivery, and the second after the attack, when a superficial abscess of some extent formed in the left hypochondriac region. This abscess did not appear directly connected with her parturient state, and she imagined that she had hurt her side against the side of the bed, in her struggles during labour. The abscess was opened, and its contents discharged.

From this time she very gradually recovered, but was not able to retain her urine for some weeks, nor to go out till the third month.

III.

The following case I saw in consultation. The patient, a lady, aged thirty-two, was delivered of her first child on the 17th of May, 1834. The practitioner who originally attended says, "the pains became so weak and ineffective, that, after remaining eight hours, I gave Secalis cornuti ℈ss. in a cup of tea: within an hour afterwards the child was born. The placenta was attached so firmly, that, after the lapse of an hour and ten minutes, I passed my hand into the uterus, and so completed with ease the separation. During the time of my attendance, there was but little discharge of any kind."

A piece of placenta was expelled from the vagina on the 19th; the lochia were first observed to be fœtid on the 20th; and from this time till the death of the patient, the pulse varied from 90 to 130.

It would be needless to give all the symptoms detailed in Mr. ——'s account of the case, and still more fruitless to copy the prescriptions; let it suffice to say, that the patient died on the 6th of June, exhausted by irritative fever, and that the treatment consisted chiefly of the exhibition of opium, ammonia, and aromatics, with effervescing draughts, and occasional aperients.

This patient was visited once by a physician of great eminence.

Post-mortem Examination, June 8th, Six A.M. On laying open the abdominal parietes, the viscera and peritoneal covering of the uterus appeared free from disease; the uterus had sunk into the pelvis, and was of the usual size of that organ three weeks after delivery. The bladder contained half a pint of pale urine. The uterus, with its appendages, the bladder, and the greater portion of the vagina, being removed, the whole externally appeared healthy. The ovaria

were sound, and there was a well-marked corpus luteum. On cutting open the uterus by a longitudinal incision throughout its whole length, a portion of the placenta was seen firmly but not morbidly adherent to the upper and posterior part of the fundus, with a portion hanging down below the os uteri. The portion attached to, and that within the cavity of the uterus, was healthy in its structure; but the part in contact with and external to the os uteri was putrid, and the substance of the os uteri was of a peculiar bluish black colour, soft, and easily torn. The veins in the substance of the uterus contained pus and black coagulated blood.

At the upper part of the right hepatic region was an abscess, communicating with the (right) thoracic cavity, which was full of sero-purulent fluid, pressing the lung laterally against the mediastinum. The surface of the lung was covered with a thick layer of coagulable lymph ; it was condensed in its substance, and at its inferior part were several abscesses containing pus. A portion of the inferior lobe and pulmonary texture was destroyed by gangrene, the structure surrounding which was of a deep red colour, dense, and infiltrated with pus.

The practical conclusions to be drawn from these cases are, that the placenta, when not expelled by the natural powers, aided by the usual assistance, should be delivered by the hand passed into the uterus, after having waited such a space of time (say two hours,) that the woman's powers are recruited, and the uterus has recovered its tone, yet before it is firmly contracted. If this fails to effect the delivery, after every due and proper exertion has been made, it is better to leave the whole than a part of the placenta, as the uterus is more likely to be excited to act on the larger than the smaller mass.

We also see that, in the event of untoward symptoms arising, it is always better to make an examination *per vaginam*, and if any portion of the placenta be detected, or if there be a probability of any portion being in utero, in addition to attending to the general symptoms, some astringent and sedative injection should be thrown up, at short intervals, such as solutions of alum, or of any of the mineral acids. This serves both to wash away the putrid matter, the absorption of which is thought to give rise to the train of fatal symptoms; and, by keeping as it were the lumps of placenta macerated, such injections possibly may produce the contraction of their volume, and accelerate their detachment from the uterine surface.

On the subject of retained placenta much useful information may be gained by the perusal of Dr. Douglas's pamphlet on the Hourglass Contraction of the Uterus, Dr. Murdoch on Retained Placenta, and the first part of Dr. Ramsbotham's Observations on Midwifery.

Remarks on Aneurisms of the Cerebral Arteries: with Cases.
By THOMAS KING, M.R.C.S.

THERE are probably several distinct conditions of the parts within the skull, tending to the production of sanguineous apoplexy; and it has been long known, that miniature aneurisms of the cerebral arteries do occasionally, though rarely, give rise to fatal extravasations of blood in the brain. I do not, however, suppose that the bursting of such aneurisms is a very frequent source of apoplectic effusions; but the event is perhaps of much more common occurrence than it is considered to be. Under this opinion, I beg to introduce the following cases, by a few particulars that bear upon the subject of apoplexy generally.

Independently of the pulsating action of the heart, the more considerable arteries of the body are influenced by a gravitating column of blood, which, in ordinary circumstances, affects, in the greatest degree, the vessels of the most depending parts, and exerts less force on more elevated ones, in proportion as they are near the summit of the column. Now, the arteries, as well as the veins, are adapted to the precise quantity of distending pressure which each may have to resist, in the habitual attitudes of the animal: the most depending limbs possessing the thickest and firmest tubes; whilst the parts, which receive nourishment, in opposition to the power of gravitation, have vessels which are manifestly thinner and weaker; and the arteries, especially of the most elevated parts, are attenuated and incontractile.

Exceptions may be found to the preceding opinions, but they are chiefly such as the physiologist would account for in a manner corroborative of the principle just laid down.

The diminishing propulsive force of the circulation towards the vertex, in health, doubtless corresponds pretty accurately to the tenuity of the appropriate vessels, as well within as without the skull; but the prevalence of certain vascular diseases in the head—as nævus, aneurism by anastomosis, cerebral hernia, and apoplexy—strongly indicates that the adjustment between force and resistance is often destroyed.

The common atheromatous and ossific affections of the arteries occur in and out of the cranium, but not always in

an equal degree in different parts of the same subject; nor do these particular senile changes appear to be necessarily connected with aneurism or sanguineous apoplexy.

After witnessing a number of apoplectic dissections, the above reflections seemed to invite a more close investigation of the extravasations; and, in consequence, out of eight or nine recent clots, examined with greater or less attention, three were found to afford small aneurisms. Two of these were evidently perforated; and two other cases presented very indistinct or doubtful traces of aneurismal dilatation.

In a post-mortem examination, after having incised the brain, with as little injury to the pia mater as the case will admit, the mode of procedure, to ascertain the state of the vessels, is to remove the whole of the pia mater, particularly that from the vicinity of the clot, about the base of the brain, and in the widest extent of the fissures of Sylvius. The membrane is then to be washed, perhaps macerated, and spread out under water, so that all the vessels may be distinctly traced.

It is, perhaps, to be anticipated, that the middle cerebral artery, and its subdivisions, will be most frequently the seat of dilatations; since this is the largest vessel from the circle of Willis, and it affords the greatest number of considerable branches distributed through the very deep and extensive sulci of the fissure of Sylvius, whence the greater extravasations are most commonly derived.

Aneurisms of the vertebral, basilar, or carotid arteries are in little danger of being overlooked; but the case is different with regard to morbid affections in the secondary vessels, whose course lies deeper in the interstices of the convolutions. It is to be remembered, that the tumours described are exceedingly small, rarely attaining the size of a pea; because the originally delicate vessel becomes still more reduced in forming the cell; and it is probably ruptured when the dilating cell is not larger than a large pin's head; and this, when empty and collapsed, would be almost imperceptible, unless anticipated and carefully sought for.

The following cases are abridged from much more detailed histories; and the illustrative parts are preserved in the Museum of Guy's Hospital.

The inquirer into this point of Pathological Anatomy will find some few literary references in Otto, under the head of Aneurism.

Feb. 12, 1831.—Henry N. æt. 45, a person of naturally delicate and otherwise enfeebled constitution, a married man, and not habituated to excess in drinking, had had several

slight attacks of paralysis, to which were to be referred some loss of motion in one cheek, and an affection of speech. While under treatment for some considerable ulcers, attended with mercurial cachexia, he was suddenly carried off in an apoplectic seizure.

The dissection of the head took place before the body had become cold.

The depression of the convolutions, and compression of the intervening sulci, were very considerable over both hemispheres. A diffused ecchymosis, in parts amounting to a grumous stratum, occupied the cells of the pia mater pretty generally over the left hemisphere, but especially in its sulci. The lateral ventricles were distended with fluid serous blood, and the septum lucidum was destroyed.

One extensive cavity of grumous blood stretched through the substance of the left corpus striatum, into the central parts of all the three left cerebral lobes. This cavity was continuous with the superficial extravasation externally towards the fissure of Sylvius.

The coats of the right large cerebral artery seemed healthy, but within it were appearances of slow obstruction by coagulation. On the left side a second ramification of the great or middle cerebral artery presented a considerable ovoid tumour, which was situated in a sulcus. It had very thin coats, and was filled with a dark, solid, and stratified coagulum. It rather exceeded half an inch in length, and was somewhat less in width. The remainder of the artery seemed tolerably healthy; the ruptured aperture was not distinctly discovered, but this was doubtless the point whence the external and internal effusions had proceeded. Elsewhere the brain was natural, and no other traces were found to elucidate the primary attack of paralysis.

Aug. 6, 1833.—J. F. æt. 30, a stout bricklayer, presented himself in the evening, on foot, having been recently seized with severe pain in the head. He appeared much distressed, and almost stupefied; the pupils were rather contracted, and but very little acted on by light; the face uninjected; the pulse slow, but neither strong nor full; the tongue was white.

It was reported that previous to the attack he had been quite well, actively employed, and had been drinking very freely for several days. Presently after presenting himself, he became suddenly insensible; his arms were stretched by his side; his breathing was laborious and almost stertorous, and for a short time there was a little foaming at the mouth; the pulse was not much changed. He lost sixteen ounces of blood by cupping, and seemed materially relieved. He took a pur-

gative dose of colocynth and calomel; and, at midnight, bleeding being deemed unadvisable, ten grs. of calomel were administered in addition.

On the following morning all the symptoms of apoplexy were developed in the highest degree. Eighteen ounces of blood were quickly abstracted from the temporal artery, and the pulse became much less hard and full; some convulsive action of the arms occurred. After the lapse of an hour (at 10 a.m.) v.s. was repeated to the amount of fourteen ounces, with a similar and marked impression on the pulse, but without any influence over the insensibility; the patient yawned: however, he died at 1 p.m.

The examination of the head only was performed 24 hours afterwards. The veins of the brain generally were moderately full, and the convolutions appeared a little flattened or depressed. There seemed exteriorly rather a deficiency of serous secretion, and the arachnoid membrane was partially clouded by diffused opake spots. A considerable lamina of black clotted blood occupied the cells of the pia mater, over all the central parts of the base, extending widely into the greater fissures, around the cerebellum, and, in some lateral sulci, even towards the vertex; and also accompanying the arteries of the corpus callosum. The substance of the brain in general was of a healthy firmness, and rather pale than otherwise. The lining membrane of the ventricles was unduly firm, and the third and fourth ventricles were actually granular.* All these cavities were much and permanently dilated, and they contained near 1½ oz. of serum, slightly imbued with the tint of port wine. Great part of the plain of the fornix, as well as its connexion with the corpus callosum, was in a state of apparent solution. A pretty solid clot of black blood was found distending the third and fourth ventricles, and continuing somewhat into the lateral ones, by the foramen of Monro, the circumference of which was partially dissolved. The floor of the third ventricle, anteriorly, was lacerated, softened, and dyed with ecchymosis, and a similar disorganization was found penetrating forwards into the substance of the right hemisphere, somewhat sinuously, and about 1½ inch in extent. The large arteries were all healthy in structure, with the exception of the right anterior cerebral, which offered, at its angle of bifurcation, a double aneurismal

* This appearance, which is not very uncommon, is probably a consequence of inflammatory action, which, in fact, had occurred in this case. A thin stratum of fluid blood, diffused over such granules, always renders them remarkably distinct.

swelling. In this, the proper mode of examination detected a rent, which was manifestly the source of the extravasation.



March 5, 1834.—Mary C. æt. 56, a tall, large, fat person, came under treatment four days after being seized with a severe apoplectic fit, which produced paralysis of the right limbs, and of the organs of speech. She had already been most actively depleted; and by the use of purges and some counter-irritants, &c., sensation and voice became nearly restored, and she could walk across the room with tolerable facility by the beginning of August.

Oct. 3d.—She suffered a second attack, by which the articulation was rendered very indistinct; her intellect became greatly oppressed, and the affected limbs much weaker. Cupping to the extent of xij. and viij. ounces was performed, with an interval of a week; small and repeated doses of calomel were administered, assisted by purgatives, and a blister.

Oct. 23d.—Under this treatment she appeared slowly mending, and thought herself much improved. She became restless early in the night. The next morning she was found insensible; and she died at 10 A.M. of the 24th.

The examination took place 26 hours afterwards.—The pia mater was greatly infiltrated with serum, and separated readily from the surface of the convolutions. The corpus callosum appeared scarcely at all arched. The vascular injection of the several parts of the brain was considerable, and the interior substance of the left hemisphere was extensively and materially altered, being much too firm, and of a dull reddish hue. Between the left thalamus and the lateral sulci was seen a plain cavity, nearly half an inch square, placed horizontally, and rather coloured than filled with dark ochrous matter. A recent apoplectic cell, about the size and figure of a small hen's egg, was found along the outer side of the left corpus striatum, and filled with a pretty uniform grumous solid. The cavity was lined by rugged ecchymosed medullary substance; and it had a small fissured communication with the lateral ventricle, above the striated body. The ventricle contained a good deal of blood-tinged serum, and some small spongy masses of coagulum. A small yellow soft cell was found in the inferior plane of the right corpus striatum. The arteries of the base were tortuous, rigid, and opaque; and a minute aneurism was detected, but apparently unbroken, in the sulci of the left fissura Sylvii immediately adjoining the floor of the great extravasation.

Account of several Cases of Carditis: with Remarks. Communicated to the Harveian Society, by WILLIAM STROUD, M.D. Physician to the Northern Dispensary, &c.

(Continued from page 198.)

BEFORE proceeding to describe the two remaining cases of carditis, formerly promised, it may not be unacceptable to adduce another example of the same kind, serving, like that last related, to illustrate the intimate connexion which often subsists between the diseases of the heart and those of the brain.

The influence exercised by the heart on other organs is subject to considerable variety with respect to its mode, duration, and degree, as well as to the medium by which it is transmitted. In some instances, the effect is produced by an increased supply, or an impeded return of blood; in others, perhaps, by the impaired, or vitiated quality of the blood. Sometimes it is the result of functional disorder of the cardiac nerves; and, at other times, of structural disease, extending along the vascular trunks to some of their remote branches. To the class last mentioned may be referred the case now about to be detailed, in which a morbid state of the arteries of the brain, attended with temporary derangement of mind, was induced by chronic inflammation of the heart and its appendages, with serous effusion into the pericardial sac. Under such agency, and partly, perhaps, through the influence of certain obscure causes of metastasis more immediately connected with vital action, a long course of debility and depression was followed by a transient, but severe, paroxysm of maniacal excitement, which remarkably modified the aspect of the complaint, and accelerated its fatal termination.

October 17, 1830.—I was desired to visit, as a patient of the Northern Dispensary, Maurice H****e, a fine looking man, about seventy years of age, and more than six feet in height, who had formerly served for nearly thirty years in the Life Guards, but had never been in action. During the earlier part of his life he enjoyed good health, but, latterly, had been for several years in a declining state; which, independently of his advanced age, might in some measure be ascribed to intemperate habits, and to the care and anxiety attendant on impoverished circumstances. He was a man of placid temper, but of an active and enterprising disposition, fond of trying speculations, which generally contributed to impair his fortune, and of taking medicines of his own prescription, which probably tended to injure his health. He

had been three times married, and had granddaughters, who attended him in his last illness. His third marriage, which was never consummated, took place within a year of his death.

I found that he had been labouring for two years under a pectoral complaint, bearing the general aspect of Syncope Anginosa, liable to aggravations, more especially in winter; and for which, about a year since, he had been bled with some relief. His principal present symptoms are attacks of spasmodic action in the heart, occurring during the night, or very early in the morning, attended with a distressing sensation like that of drowning, by which he is roused from sleep with alarm, and compelled to sit up in bed. He has no sympathetic pain in the arms or abdomen; and, with the exception of being weak and low-spirited, has little other complaint. About twenty-five years since, he suffered from acute rheumatism, chiefly affecting the arms, but in which the thoracic organs did not seem to participate.

Prescriptions. Sumantur primo mane, prout opus fuerit, Pil. Rhei comp. gr. v. vel. x.; et Extract. Hyoscyam. gr. v. omni vespere.—Aquæ puræ f℥vj; Potass. Acetat. ʒivss.; Tinct. Digital. fʒss.; Tinct. Zingiber. fʒij. Sumatur f℥j. ter in dies.

27. Without taking the composing pill, he sleeps rather better, but is sometimes disturbed by frightful dreams, concerning water, and drowning. His urine is now extremely copious, almost amounting to diabetes, especially during the night; and its quantity is always observed to be in an inverse proportion to the intensity of the pectoral symptoms, being deficient when they are severe, and abundant when they are moderate. He has lately had a spasmodic pain in the calf of the left leg.

Prescriptions. Aquæ puræ f℥ivss.; Mucilag. Tragacanth. f℥iss.; Pulv. Zingiber. ℈j.; Pulv. Rhei ʒss.; Magnes. Calcinat. ʒj.; Tinct. Hyoscyam. fʒj.; Tinct. Cardamom. comp. fʒij. Sumatur f℥j. ter in dies.

November 11. The complaint is gradually increasing, with general debility, and depression. The pulse is irregular, and intermitting, and the respiration is frequently accompanied with a slight groan. The urine is less copious. During the night he is frequently compelled to sit up in bed, with his body inclining forwards; but, in the daytime, he can lie down, and sleep with comparative ease.

Prescriptions. Extrahʳ per. V. S. sang. f℥viii. vel. xij. Elaterii gr. vj.; Pulv. Zingiber. ℈ij.; Syrupi q.s. Fiant Pil. xij., quarum sumatur una, omni horâ, donec alvus soluta fuerit. Sumantur omni vespere Pil. Sapon. cum Opio. gr. v. vel. x. Per intervalla Repʳ. Potio Rhei cum Magnesia.

26. The complaint seems progressively to increase, the more so, perhaps, in consequence of the patient being capricious, and irre-

gular in the use of medicines. In addition to his other complaints, he has for some time had a cough, with thick yellow expectoration, and an uneasy sensation of spasm, and suffocation, at the pit of the stomach, which is relieved by eructation. He is weak, low-spirited, and restless; groans, or mutters much to himself, lies down with difficulty, sleeps ill, and often wakes in a fright, more especially about two or three hours after midnight. This symptom was at the time relieved by the bleeding. His bowels are regular, and his urine is less copious than formerly. On examination with the stethoscope, the action of the heart is found to be very feeble and obscure, while the respiratory murmur is loud and puerile.

Prescriptions. Pectori medio admovr. Emplastr. Cantharid. —Extract. Hyoscyam. ℈j.; Pulv. Scillæ, Pulv. Digital., Pulv. Cambog. *aa* gr. vj.; Syrupi q. s. Fiant Pil. xij., quarum sumatur una ter in dies.—Mist. Camphor. f℥vi.; Tinct. Scillæ f℥j.; Tinct. Hyoscyam. f℥ij.; Spir. Æther. Nit. f℥iij.; Sumatur f℥j. omni vesp. horâ somni, et Repr. media nocte p. o. f.

December 1. The blister operated well, and the discharge produced by it still continues. The bowels are relaxed. The dejections are watery, and fetid. The urine is again copious, yet the ancles are a little œdematous. The cough is occasionally troublesome, with much mucous expectoration. He sleeps little, either by night or by day, but is lately observed to be somewhat stronger, and his appetite is increased.

Prescriptions. Rep. Med.

18. During the last week the symptoms of delirium tremens have gradually supervened, accompanied with much heat, and perspiration of the head, and an almost total interruption of sleep. A few days since, the action of the heart was examined by the stethoscope, and found to be stronger than before. The bowels continue to be rather lax.

Prescriptions. Infus. Sennæ f℥ivss; Aquæ Menth. vir. f℥iss.; Magnes. Sulphat. ℥iss.; Sumatur f℥j., primo mane, p. o. f. Pulv. Glycyrrhiz. Sulphat. Quinin. *aa* gr. xij.; Pulv. Opii gr. vj.; Syrupi q. s. Fiant Pil. xij., quarum sumatur una ter, vel quater in dies.

24. The patient soon afterwards became furiously maniacal; and, after having long been weak, helpless, and dispirited, was now strong, active, and dangerous. His wife and granddaughters being unable to control him, and dreading ill consequences to himself or others, if he were left at liberty, procured his removal this day to a neighbouring asylum, where he remained till his death, which took place five weeks afterwards. In his new dwelling, a blister was applied to the crown of his head with some relief; and, by the aid of mental management, and proper diet, the cerebral symptoms after a time abated, while the pectoral complaints were renewed, particularly shortness of breath on attempting to ascend a stair, a disposition to sit with the body leaning forwards, as if to relieve an uneasy sensation about the heart, and some œdema of

the legs. After this, his strength rapidly declined, and he at length died rather suddenly, on the morning of January 31, 1831.

Post-mortem Appearances. The body, having been conveyed to the patient's former lodging, was inspected by me, on the 2d of February, when the following appearances were observed.

General Conditions. The body was tall, well made, and not emaciated; but, with the exception of the heart, and great vessels, contained little blood, and no fat. The skin was moderately firm; the muscles were soft and flabby; the cellular substance of the abdomen was loose, watery, and verging to putrescence. The limbs were plump, and the lower extremities were somewhat œdematous.

Head. The crown, which was bald, exhibited several red, and dry spots, probably occasioned by blistering. The scalp adhered to the calvaria by a thin layer of very dense cellular membrane, which rendered it difficult to denude the bone. The dura mater was thick, and white. It adhered in a few places to the inner table by long slender filaments, as likewise to the subjacent membranes, on each side of the longitudinal sinus at the vertex. The arachnoid covering the hemispheres was somewhat thickened, and œdematous; and the pia mater was much injected. On dividing the dura mater, a good deal of reddish serum escaped from between the membranes. The substance of the brain was firmer than usual, more especially the medullary portion, which, on section, exhibited several bloody points, but was otherwise sound. The cerebellum was softer than the cerebrum, but the component parts of the medulla oblongata were very distinctly marked. The encephalic nerves were rather small, as if wasted. The arteries were thick and rigid, with some tendency in the basilar artery to cartilaginous or osseous degeneration. Owing to their patulous state, much liquid blood escaped from the divided carotid, and vertebral arteries, when the atmospheric pressure was admitted, by opening the chest. There was a little liquid in the ventricles, chiefly on the left side. The choroid plexuses were rather congested, but not hydatiform. The commissures were very dense, and firm.

Thorax. The cartilages of the ribs were ossified, requiring the use of the saw for their division. The second pair of ribs was extuberant. The mediastinum was thick, and fleshy. The pleural sacs contained a large quantity of bloody serum. The membrane was not inflamed, but its pulmonary reflexion was slightly attached to the diaphragm and sides by a few slender adhesions. The lungs were voluminous, and emphysematous, but otherwise healthy. The decumbent portions were a little congested. The external surface was beautifully mottled in the manner frequently observed in old persons, with dark purple spots, about the size of a pea, regularly sprinkled on a light red ground. On making sections into the lungs, there was found little or no effusion, either bronchial, or parenchymatous; but the lining membrane of the trachea was very red, and the posterior band of longitudinal fibres was remarkably

distinct. The pericardium was white, and rather thick, presenting a blanched or sodden appearance, like that of the peritoneum in ascites. It contained several ounces of pale, watery liquid; and, by its loose, and flaccid condition, seemed to have formerly contained a greater quantity. The heart was large, more especially before its contents, and those of the pericardial sac, had been removed. The auricles were dilated, and inclosed much liquid blood; but there were few coagula except in the ventricles. The latter were considerably hypertrophied, and very firm, particularly the left ventricle. The valves, both cardiac, and arterial, were perfect. The aorta and the pulmonary artery were large, and rather thin. The orifices of the coronary arteries were patulous, and included between them a sharp ridge, or crest of ossification, no where else observed.

Abdomen. The peritoneal sac contained a little pale serum. A considerable portion of the jejunum, and of the ileum was red contracted, and somewhat twisted, or retroverted. The liver was of full size, but healthy; and the gall-bladder was distended by thin bile. The spleen was short, and quadrangular; and, like the liver and kidneys, was firm in substance, uniform in texture, and of a deep red colour. The convex edge of the right kidney was indented with depressions resembling cicatrices, giving the organ a lobulated appearance. The bladder was contracted, and empty.

Remarks. The general character of the disease just described was chronic inflammation of the heart, and ultimately of the brain, attended with serous effusion, and other organic lesions. Its apparent causes were habitual, but not excessive intemperance; grief, and anxiety on account of pecuniary losses; and perhaps, also, acute rheumatism in the arms, which occurred some years before, but of which the influence was more doubtful. The two former causes might have operated at once on the heart, and on the brain, and each of these organs may have affected the other; but, as the cardiac symptoms existed alone for nearly two years, while the cerebral ones did not supervene till within the last two months, the latter, which, perhaps, were chiefly concerned in accelerating the fatal termination, must be regarded as secondary to the former. In both organs, the inflammatory action, although destructive, was moderate, and the physical results corresponded.

In the pericardium, as in the peritoneum, and other serous membranes, it is evinced by the blanched, or sodden aspect produced by thickening, and opacity, depending, no doubt, on an interstitial deposit of solid albumen, which, in a liquid form, is at the same time discharged in excess from the secreting surface. The loose, and flaccid state of the pericardial sac, notwithstanding the heart itself was enlarged, seemed

clearly to indicate that it had once contained a greater quantity of liquid than was actually found in it. This, of course, implies the possibility of absorption taking place from that cavity under favourable circumstances, including, perhaps, a low degree of inflammatory action in the membrane itself, and an abundant flow of urine, which, by its sympathetic influence on the kidneys, it seems occasionally, as in this case, to excite. The excessive growth and firmness of the fleshy substance of the ventricles, and the incipient ossification between the orifices of the coronary arteries, were the natural consequences of the same inflammatory action, not confined to any one texture, but gradually pervading every portion of the organ attacked. The dilated state of the auricles, and the copious extravasation of bloody serum into the pleural sacs, might reasonably be ascribed to languid action of the ventricles, and consequent obstruction of the circulation at its centre, conjoined with relaxation of the capillaries, immediately preceding death; and it was, probably, owing to the same defect of vital action that the detained blood was nearly liquid.

The existence of chronic inflammation in the brain, and its appendages, was denoted by close adhesion of the scalp to the cranium, thickening, or injection of the cerebral membranes, effusion of reddish serum between them, cartilaginous rigidity of the arteries, and increased firmness of the medullary substance, with a display of bloody points on section. Either of these conditions separately, and especially the whole of them combined, is abundantly sufficient to derange the functions of the brain, and, in some cases, to destroy life. The other morbid states of this organ might in a great measure have been derived from that of the cerebral arteries, and originally from that of the heart, not by continuous sympathy, since the great vascular trunks were unaffected, but through the medium of the ganglionic nerves, which enter into the composition of blood-vessels, as of all other parts, and exercise an important influence, both on their nutrition, and on their actions. Such a state of the arteries strongly disposes to disease of the brain, and of its membranes, yet it sometimes exists alone; and, tending, at length, by the brittleness which it occasions, to sudden rupture from slight causes, produces a distinct variety of apoplexy, exclusively vascular.

The traces of inflammatory action in the abdomen were inconsiderable; but it is not improbable that a long course of moderate intemperance, conjoined with mental vexation, in a person of good constitution, may give rise to that increased firmness, and redness of all the solid viscera of this region, which was here observed, and which may justly be regarded

as the product of chronic irritation, and the prelude to organic disease.

After duly considering the history and pathology of this case, its symptoms are easily explained. When the brain is not specially predisposed, cardiac disorder may long continue without exciting much cerebral disturbance, although it is usually productive of susceptible feelings, and of an irascible temper. In this instance, habitual depression of mind, approaching to despondency, constituting the lower degree of mental derangement, ultimately advanced to the higher, and more conspicuous degree, marked by delirium tremens, constant watchfulness, and maniacal excitement. On the other hand, cerebral disorder generally affects the heart, producing, when acute, and unattended with effusion, a strong and hard pulse, but more commonly, a weak, and very frequent one, and, in some cases, intermission, and a tendency to syncope. Such might in this case have been, in part at least, the cause of the feeble and obscure action of the heart which long prevailed, but which might partly, also, be ascribed to the mechanical obstruction occasioned by an accumulation of liquid in the pericardial sac, and partly, perhaps, to that debilitating influence which certain irritations of membranous parts frequently exercise on organs with which they are associated, producing torpor and relaxation, and, ultimately, extenuation and atrophy. The law of vital action on which this influence depends, is one of great importance, and demands a fuller development than can here be attempted; but examples of its agency are occasionally furnished by scarlatina, cholera, inflammation of the bronchia, and of the peritoneum, and by various forms of intestinal irritation. To the same agency may, perhaps, be attributed the inflated, or emphysematous state of the lungs here observed, a state for which mere mechanical distention, although it may no doubt partially contribute, is unable fully to account.

The greater interruption of sleep in the night than during the day is a circumstance meriting attention; depending, probably, on cerebral influence, rendering the sleep in the first place more complete, so as to occasion a temporary suspension of the heart's action, already feeble and embarrassed, which is naturally followed by uneasy sensations, and by a violent, and convulsive effort to restore the circulation. Hence, persons labouring under such complaints may sometimes be prevented from waking in alarm, by their attendants watching the first approach of restlessness, and dyspnœa, and gently tapping them on the chest, or back, so as, without actually rousing them, to render their sleep for a time less profound.

The influence of the diseased heart on the organs situated in the upper region of the abdomen is often very considerable, and seems in a great measure to depend on its physical qualities of increased weight, heat, and impulse, freely operating through the thin partition of the diaphragm, and giving rise to various forms of gastric, or hepatic irritation. In cases of hypertrophy with strong palpitation, pain in the epigastrium, with nausea and vomiting, is not an unfrequent occurrence; and, independently of intemperance, the liver is often enlarged, and mottled, so as to present on section an aspect like that of nutmeg, owing, as it appears, to venous congestion occasioned by the difficult return of its blood. The stomach, in its turn, acts powerfully on the heart. Hence the ill effects arising in cardiac complaints from strong emetics, active stimulants, a full meal, especially in the evening, flatulent, or indigestible food, and various other errors in diet; whilst, on the contrary, the seasonable application to the epigastrium of leeches, blisters, and opiate liniments, and the moderate use of calomel and rhubarb, as a cholagogue purgative, are often productive of much benefit.

The occasional redundance of urine in such cases is calculated to give relief, not merely as a mode of depletion, but also, by the sympathetic influence of the kidneys on the pericardium, agreeably to the law of vital action, whereby all secreting surfaces throughout the system mutually affect each other, the increase of the renal function being at once a sign, and a cause of that incipient reduction of the pericardial inflammation, of which, when moderate, it is a natural result.

The diagnosis in this case was facilitated by the absence of any material complication, and by the harmonious concurrence of the general symptoms, the physical signs, and the previous history of the disease, in furnishing the same indication of its nature. The distressing sense of spasmodic action in the præcordia, the terrifying dreams concerning water, and drowning, the sudden disturbance of sleep in the early part of the morning, the necessity of sitting up in bed, and the relief obtained by inclining the body forwards, together with the weak, and intermitting pulse, and the dull, and indistinct sound of the heart's action, were all significant of the same state of cardiac disease, which intemperance, anxiety, vexation, and acute rheumatism were most likely to have produced. Owing to the unavoidable hurry and imperfection of Dispensary practice, especially when persons are to be visited at their own dwellings, the physical signs derivable from auscultation and percussion were not sufficiently explored; but, as far as they were consulted, their information was valuable,

and fully confirmed by the result. In consequence of the diversity and mutability of circumstances, these signs are, however, often of a various, and sometimes of an opposite character. In chronic pericarditis, with serous effusion, the action of the heart is generally very feeble and obscure, although it may be diffused over a wide space, and the arterial pulse may at the same time be occasionally full, and strong. Pericarditis with universal adhesion is, on the other hand, frequently attended with violent palpitation, contrary to the opinion of Allan Burns, and others, who, on speculative grounds, have regarded the two conditions as incompatible. In this instance, the increased action of the heart, following the copious discharge of urine, and immediately preceding the stage of cerebral excitement, was very observable; and, had it been properly appreciated at the time, might, perhaps, have prompted measures for the prevention, or mitigation of that dangerous state.

The prognosis of complaints of this kind must, of course, be generally unfavourable, chiefly on account of the irreparable organic changes which have usually taken place before medical aid is requested. In consideration of their inflammatory character, although chronic, and attended with delusive symptoms of depression, the general plan of treatment should be moderately antiphlogistic. Active depletion is for the most part inadmissible; since, without curing the disease, it rapidly exhausts the strength of the patient; but all the remedies employed, however strictly restrained within due limits, should be selected from the debilitating class. Small occasional bleedings, the application of leeches, blisters, and narcotics to the epigastrium, or of a seton between the shoulders, combined with spare diet, tranquillity of mind and body, the diligent promotion of the several excretions, especially that of urine, and the moderate use of sedative and revulsive medicines, such as tartarized antimony, nitre, digitalis, colchicum, and hyoscyamus, are the means which reason and experience unite to suggest as best adapted to relieve the urgent symptoms of such complaints, to retard their progress, and to repair, as far as possible, the injury which they may already have committed.

[The remaining cases of carditis will be inserted in the ensuing number.—EDITOR.]

A Case of Loss of Nose from Syphilis, and Restoration by the Taliacotian Operation; with Remarks. By FREDERICK TYRRELL, ESQ. Surgeon to St. Thomas's Hospital, &c.

IN relating the following case, I shall omit all minute detail, and confine myself to such points as I consider worthy of notice and requisite to elucidate the observations I have subsequently to offer.

J. H. æt. twenty-seven, of small stature, light complexion, dark hair and eyes, and of scrofulous diathesis; by trade a working goldsmith; had suffered from cynanche tonsillaris two or three times, and also from common lepra twice. His habits had been irregular, but he had not been addicted to intemperance.

In 1831 he had gonorrhœa and chancres, for which he took mercury, but not so as to affect his mouth, and he apparently got well. A few weeks afterwards he was attacked with inflammation and ulceration of the soft palate, which destroyed part of the palate and uvula; this disease was arrested and relieved by mercurial fumigations and a gargle of the chloride of soda.

After this he remained tolerably well for about a year; but, in the spring of 1832, he felt uneasiness at the upper part of his nose, which became swollen and tender. This was soon followed by an offensive discharge from the nostrils, which was frequently tinged with blood; and some pieces of bone separated and passed by the pharynx, through the mouth. Under professional advice he took mercury in large and small doses, sarsaparilla, and mineral acids, and applied injections of the solution of the chloride of soda; but, in spite of the means employed, the disease progressed, and in October (six months after the disease commenced in the nose) he applied at St. Thomas's Hospital, and was admitted under my care. At the time of his admission, the extremity of the nose, the fibro-cartilaginous septum, the whole of the left ala, and part of the right, were gone, and the larger part of the turbinated bones had exfoliated; the ulceration was still proceeding, and the edges of the ulcer were ragged, the surface sloughy, and affording a copious thin secretion, mixed with blood, highly offensive and irritating; the surrounding skin was red and swollen, and the whole part excessively tender and painful. He was pallid and emaciated; his pulse was quick and feeble, his appetite bad, his bowels irregular, usually constipated; he enjoyed but little sleep, and frequently woke in profuse perspiration.

I prescribed for him, Hydrarg. c̄. cretâ, g. ij.; Opii, g. j. om.

nocte. Decoct. Sarsap. c. c̄. Quinin. Sulphat. ter die, and a mild aperient when required. His diet was to be nutritious. As a local application I ordered the following lotion, to be used on lint, and covered by a light and warm linseed poultice: ℞. Aquæ Destillatæ, lbj.; Opii, 3j.; cola post solutionem; tum adde Liquori colato Mucilaginis Acaciæ, 3j. ut ft. lotio.

For a few days there was no visible improvement, and he obtained very little sleep; I therefore prescribed liquoris opii sedat. min. xxx. to be taken at night, instead of the grain of opium. An improvement then took place in his general health; he rested better, ate with some appetite, and requested to be allowed some port wine, of which I ordered two glasses a day for him. But, although his general health mended, the ulceration did not stop, and the diseased part continued tender, painful, and unhealthy in aspect. About the middle of November his health again retrograded, when I changed his medicines, giving him Ferri Subcarbon. 3ss. ter die, and Solut. Acetatis Morph. m. x. nocte.

His general health again rallied, but the ulcer remained much in the same state; and, in the beginning of December, I tried, as a local application, an ointment of the Hydriodate of Potash; but it created so much irritation, that it was soon discontinued, and a lotion of Black wash, Opium, and Mucilage substituted. During the whole of the period that he had been under my care every attention had been paid to the state of his secretions; and his food, always of nutritious quality, was changed repeatedly, to suit his palate and excite appetite.

The local disease nevertheless extended; the right ala had been destroyed, the ossa nasi had been exposed, and had exfoliated; the vomer and remains of the turbinated bones had also separated. In consequence of some observations in the periodicals on the efficacy of iodine in secondary syphilis, I was induced to try it in this case; and, on the 31st of December, prescribed Solut. Potassæ Hydriodatis (Lugol's) ter die, and the dose was gradually increased, during the month of January, to min. xvj. ter die. He continued the use of the acetate of morphia, of which the dose had been increased by degrees to min. xxx.; and he occasionally took besides a pill of conium and ipecacuanha, to relieve a cough. The exhibition of the iodine was followed with immediate beneficial change: his appetite, in a few days, was excellent; he slept well, and was enabled to leave off his opiate; his cough subsided, and the local disease seemed as if affected by some charm, so rapid was the change in it. The tenderness and pain were no longer felt; the surrounding redness and

swelling disappeared; the surface and edges of the sore became even, florid, and healthy, and gave out a good purulent secretion.

From this time he went on well in every respect; his general health improving, and the ulcer granulating and cicatrizing; so that on the 10th of July he was made an out-patient; once only was he obliged to leave off the iodine for a few days, in consequence of his stomach being disordered, and he then took the sarsaparilla again, but resumed the use of the liq. Potassæ Hydriodat. as soon as the irritability of the stomach had subsided.

While attending as an out-patient, the sarsaparilla was substituted for the iodine for the same reason, but his general health declined, and the sore became unhealthy, and began to spread again. I therefore readmitted him into the hospital on the 1st of August; and considering the use of the iodine inadmissible, from the state of the stomach, I directed the sarsaparilla to be continued, with small doses of Hydrarg. c̄. cretâ, and opium, with his former diet.

He was attacked with diarrhœa, which had been, and was prevalent in the hospital, on the 23d of September, which compelled me to omit the sarsaparilla, &c. for about three weeks. On the 15th of October he resumed the use of the sarsaparilla, and was so much recovered on the 19th, that I prescribed two tablespoonfuls of the following mixture, to be taken three times a day, instead of the sarsaparilla: ℞. Iodines, grss.; Potass. Hydriod. ʒss.; Syrupi Papaveris, ℥ss.; Aquæ Destill. lbss. Rapid improvement again took place in his general health and in the ulcer; and, without any change worthy of notice, the ulcer had perfectly healed, and his general health was restored in the beginning of January, 1833.

Some months afterwards he called upon me, to solicit me to try some means of relieving the horrid deformity created by the loss of the parts I have mentioned. I then resolved upon performing the Taliacotian operation for him, there being an ample forehead to furnish integument for the new nose; but, before I undertook the operation, I was desirous that the new formed structures should be well organized, and contracted as much as they would admit. Considering these objects to be effected in the spring of 1834, and his general health being good, I admitted him into St. Thomas's again.

Reflecting on the operation which I was about to undertake, I thought I might, by artificial means, give support and figure to the new nose, which I feared (from the loss of the ossa nasi, and the extensive ravages of the ulceration,) would be otherwise difficult to form and maintain.

The fact of styles or tubes of silver or gold being worn in the nasal duct for years without inconvenience or mischief, principally induced me to make the trial of a metallic support in the present case. I therefore took a cast, in plaster of Paris, of the patient's face, and had a light but firm frame of platina formed, the base of which was to rest on the frontal bone above, and the superior maxillary bone below; from this there projected a small stem, corresponding to the septum of the nose, continuous with, and supporting inferiorly, the main part, which passed in the direction of the median line, from that end of the base which was to rest on the frontal bone, and joined the portion I have mentioned, corresponding to the septum at an acute angle: from near the junction of these two parts, but attached entirely to the dorsal portion, two small alæ projected laterally, which were to support the alæ of the new organ.

The support was made of platina, as not liable to be acted upon by the secretions or air; and in forming it I bore in mind the possibility of its producing irritation or mischief, which might render it necessary to remove it; it was not, therefore, so firm as it might have been made, had I been certain of its remaining without injury, for I had contrived it so that it could be easily removed at any time, without disturbance to any part.

Having fitted the platina frame to the plaster cast I had of the face, I carefully modelled over it some plastic wax, as near as I could judge, of the thickness of the integument of the patient's forehead, so as to form an artificial nose; this being afterwards spread out flat and laid upon the forehead, gave me accurately the portion of integument I should want to cover the platina frame, and form the new nose; but it was necessary further to make allowance for the twisting or turning of the flap, and the contraction which would occur after its union.

Being fully prepared, and the patient being in good health, I performed the operation on the 16th of May, 1834. The extent of integument which was to be raised from the forehead was distinctly marked out by a line in indigo; the stem by which the flap was to retain its connexion was at the inner extremity of the right eyebrow, and the flap itself had an oblique direction over the left eyebrow and left side of the forehead; it terminated in the tongue-like piece which was to form the septum of the nose.

The patient was placed in a recumbent posture, and I first made an incision completely through the integument on the right side of the nasal opening, which extended from

the nasal part of the frontal bone, downwards and outwards, to the site of the termination of the original ala; a second incision, parallel to this, but about one tenth of an inch distant, and penetrating to the same depth, included a narrow strip of integument, which I dissected out, leaving a narrow deep groove. I then, in the same way, made a similar groove on the left side.

Next I removed a small square piece of the integument and soft structures on the median line, at the upper part of the commissure of the lip, so as to expose the periosteum over the junction of the superior maxillary bones, to a sufficient extent to receive the corresponding part of the base of the platina support and the extremity of the new frænum. I also made a similar space over the lower part of the frontal bone, on the median line, to lodge the upper part of the base of the platina frame.

Thus I had prepared for the reception of the artificial support, and the skin which was to form the new nose, and I proceeded to detach the flap from the forehead.

I traced the outline, made with indigo, with the scalpel, carrying the point of the instrument to the pericranium; and then I dissected up the flap, leaving little or nothing but pericranium. The connexion left towards the right eyebrow was about a quarter of an inch in width.

The hemorrhage was checked by pressure with German tinder, and the flap was held between sponges dipped in warm water.

As soon as all bleeding of consequence had ceased, I put the platina frame in its place, and brought the flap of integument over it. To secure the flap, I used small curved needles and thin silk ligatures, and passed the first sutures through the extreme lateral parts of the flap, and the lower ends of each lateral groove; and, by tying the ligatures, I readily adapted and fixed the extremity of each ala in its proper situation. I then passed other sutures on each side, about a third of an inch apart, so as to secure the edge of the flap in the groove made for its reception; and lastly, I fixed, in like manner, the strip of skin which formed the septum.

A small vessel near the tongue-like portion of the flap which formed the septum, continued to jet out blood, even a short time after the sutures had all been tied; shewing that a large part of the flap was well organized. Every part fitted perfectly, and I had good reason to be satisfied with the immediate result.

The patient bore the operation without a murmur or complaint; and was conveyed to his ward and bed in high spirits.

the wound on the forehead was covered with German tinder, and the nose had a thin layer of soft cotton placed on it; but the larger part of this covering was soon removed, for the influence of the air from the lungs kept the part perfectly warm.

Union took place very rapidly, and in four or five days every suture had been removed; the adaptation had been so perfect, that it required close inspection to distinguish the line of junction for a considerable extent. The stem of the flap which had been twisted in turning down the flap, had become perfectly smooth. The part retained its sensibility; but if touched, the sensation to the patient was as if the forehead were touched; and this occurred for many weeks after the operation.

For the first two or three weeks everything went on most prosperously: the nose retained an excellent figure, and the platina frame appeared fixed, and did not produce the slightest inconvenience; but I soon observed changes going on, which I dreaded would disturb the harmony of the work. The integument forming the new nose began to contract, and I regretted to see this take place very unequally; that on the left side being much more rapid and extensive than on the right; this I had in a degree anticipated, and thought I had amply provided for it, by making the side of the flap which formed the left nostril more extensive altogether than the other. I had not, however, calculated upon the greater contraction of the thin integument, of which the left side of the nose was formed; for it came from the superior part of the forehead, where the skin was thinner, and the subcutaneous cellular tissue much less abundant.

The irregular contraction after a little time displaced the platina frame, and the part which should have supported the point of the nose, by degrees projected out of the left nostril; still it did not irritate, or occasion any uneasiness.

After waiting some weeks, to ascertain whether I could remedy the defect without removing the platina frame, and deeming it impossible, I reluctantly had it taken out; this was done by the patient himself, easily, and without suffering.

The contraction increased a deformity of the upper lip, which previously existed on the left side, by drawing up and everting that part of the lip. The previous defect had been occasioned by the exfoliation of a portion of the superior maxillary bone, and I am of opinion that the want of support and attachment resulting from this had favoured the contraction of the left ala.

On the 3d of October last I remedied the defect in the

upper lip by an operation similar to that for hare lip, and at the same time closed a part of the left nostril, and enlarged the right, by which means the nose was made nearly symmetrical.

At this time the organ appears fixed, and not likely to undergo any further change; it is as good as any that I have seen formed by similar means.

The advantages resulting from the operation have been manifold, and greater than I expected; for not only has the patient got rid of a shocking deformity, but he is now free from a dryness of the nasal cavities, and of the pharynx, which had continually distressed him; and his voice, which was before extremely indistinct and unpleasant, is now clear and perfectly audible.

Observations. The history of the case, as far as regards the influence of the syphilitic virus on a patient of weak power and scrofulous diathesis, is by no means uncommon; for although such cases are not so frequent as they were some twenty or thirty years ago, yet our large metropolitan hospitals usually afford examples somewhat analogous. There is scarcely any surgical class of disease in which a greater revolution has taken place in the treatment (within the period I have mentioned) than in syphilitic affections. Mercury, which was formerly considered as a specific in most of these cases, is now confided in by few, is looked upon as a useful auxiliary in the treatment by the many, and is rejected altogether by others. My own experience induces me to consider it as a salutary and useful remedy in very many cases, but certainly not a specific; and I believe many will agree with me when I say that there are cases, as the present one, in which mercury aggravates rather than alleviates the disease. Some such cases as I allude to are relieved by sarsaparilla, and very small doses of mercury; some by sarsaparilla alone; and I have known some do well under means of great variety, but tending to one principal object, viz. the restoration and support of general power.

But in most of these cases the recovery has been very tardy, and often protracted by frequent relapses, and some progressed in spite of all our care, and destroyed life either by exhaustion from continual suffering, or by the extension of the disease to vital organs.

Few will, I think, deny that a more powerful remedy was wanting to enable us to combat the most formidable cases of secondary syphilitic disease with anything like certainty of success.

The influence of the preparations of iodine, as far as pre-

sent experience goes, will almost warrant us in coming to the conclusion that the much desired remedy has been found. The case I have related was one of the first in which I tried this remedy, and I have but feebly detailed its effect. I have never seen such rapid influence produced upon general and local disease by any other remedy.

I have for the last two years employed it in all the varied forms of secondary syphilitic and of scrofulo-syphilitic disease; in the affections of the throat, of the skin, of the fibrous tissues, &c. I have also given it in many cases of primary disease, and with excellent effect, when the local action has been unusually disordered.

Further experience is of course necessary to enable us to form very accurate opinions respecting the use of such a remedy; but I shall briefly state my opinions of it, resulting from the experience I have had. I have found its effects most rapid in secondary syphilis, modified by scrofula, when the general power has been depressed, and a morbid irritability has existed.

In all cases where it acts beneficially it produces rapid effects on the general health; it increases appetite, augments the force of the circulation; it lessens nervous irritability, and subdues local pains.

Almost as soon as its influence is apparent in the system, the local affections undergo salutary changes, without the aid of other than the most simple applications.

There are circumstances, however, under which its exhibition must be delayed or laid aside; as when the stomach is very irritable; when there is a tendency to or an actual state of diarrhœa; again, when the secretions from the alimentary canal are ill-conditioned, or when there is constipation.

The form I prefer is that which I have described as the Mistura Potassæ Hydriodatis. Sometimes I omit the poppy syrup, and sometimes I omit the iodine, giving the hydriodate of potash simply. These alterations are determined by circumstances afforded by respective cases; thus, if there be no nervous irritability, if there be headach, or tendency to confined bowels, I omit the poppy; if the stomach is naturally irritable, I omit the iodine, &c.

I have hitherto found the small dose I have mentioned quite sufficient; and in some cases have been obliged to diminish it, as it created nausea.

The Mistura Potassæ Hydriodatis does not disorder the stomach so soon or so frequently as Lugol's solution, or other somewhat similar formulæ that I have tried.

In many cases I have found much benefit from giving at

the same time small doses of mercury, as a grain or two of the Hydrarg. cum Cretâ or Blue Pill at night, or every second night, to promote a proper degree of biliary secretion.

Like all other remedies, it must be given at proper times, and under circumstances favourable to its use. I am satisfied of its being a very valuable remedy, and hope that an indiscriminate and improper use of it will not bring discredit upon it. When I have had more experience I may have opportunity to offer some farther observations on the use of this remedy, in a more connected and extended form than I am at present able to do.

I shall in conclusion offer a few remarks on the operation and its effects.

With the exception of the introduction of an artificial support, I believe there was nothing novel in the plan I pursued, but it may nevertheless be useful to detail the principal difficulties.

In calculating the extent of the flap of integument to be raised from the forehead, full allowance must be made for the turning and for the after-contraction. If the flap is to remain connected to the right side, in turning it down the sides become reversed; that which had been to the right being placed afterwards to the left, and the left to the right. Supposing them to be of equal length, after being turned down, that on the right side would be relaxed, and that on the left be stretched out; to obviate this, the left side of the flap should be made considerably longer than the right; if the integument which is to form the flap varies much in thickness, a further allowance should be made, as the thinnest portion will afterwards contract most.

In another case, if I made the septum with the flap, I should secure it first, as I experienced some difficulty in doing so after I had fixed the flap itself. If, however, the forehead was not sufficiently large to afford integument for the septum, without encroaching on the hair, I should form the septum subsequently from the upper lip, as recommended by Dieffenbach.

Short curved stiff needles enabled me to pass the sutures with great ease; and I much prefer the small silk or thread ligatures to the metallic thread, or metallic pins. I have used the last two in other operations, but cannot detect any advantages in their use.

The experiment of the platina frame as a support failed only, I consider, from peculiarities in the case, and from my having given it a figure which made its displacement easy. I am perfectly satisfied that such a support might be used with good effect, and without its producing any mischief;

the want of such aid renders the new-formed organ usually irregular and misshapen; this has been the case in every instance which I have seen.

Before the parts are adapted and fixed by sutures, the surgeon should wait until all hemorrhage which may be likely to interfere with the surfaces has ceased, otherwise coagula may be deposited, which would prevent adhesion.

In the after-treatment the patient should be kept recumbent, and at perfect rest, and should be desired to suppress an inclination to cough or sneeze. There is no fear of the part suffering from want of warmth; the warm air from the lungs keeps up sufficient heat. I think it not improbable that the part might be so heated and distended as to require the influence of cold, and the erect posture to check mischief. I should, however, not consider it prudent to apply cold without evidence of its necessity.

As soon as the union is firm, the sutures should be removed, to prevent their irritating and exciting ulceration.

The loss of the nose not only produces conspicuous deformity, but subjects the patient to consequences which materially affect his comfort and health. The constant dryness of the nasal cavities and of the pharynx, with frequent soreness of the latter, disturb the rest, and affect the appetite; and the effect on his articulation is such as to render it extremely indistinct and unpleasant. He is, by his misfortunes, almost an outcast from society.

Are we not then warranted in urging the performance of an operation by which most of these evils can be remedied—which is not attended with risk, and which, if carefully conducted, can hardly fail? Such is my impression, from the result of the present case, and others which I watched.

17, *New Bridge Street, Blackfriars.*
Dec. 27, 1834.

To the Editor of the Medical Quarterly Review.

Sir: If you think the following case worth a place in your valuable journal, will you do me the favour to insert it in the next number? I am your obedient servant,

F. E. Hicks,
Late House Surgeon to St. George's Hospital.

33, *George Street, Hanover Square;*
Dec. 13, 1834.

On Saturday, the 6th inst. at 2 o'clock P.M. I was requested to visit a young lady, aged twenty. I was from home at the time, and did not see her until four o'clock on the same day.

I then learnt that, owing to a cold, she had remained in bed longer than usual that morning; that upon getting out of bed, a sudden and involuntary discharge of fæces had taken place, mixed with blood; I should think that it was nearly a pint in quantity, and apparently venous. A medical practitioner had seen and prescribed for her. She did not complain to me of any pain, but said that she felt restless and uneasy. Her countenance was pale, and the pulse was quick, feeble, and fluttering. Believing the bleeding to come from some of the hæmorrhoidal vessels, I examined the rectum, but could not satisfy myself that it did so. I, however, prescribed a cold astringent injection, and the following draught: ℞. Infusi Rosæ c. ℥iss. Acidi sulphurici diluti, m. xx. Conf. Rosæ Gall. ʒss. M. fiat haustus statim sumendus et omni horâ repetendus.

As she was placing herself in a position for the nurse to administer the injection, about two pints of blood were again expelled.

I was again sent for to see her about half-past five o'clock. She was faint; there was no pulse at the wrist; and the extremities were cold. I ordered the injection to be repeated, and gave her half an ounce of Ruspini's Styptic by the mouth. Several large coagula were again expelled from the rectum in the course of a few minutes. The syncope increased to such an alarming extent that I was obliged to give stimulants, and repeated the Ruspini's Styptic. I then requested my father to see her. The hæmorrhage did not recur after six o'clock.

We continued to give stimulants, but she never rallied from the state of syncope, and died about half-past seven o'clock in the evening.

On Monday, the 8th inst. I examined the body. The intestinal canal from the cæcum downwards was of a dark colour, and appeared to contain blood. On laying open the cæcum and upper portion of the colon I discovered a great number of circular ulcers, particularly about the valve of the cæcum, some of them as large as a sixpence. In the centre of most of them was seen a thick dark-coloured slough, which had separated at the edges; from some of them the slough had been entirely thrown off, leaving an unhealthy-looking ulcer. The cæcum and colon contained about half a pint of blood. The other viscera were healthy.

History. This young lady, for the last two years had suffered occasionally from dyspepsia and constipation of the bowels; but her ailments were seldom so severe as to require medical advice, the symptoms being generally relieved by a little aperient medicine. She does not appear to have complained of any pain in the abdomen.

About a week before her death she took cold, and her bowels became constipated, requiring strong and repeated doses of aperient medicine, prescribed by herself; such as castor oil, antibilious pills, &c.; these all failed until the day before her death, when the bowels were well relieved by a black draught. The following morning she felt much better; and indeed, when I saw her and made enquiries as to her previous state of health, she told me, that independently of the cold, she never imagined herself in better health.

Remarks. The extraordinary features of this case are, first: that it is clear the cæcum must have been a seat of disease for some time past, although the symptoms were never referred to this viscus; and, secondly, that so profuse an hæmorrhage should have taken place from these small ulcers as to destroy life.

I imagine, myself, that these ulcers had existed for a considerable length of time; that owing to the cold, probably attended with some fever, and owing to the irritation produced by the aperient medicines the patient had taken, they had put on a sloughing character; and that on the separation of the sloughs the hæmorrhage ensued. I could not discover any larger vessel into which the ulceration had extended; neither do I believe that bleeding to such an extent could take place from any one vessel of the cæcum or colon. I think then that this enormous loss of blood (altogether three quarts) was occasioned by nearly all these ulcers bleeding simultaneously.

COLLECTANEA.

PATHOLOGY AND PRACTICE.

ANIMAL MAGNETISM.

We have received an ingenious communication on this subject from Dr. Stanley, of Brighton, which we do not publish, for the following reason. Dr. Stanley's paper mentions, with great brevity, that he has magnetized some persons, but it is chiefly occupied with the theory of the art. He supposes that slight galvanic shocks are thrown out by the fingers of the magnetizer; a theory which is certainly supported by some late discoveries, showing that the acid and alkaline secretions of different parts of the human body form a kind of voltaic pile. But it is not a theory of animal magnetism, however plausible, that is now wanted,—we require facts. Let Dr. Stanley come into our hospitals, and demand permission to cure a dozen patients by mesmerism: this will readily

be granted; and, when he has convinced a number of hospital physicians and surgeons of the reality of the art, we will answer for the rest of the profession. That is to say, we will answer for every one except Dr. Bostock; for he tells us, "The conclusion that forces itself irresistibly on the mind is, that no medical testimony is insufficient to establish a fact which is in itself incredible, and that this previous incredibility can only be ascertained by an extensive and accurate knowledge of the functions and properties of the living body, both mental and corporeal, in all its modifications, and under all circumstances, and by a correct and careful generalization of the knowledge thus obtained." (*History of Medicine*, cap. xiii. *Cyclopædia of Pract. Med.* part xxii.)

Dr. Stanley is quite right when he says that we have no prejudices against animal magnetism; and we repeat that we wish, with Dr. Pritchard, that the art could be introduced into this country. But, that this may happen, it is necessary that everything should be done above board, and free from all suspicion, from all possibility of collusion. People begin to think that we have been tantalized long enough with talk about animal magnetism, and ask for facts. The mere account of foreign cases is not sufficient. The sober good sense of British practitioners requires that what was done at Paris or Vienna should be capable of repetition in London. If the phenomena cannot be transplanted to this colder climate, they are at any rate of no practical importance to us.

CASE OF APPARENT HÆMOPTYSIS CAUSED BY A LEECH.

A shepherd had been spitting blood for eighteen days, and, being tired of taking the pectoral drinks which were prescribed for him, went to consult a physician in a village very near Perpignan. On examination, he found at the orifice of the pharynx, behind the velum palati, and at the left of the base of the uvula, a leech, about two inches long, and eight lines thick at its middle. It was extracted, after several attempts, with his thumb, forefinger, and a pair of dressing forceps. Dr. Bonafos, who relates the case, supposes that the blood proceeded from the body of the leech, squeezed by the action of the pharynx. The leech, having thus disgorged a part of the blood, was enabled to begin sucking again, which accounts for its not having dropped off.—*Journal des Connaissances Médico-Chirurgicales.*

CASE OF STRANGULATED HERNIA FOLLOWED BY CHOLERA.

A robust grenadier, of temperate habits, was admitted into the military hospital at Antwerp, on the evening of the 5th of January, 1834. He wore a truss habitually, for an inguinal hernia on the right side, but he had taken it off the preceding night, on going to bed, and in the morning the hernia was down. It was harder and larger than usual, and he could not reduce it. He suffered from pain during the day, and in the evening was obliged to be carried to the hospital. The house-physician made new attempts to re-

duce the hernia, but did not continue them long, on account of the pain and tension of the parts. He took sixteen ounces of blood from the arm, applied sixteen leeches to the tumour and around the ring, and put the patient into a bath. After several unsuccessful attempts the tumour was reduced on the morning of the 6th. Meantime another set of phenomena had appeared. Vomiting had occurred during the bleeding, and had returned several times, and the patient had fallen into a remarkable state of debility attended with anxiety. These symptoms might be considered as the result either of the taxis or the bleeding; but the state in which I found the patient on the following morning, says Dr. Gouzée, was such as might make one doubt concerning their origin. His eyes had sunk into their orbits, and were surrounded by a bluish circle; his lips, hands, and feet were completely blue; the integuments pitted on pressure; there was vomiting of greenish matter, and extreme thirst; no stools, no urine, no pulse at the wrist; colic pains, but no cramps. The treatment consisted of mustard poultices to the legs and chest, an emollient cataplasm to the abdomen, and a table-spoonful every quarter of an hour of a mixture, consisting of seven ounces of peppermint-water, an ounce of syrup of marshmallow, and a drachm of sulphuric ether. On the 8th, he was well, with the exception of the thirst. He was discharged on the 21st.

Dr. Gouzée is of opinion, that in this case the sympathetic nerve formed the connecting link between the two diseases, and thinks it not improbable that the Asiatic cholera is essentially a disease of the sympathetic. He mentions a case which he saw in 1831, where a sabre wound in the abdomen was followed by blueness of the face and lips, alteration of the features, anxiety, loss of voice, and absence of pulse; and another in the Archives Générales for November, 1833, where a man had been wounded in the chest by a foil, beneath the third rib. When visited by his physician, the patient seemed moribund; his skin was cold, his countenance blue and depressed, his pulse almost imperceptible, and he had a strong desire to make water, without being able to do so. He was better the next day, and out of danger the following one. The author of the case, M. Lesauvage, attributes these symptoms to a lesion of the cardiac and pulmonary plexuses; and Dr. Gouzée agrees with him.

[From the *Observateur Médical Belge*, a new and excellent medical Journal, published at Brussels. We have now before us all the numbers from its commencement in April, 1834, to November; the original articles are good, the extracts and translations judicious, and it is by far the best looking of the continental journals.—Ed. *Med. Quart.*]

CASES OF HYSTERICAL AFFECTION OF THE KNEE.

Case 1. A young girl, æt. nineteen, was admitted into St. George's Hospital in January, 1828, complaining of pain in the

knee, which came on suddenly, three months previously, and prevented her from walking about. The pain was more severe some days than others, but did not prevent her from sleeping eight or nine hours every night. Cupping, leeches, and blisters had been employed without advantage. On examination, the form and colour of the knee were but slightly altered from their natural appearance, the skin of the knee and adjacent parts was preternaturally sensitive to the touch. The patient's general health was good, and menstruation regular. She was ordered to take aperient pills occasionally; a blister was applied near the knee, and a discharge maintained from the sore. The patient was dismissed the hospital cured, at the expiration of twelve days from her admission.

Case II. A young woman was admitted into St. George's hospital, October 1st, 1829, with pain in the knee, extending down the leg. The complaint had existed ten weeks, being alternately better and worse. Leeches had been applied without any beneficial result. At the time of her admission, the complexion was of a jaundiced hue, the tongue furred, and the menses irregular; the pain sometimes ceased, but generally became worse after walking, the skin of the knee and lower part of the thigh was excessively tender to the touch. The following medicine was ordered: ℞. Decoct. Aloes Comp. Mist. Camph. *aa* ʒvj. M. bis die sumend: spirit lotion to the knee. The lotion aggravating the pain, it was withdrawn, and a blister applied in its stead.

On the 14th October, the general health was improved, but there was no amelioration of the local symptoms; the mixture was continued, straps of soap plaster and a bandage were applied to the knee.

On the 17th, being no better, the mixture was left off, and the following prescribed: R. Tinct. Castorei ʒss. Mist. Camphoræ ℥iss. M. pro haustu ter die sumendo. ℞. Ext. Coloc. Comp. ϑss. Ext. Hyoscyami gr. iv. M. fiant pilulæ, iii., omni nocte sumendæ.

October 20th. She felt scarcely any pain, and the morbid sensitiveness of the skin was much diminished. Medicine continued.

October 22d. She had a recurrence of the severe symptoms. Medicine repeated, and a belladonna plaster applied to the knee.

November 1st. Since the last date the knee was sometimes painful, at other times free from uneasiness, the pain has increased within the last two days. The former medicine, and the belladonna plaster, to be discontinued, and Ammon. Carb. gr. iii. Mist. Camph. ℥iss, to be taken three times a day.

November 4th. No better since the last date. The mixture to be continued. ℞. Tinct. Opii. Spirit. Rect. *aa* ʒii Mist. Camphoræ ℥vj. M. fiat lotio constanter genu applicanda.

November 6th. The lotion appeared to relieve the pain and acute sensibility of the skin. The same remedies were continued for several days, the symptoms subsided, and the patient was dismissed the hospital on the 24th.—*Mr. Lee, on Nervous Disorders.*

CASE OF ADHESION OF THE PLACENTA TO THE FUNDUS OF THE UTERUS.

I was called to visit a black girl, who, I was informed, was in labour, but, on arriving at the house, was told "she had been delivered of her child three days before, but that the after-birth was still retained." I found her with a countenance expressing much anxiety; severe pain in the region of the uterus; a hot, dry skin; and her pulse about 120 in a minute, and very small. On raising the bedclothes to introduce my hand for examination, there escaped the most disgusting stench I ever encountered. I then introduced my finger into the vagina, upon which she sprung to the head of the bed, exclaiming, "Oh, you will kill me!" I immediately withdrew my hand, and asked what was the matter? She then told me "that the nurse had felt her so much that she could not bear to be touched." I explained the necessity which existed for an examination, and that it was impossible for me to render her any assistance unless she submitted. She then told me she would bear it. I again introduced my finger, and carried it to the os uteri along the cord, which I found so firmly contracted that I could scarcely introduce the end of my finger, and its edges quite firm, and yielding none to the pressure made upon it. I then held the finger of the right hand at the os uteri, and drew gently with the left hand the umbilical cord, in order to ascertain where the adhesion existed by the course of the cord. This I found to be at the fundus, and that very firmly. The case to me was a novel one. I never had seen or read of a case having occurred, and the only light thrown upon the subject is a paragraph in Dewees' System of Midwifery, where he says that he has never seen a case of adhesion of the placenta to the fundus of the uterus, and at the same time a contraction of the os uteri, but that he would suppose the secale cornutum might be advantageously used. We know the powerful effects of this remedy on the fibres of the uterus; we know that it produces strong contractions; then the question arises, will the contraction of the longitudinal fibres overcome the force of the circular? If so, the os uteri must dilate. I believed it would, and consequently gave fifteen grains of the ergot as a dose. Its effects were powerful, and continued some time, but without producing any other effect. In half an hour I repeated the dose, with the same result as the first, except that the contractions of the uterus were stronger. I repeated the third, fourth, and fifth time, with an interval of half an hour between each dose. Immediately after giving the fifth dose, making in all seventy-five grains, I had the pleasure to find the os uteri open, the adhesion give way, and the placenta delivered. The girl did well, with the exception of a mild phlegmasia dolens, which yielded to simple remedies.—*Dr. Worrell, in American Journal of Med. Science.*

FUNGUS HÆMATODES.

Dr. Smith has given, in the *Baltimore Journal*, a case of this disease successfully treated. The patient was suffering from two tumours, one on the most prominent part of the malar bone, and the other over the centre of the sterno-clavicular articulation. Dr. Smith first employed leeches, cooling lotions, cathartics, low diet, and repose, but without advantage. He then prescribed the Tr. Iodin. in doses of ten drops three times a day, and a pill composed of two grains of aloes, two grains of bluepill, and half a grain of ipecacuanha, to be taken every night; and also the empl. hydrarg. to be applied to the tumours. An amendment took place in two or three weeks, and ultimately the cure was perfect. The author states that he is treating another case with the same remedies, that they are keeping the disease in check, and that he does not despair of their bringing it under control.

LIGATURE OF THE AORTA.

This tremendous operation was performed last January, at the Cape of Good Hope, by Dr. John Murray. The details are given in the *Medical Gazette* of October 4th, 1834. The patient was a Portuguese sailor, æt. thirty-three, suffering from aneurism of the external iliac artery, which had existed for three months. The aorta was tied three or four lines above its bifurcation, and about an inch below the spot where the inferior mesenteric artery is given off. It is almost unnecessary to mention the result of the operation,—the patient died in twenty-three hours.

ON BELLADONNA IN PERTUSSIS.

Dr. Jackson tells us (*American Jour. of Med. Sciences*, No. 28,) that, having determined to try the effect of belladonna in hooping cough, he gave it, in the winter of 1831, after the manner recommended by Dr. Kahleiss, *i. e.* in combination with sulphur and ipecacuanha, and with alternating doses of prussic acid. The belladonna was spurious, and the mixture inert. In December, 1832, the disease invaded the author's own family, and the following is his account of the first case.

"Our second child, a girl in her ninth year, had high fever, and her cough was so violent that the blood streamed from her nose at almost every paroxysm. This too was the mere catarrhal cough that precedes the spasmodic and more distressing form of the disease. She was bled once, purged gently, took tartar emetic in nauseating doses, with an abundance of linseed-tea: thus the fever was soon reduced, and the characteristic cough began to be developed. We then commenced with extract of belladonna, giving it simply triturated with water, in what doses we do not recollect, but it was given freely till the pupils were greatly dilated, and her vision so confused that she could not read large print. To reach this point did not require more than two days, when the complaint

being plainly mitigated, the medicine was for the present omitted. In about twenty-four hours the pupils began to contract, and vision to become more distinct; the belladonna was therefore resumed, and given in larger doses than before. How long she took it, or how large were the doses, we do not now recollect; nor is this point material to our present purpose, as we shall treat of it particularly towards the end; but we do very distinctly recollect that the relief was altogether unexpected and incredible, for in a few days (certainly not more than ten from the time she began the belladonna,) the child was totally cured. We do not presume to say that she coughed none, but we do say that her fever was gone, her appetite ravenous, that she was able to attend to all her lessons, and that her cough, if she had any, would have passed unnoticed in any family."

Dr. Jackson's four other children were treated with the same remedy, and recovered with the same facility.

On the hooping-cough breaking out in the families of two gentlemen named Snyder, living seven miles from our author, he recommended the belladonna; but the results were different in the two families, for "it certainly requires some courage to give this medicine in the most efficacious manner; and this fact, it is presumed, will deter many from giving it as they ought. George Snyder was frightened by the panic of his family physician, and hence his children are still coughing, whilst his brother Henry, who possessed some medical philosophy himself, persevered, and performed a cure many weeks ago."

The medicine should be given till dilatation of the pupil is produced, when it must be discontinued, or administered in smaller doses. Dr. Jackson thinks that one sixth of a grain of the extract may be given to a child three months old, every three hours from sunrise to bedtime; a grain to a child two years old, and a grain and a half to one four years old. Our own opinion is, that, if the extract be very good, these doses are too large, and too frequent.

TREATMENT OF NASAL POLYPI.

Mr. Joseph Dallaway, divisional surgeon of the Coast Blockade, states that, in seventeen cases of common nasal polypi, he has succeeded in curing them all without forceps, or any other mode of treatment than a solution of the Sulphas Zinci in water, in the proportion of from ℈ij. to ʒj. of the former, in ℥j. of the latter. This lotion, he states, is to be introduced up the nostril by means of lint, which has been well moistened with it, and the lint spread over the surface of the tumour, as far up as can conveniently be effected, by means of a probe or director. This lint must be kept moistened by dropping in the solution of zinc four or five times in the day, and then by removing it night and morning, to be replaced with a fresh piece of such moistened lint. Mr. Dallaway states that his seventeen cases were all cured of the disease within a fortnight, by this simple remedy. He does not state, however, that

any of the cases enumerated were of a malignant nature, but merely the common soft polypus, as I understand him.

Mr. Dallaway first adopted this practice in polypus, he says, so far back as 1797; and aptly remarks, that it *may* be equally successful in certain cases of polypus uteri. I must say that, upon the receipt of this paper, I tried the remedy in my own practice at the Westminster General Dispensary, and in three cases of the soft common polypus I succeeded, within ten days, in removing the disease; and I understand from my colleague, Mr. Thomas Chevalier, that he was equally successful with one or two others.—*Mr. A. Copland Hutchinson, in Med. Gazette.*

THE ITCH INSECT.

The detection of this minute animal has created quite a sensation among the *savans* of Paris. M. Renucci, a student of the Hôtel Dieu, has been the first to put beyond a doubt the existence of the genuine Acarus *scabiei:* he has, in consequence, beside the credit due to him for his success, netted three hundred francs, which M. Lugol, a few years ago, offered for, or rather wagered against, the discovery of the insect. All the descriptions hitherto given of the *A. scabiei*, by Bonomo, De Geer, Baker, Alibert, and others, have been inaccurate and fanciful: they would have better served to represent the mite of cheese. The true *A. scabiei*, like the mole, has its fore legs strongly developed, while its hind quarters are comparatively feeble; it is thus enabled to burrow under the cuticle, and to make a road for itself as it proceeds. Plans and drawings of the animal on a greatly magnified scale have been laid before the Institute by M. Beaude; and M. Raspail, whose skill in exploring minute objects is so celebrated, is engaged with his microscope in procuring further details.

We learn from a letter addressed by M. Renucci to the Academy of Sciences, that, in the year 1825, while he was attending his brother's practice in Corsica, he often had an opportunity of observing the method pursued by women of that country in extracting the acarus, usually called by them the *pedicello*. M. R., aware that the existence of the insect was denied by many eminent naturalists and physicians on the continent, took pains to ascertain the signs of its presence: he devoted a good deal of study to the subject, and thus was enabled recently to point out the true *A. scabiei* to M. Alibert, at the Hôpital St. Louis.

The proper mode of proceeding for the purpose is to examine the vesicles of an itch patient newly infected, and not yet under cure. At the base of any one of them will be found certain little furrows, going off in different directions, some towards the summit of the vesicle, others running round it, and others again prolonged beneath the neighbouring skin. Observe the furrow which diverges most from the vesicle, and at its extremity will in general be detected a white point, visible with the naked eye. This white point, where the cuticle is slightly elevated, corresponds to the posterior

part of the insect. In warm countries, says M. Renucci, I have further been able to discern the head, which is brownish. Whenever we can distinguish two such points, we may be almost sure of finding the insect. In order to extract it, we must pierce the cuticle with a needle, at about the distance of half a line from the white point, when, by gently dividing the epidermis upwards, the acarus is laid bare, and easily removed.

It is not rare to find it at the base of the vesicle; sometimes it is even found on the sides; but very rarely, or perhaps never, on the top. Most likely it was owing to this circumstance that many of those who sought the acarus scabiei with such industry *in* the vesicle, or its fluid, were induced, from their want of success, to deny its existence altogether. The figure given by De Geer is, according to M. Renucci, rather that of the itch-insect of the horse than of the *A. scabiei* of man.

But, after all, says a writer in the *Journal Hebdomadaire*, it does not follow that this insect, the presence of which we have ourselves witnessed, is the real cause of the itch. It still remains to be seen whether there may not be genuine itch without an insect; whether the acarus now detected be the same in all patients affected with scabies; and whether it be not found in other animals, or even in animal or animalized substances, placed in circumstances favourable to the propagation of insects, such as heat and humidity.—*Med. Gazette.*

CASE OF UNUNITED FRACTURE, SUCCESSFULLY TREATED BY FRICTION.

Samuel Sapp, a stout, athletic man, aged about twenty-seven years, from New Jersey, applied to my father, during the last summer, concerning an ununited fracture of the humerus. He stated that, on the 1st of March, 1833, while engaged in his occupation, as one of the deck-hands on board the steam-boat Trenton, he was dragged overboard by becoming entangled in the rope, and, in attempting to save himself by seizing the railings, his left arm was fractured.

He immediately applied to a surgeon in a neighbouring town, who carefully adjusted the fragments, and placed the limb in splints; the injured parts being but slightly painful, the first dressings were allowed to remain undisturbed for about three weeks, when other splints were substituted, and continued on the limb, with occasional alterations, for three months. At the end of this period, finding no improvement, his physician advised him to seek further advice.

On removing the splints, the limb was found to be much reduced in size, its muscular power was obliterated, and its capillary circulation feeble. He was advised to lay aside the splints and bandages, to use the limb moderately, and to keep up a steady system of external frictions, and requested to return to the city in cool weather.

On his return in the autumn, no improvement was manifest; and, by the advice of my father, he placed himself under the care of my friend, Dr. William Ashmead, and myself.

On a careful examination of the parts, we found an unusual obliquity in the fractured portions, the surfaces exposed being not less than three inches in extent, the edges of these surfaces, the rounded extremities of the fragments, and the crevice separating the opposing surfaces of the fracture, could be distinctly traced by the fingers. This examination was rendered peculiarly satisfactory, in consequence of the emaciation and flaccidity of the limb.

Owing to the remarkable extent of the fracture, and the loss of muscular power in the arm, the fragments, which in a more vigorous state of the surrounding parts, might have been kept in apposition, were separated from each other to a greater or less extent, as they were influenced by the position of the limb. When the forearm was flexed upon the arm, in the usual attitude for fractured humerus, the surfaces of the fragments were separated throughout their whole extent, but more particularly at their upper portion, and it was only in one position that their apposition was effected.

The limb being placed in that position which we found upon trial effected a perfect coaption of the parts, the upper and lower portions of the broken bone were grasped by the hands, and a firm, gliding motion communicated, so that the surfaces could be felt rubbing upon each other. This process was continued for several minutes; and the limb was then secured in this position by light dressings in an angular box, a piece of thin board being firmly bound over the seat of fracture.

This process was repeated for several successive mornings, and was performed by Dr. Ashmead or myself: the few first trials excited but little sensation in the fractured surfaces, though the force used was as great as we could command. In a few days, however, the patient began to feel pain, which increased at every repetition of the process, until it became acute. The fractured ends were less moveable, heat and action were reestablished in the limb, and we were obliged to diminish the frequency and severity of the friction.

In about a month, bony union became evident at the lower extremity of the fracture, which proceeded rapidly, and so agglutinated the lower portion as to prevent the necessity of the box: shooting pains were frequently experienced in the limb, and any attempt to disturb it produced considerable suffering. Under these circumstances we declined interfering with the salutary operations of nature, which proceeded most happily. In about two months after the commencement of the practice, we had the satisfaction of observing that a firm bed of callus was thrown out over the whole surface of this extensive fracture.

The muscles soon acquired their accustomed volume and force, and the man has since been pursuing his laborious occupation.—*American Journal of Med. Sciences.*

EFFECTS OF THE SOLUTION OF MURIATE OF ANTIMONY IN CARCINOMA. BY DR. A. NEUMANN.

G., a peasant, from the village of Grabowiez, was operated on for a carcinoma of the lower lip and right cheek, without any hope of being able to effect a cure of the wound by the first intention, on account of the great extent of the disease. The carcinoma had not only seized upon the lip from one corner of the mouth to the other, partly destroyed it, partly hardened it and bent it outwards, as well as changed the appearance of the soft parts as far as the bone of the lower jaw, and to the very point of the chin, but had also gone on from the right corner of the mouth over the thin surface of the cheek for about an inch, while the outermost parts appeared undisturbed. By the operation, the whole lip, beginning from the right corner of the mouth down to the bone of the lower jaw and the chin, and again up to the left corner of the mouth, was cut off; the right cheek was turned inside out, and, a second circular cut being made, the scirrhous tumor was separated from it. Upon an examination of the cut surface, it was found that it was entirely free from the hard carcinomatous parts, except in one place near the chin, and close to the maxillary bone, where a piece, about the size of a silver groschen, still remained.

Although the patient had as yet suffered very little, still he could not be prevailed upon to allow the knife to be applied again to the diseased part. Indeed, he frustrated even the attempt which was made without his knowledge to apply a hot iron before bandaging the wound, for which preparations had been made; he pushed aside three men who were holding him, and put himself on his defence against the author.

In this case, as the wound showed full three inches in its lower part next the chin, and from three to four inches in the upper part, and at the same time, as above mentioned, still contained carcinomatous parts, it was only possible to promote union by strips of adhesive plaster and bandages, and to effect a cure by granulation, the author intending to remove the carcinomatous parts afterwards by caustics. This was tried on the following day when the patient had become quieter, when the bandage had been removed, not by means of arsenic, but by applying a few drops of solution of muriate of antimony. This caused a blackish ichorous discharge on the carcinomatous spot, and for six days large and small pieces of the carcinoma, which reached to the maxillary bone, came off, after which healthy suppuration took place. By degrees the wound healed up on all sides, Ung. Basilicum alone being applied, and in about three weeks it was half its former size, without any great ptyalism having taken place, which was the chief thing to be feared. In eight weeks the wound had completely healed, whilst a lip, reaching up to the crowns of the teeth, had formed itself, by which means the patient could retain his saliva.

It was remarkable, that, in the whole lower part of the wound, and even in the cauterised carcinomatous place, where the whole of the soft parts had been removed as far as the periosteum, that as the scar made progress so black hairs sprung forth, which certainly in this case did not come from bulbs of hair left behind, as, in that case, within the periosteum.

I explain this appearance through the standing law of nature to work according to a fixed original model, and to regenerate a given organ on its appointed spot, as far as the strength of any particular class of animals will allow. This is the more probable, as in our case the new hair was of a handsome black colour, while the rest of the patient's hair, whether his beard or on his head, had become either grey or white, on account of his advanced age (fifty-eight.)

I cannot make my readers too attentive to the permanent extirpation of the cancer by the solution of the muriate of antimony, especially in these times, when it has unfortunately become so much the fashion to run after new remedies, and to overlook old ones, of which the effects are not yet sufficiently known and inquired into. I believe that, in most cases of carcinoma, arsenic, which is so dangerous on account of its being absorbed so easily, so painful, and so troublesome, might be replaced by muriate of antimony, even before the operation; and it is therefore to be desired that frequent trials should be made with this remedy in cancer, and the experiments, when collected, should be published.

I cannot refrain from pointing out the following rules for the application of the solution of the muriate of antimony. The remedy must be applied to the diseased part alone with the greatest accuracy, and this must be done once or twice a day. By this, if the surface was dry before, a dry, black, and as it were carbonized and hard crust, is formed; but, if it was a suppurating surface, a blackish ichorous crust, which is carbonized only in two or three places. If this does not come off of its own accord, it must be removed by means of careful incisions in the dead part, pushed as deeply as possible. The caustic is now to be applied again, and continued until the surrounding healthy parts begin to inflame, although untouched by it. This is a proof that the diseased part only is destroyed, and that the caustic has reached the healthy parts. Cicatrization must afterwards be promoted, and completed, by means of digestive ointment.

CARBONATE OF AMMONIA IN THE URINE.

I was the first, I believe, several years ago to announce the discovery of carbonate of ammonia in urine recently voided, and that in considerable quantity, causing the fluid to effervesce briskly on the addition of an acid. The observation did not excite the attention, if it met the eye, of Dr. Prout and others who have since written on the composition of the urine in disease. As a second case of the kind, however, has very lately come under my notice, I think it well to return to the subject. The case, the particulars of

which I formerly published, was that of a young man labouring under long-continued fever, attended with petechiæ. The urine contained carbonate of ammonia for four or five days, at a time he was extremely bad. As he improved this salt disappeared. We at first thought it might have been formed in consequence of the urine undergoing decomposition in the bladder; but it was proved that this was not the case, for when the bladder was completely emptied, the urine formed in it in two hours afterwards was found equally loaded with the same salt. There was no disease of the mucous membrane of the bladder whatsoever, and we therefore were justified in concluding that the carbonate of ammonia existed in the urine as secreted by the kidney. Although I afterwards examined the urine of numerous fever patients, I never met with the same salt. The case now under our observation at the Meath Hospital is very different indeed in every thing but the presence of this salt in the urine. A strong and athletic man, employed by the Ballast Board as a labourer, had occasion to work several days standing up to his knees in water. Being at the time constipated, he took a large dose of Glauber's salts which acted briskly on the bowels, but he did not cease to work in the cold water notwithstanding. The consequences of his imprudence soon became apparent, for the purgative effect of the medicine was scarcely over, when he was attacked with most violent pain in the belly, accompanied by great distention of the stomach and bowels, thirst, headach, and fever. In a few days he was admitted into the Meath Hospital, labouring under anasarca, ascites, and intestinal tympanitis. Bleeding, leeching, and the most active antiphlogistic treatment, greatly abated his sufferings, and diminished the intensity of the disease, but I fear all our efforts will prove unavailing to procure his final recovery. At the period that the pain and tenderness of the belly, together with the character and frequency of the pulse, demanded the first application of leeches, I was very much surprised to hear from Mr. Knott, a most diligent and intelligent pupil, that the urine contained carbonate of ammonia in considerable abundance. It was examined in Dr. Apjohn's laboratory by Mr. White, and was found to effervesce briskly on the addition of the mineral acids.

This appearance was owing to carbonate of ammonia in great excess. It was of rather a pale straw colour, contained no albumen, and acted on the vegetable colours as an alkali. It deposited a precipitate, consisting of the ammoniaco-magnesian phosphate and phosphate of lime. This remarkable urine was supposed by some, who witnessed the violence of its effervescence on the addition of an acid, to owe the formation of its ammoniacal salt to decomposition during its retention in the bladder. But that this was not the source of the carbonate of ammonia, was proved by many circumstances. It was perfectly limpid when voided, and had not the slightest smell of putrescence, such as exhales from urine even in the commencement of decomposition. Again, when our patient

completely emptied the bladder of its contents, and in half an hour afterwards again passed a small quantity of water, this latter was found as copiously loaded with carbonate of ammonia as the former. It necessarily follows, therefore, that the urine, as secreted by the kidneys, contained the carbonate of ammonia which seemed to be a vehicle for excreting those elements which are usually combined so as to form urea, for in this man's urine not a trace of urea could be discovered.

The occasional presence of ammonia in the urine, in the form of the ammoniaco-magnesian phosphate, has been long known to chemists; carbonic acid is of much rarer occurrence indeed, for not more than one or two cases have, I believe, been observed, in which carbonate of lime has been found forming a urinary calculus in the human bladder, although so common in swine and other animals.

P. S. July 5. The post-mortem examination of this man exhibited the kidneys rather enlarged, and somewhat turgid with blood, the bladder perfectly healthy. The liver misshapen, round at the edges, smaller than natural, indurated, and composed throughout its whole mass of globular masses, very firm and pale, forming a variety of what is called schirrous liver.—*Dr. Graves, in the Dublin Journal.*

ACCOUNT OF A TRIAL OF ACUPUNCTURE WITH GALVANISM, MADE BY DR. W. STOKES, ONE OF THE PHYSICIANS TO THE MEATH HOSPITAL. BY JOHN HAMILTON, L.R.C.S.I.

With the expectation that the efficacy of acupuncture would be increased by passing galvanic shocks through the needles, such a combination was tried in France a few years since, and with apparently favorable results. But in this country, although the use of acupuncture is pretty generally known, and its efficacy admitted, I am not aware of any account of its having been tried with galvanism; the following sketch, therefore, of the result of some cases, in which such a trial was made by Dr. Stokes, in the Meath Hospital, will at least possess the merit of novelty.

The galvanic battery employed was a trough, with fifty-two inch zinc and copper plates, and the liquid, sulphuric acid and water, in various proportions, most commonly three drachms of the acid to eight ounces of the water.

The application was as follows. If a patient presented himself with paralysis of the deltoid muscle, from rheumatism or other cause, one needle was inserted tolerably deep into the upper fleshy part of the muscle, and a second at the lower part, so that, on applying the wires from the ends of the battery to the needles, the shock was passed quite through. Two other needles were occasionally passed at the sides of the muscle. Nine or ten shocks were given at a time, and repeated daily as long as necessary. As the strength of the shock depended on the number of plates used to complete the galvanic circle, that number differed according to

the part and the susceptibility of the patient. In sciatica, for instance, where the parts about the seat of the disease are chiefly muscular, the shock from the whole fifty was sometimes passed along the limb. The employment of so great a number, however, was rare, from the violence of the shock being far too great, and anything near that number, where the galvanic fluid had to pass through a delicate or important organ, such as the brain or eye, was never used. The necessity of caution in this last respect is well shown in the following case. A man, formerly a soldier in India, with some obscure chronic disease of the brain, which rendered both eyes amaurotic, was ordered to be subjected to this agent; more from a wish to give him every chance where all the usual remedies had been tried in vain, than with much hope of success. The left eye being the worst, one needle was inserted a little above the left eyebrow, another at the lower part of the occiput at the same side. It had been determined to commence with only eight or nine pair of plates, but, from a feeling of caution, the circle of communication only included three pair. And yet, with this exceedingly small number, he was completely stunned for an instant, as if from the blow of a heavy stick, and felt a severe darting pain through the head, with a flash of light before the eyes. Now, where so severe a shock resulted from so few plates, and as we know the severity is proportioned to the number, it does not appear unreasonable to suppose, that, had the number commenced with been twenty-five, which would have given a shock upwards of eight times as strong, some severe lesion of the brain, or even death itself, might have been the result. In all subsequent cases of amaurosis, to prevent the likelihood of any injury to the brain, the place of insertion of the needles was altered, and consequently, the course of the galvanic fluid.

The extent to which the impression of galvanism on the system is increased by the aid of needles, and how much can be done by a small battery, is very remarkable. On merely applying the ends of the wires to the skin, no effect is produced, the galvanic fluid appears diffused over the surface and lost; but the instant they touch the needles inserted into a part, a most violent shock is given, making the stoutest cry out from pain, powerfully convulsing the muscles, generally throwing the patient into a profuse sweat, and often followed by faintness and sickness of the stomach. Some, from its severity, would not submit to a second operation. In a case of amaurosis one needle was inserted into the nasal end of the eyebrow, the others into the temple, by which means the shock passed in a great measure through the orbit, engaging the brain only to a slight degree. The patient was sensible of a disagreeable stunning feel in the forehead, with pain, the brows were reddened and contracted, a flow of tears came from the eye, with the sensation of a flash of light; and in one person in whom it was used by the late Mr. Hewson, going as high as twenty-five pair of plates, the pupils were observed to be very much contracted after its use,

and a stinging pain felt in the head the rest of the day. In another case also, where the application was to the side of the face, for paralysis of the portio dura of the seventh nerve, rigors, with headach, and heat and prickling in the part, followed several times.

This great increase of power from the use of the needles evidently depends on their conducting the galvanic fluid beneath the cuticle, the well known property of which is to resist its admission. They accomplish what Humboldt effected by removing the cuticle by blisters, but in a much simpler, more expeditious, and convenient manner; giving scarcely any pain, if rightly introduced, and leaving no lesion behind them. The following circumstance attending their extraction is curious. In simple acupuncture all the needles inserted are generally withdrawn with some degree of difficulty; this difficulty was always found to be greatly increased after the application of galvanism in one of the needles, while the other was exactly the reverse, being invariably withdrawn with unusual facility, greater even than the natural consistence of the flesh would seem to permit. Some idea may be formed of the degree of resistance occasionally met with in the extraction of one of the needles, when I mention, that one gentleman found it so great, that after exerting much force in vain, the needle still sticking tightly in the lumbar muscles, he expressed his conviction that it must by some means have got bent, and thus hooked in.

The needle difficult of extraction was always that to which the positive wire had been applied, the other, that touched by the wire from the copper or negative end of the battery.

This phenomenon appears to depend on the power which the positive end of the battery is known to possess of giving irritability, and that of the negative in taking it away. "If silver be applied to nerves and zinc to muscles, the irritability of the latter increases in proportion to the time they have remained in the chain. By this method the thighs of frogs have been revivified in some degree, and afterwards become sensible to stimuli that before had ceased to act on them. By distributing the metals in an inverse manner, applying zinc to nerves and silver to muscles, an effect absolutely the contrary is observed, and the muscles that possessed the most lively irritability, when placed in the chain seem to be rendered entirely paralytic." Applying these principles to the facts before us, we can readily conceive how the muscular fibres round the positive needle, endued with a tenfold degree of irritability, tightly grasp the needle, and resist its removal, while the exhausted and paralysed fibres round the negative needle yield it up to the slightest force. Wishing to see how far these effects extended, I inserted the needles scarcely a quarter of an inch apart, but still found the positive needle hard, the negative easy to extract. On changing the application of the wires, so that each needle was touched by both, both needles were equally resisting.

Between the needles there was generally a red blush, and the shock extended no farther; in one instance, however, where one

needle was inserted on the outside, the second on the inside of the right ankle, a strong convulsive twitch was excited, extending up the leg and thigh, and slightly convulsing the right arm and temporal muscle, accompanied by pain in the same direction.

As a remedial agent, I regret to say, the cases in which this combination of acupuncture with galvanism has been tried leave little to be said in its favour. Even were its efficacy greater, the application is so severe as to preclude its use, except in cases of a hopeless character, and where milder means had been resorted to in vain. It was tried in the manner described above in numerous cases of chronic rheumatism, several of sciatica and lumbago, a few of amaurosis, and some of paralysis, two of which were from lead. A case of lumbago and paralysis from lead were certainly cured, after many other remedies had been tried in vain, and a case of rheumatism greatly relieved; the most striking instance, however, was a case of paralysis of the portio dura of the seventh nerve, which I think well worthy of giving at length, as presenting a very accurate picture of this very interesting and rather rare form of disease, as well as a full exemplification of Sir Charles Bell's views on this subject. It was taken by my friend, Mr. Ellison, of Liverpool, who applied the galvanic shocks himself.—*Dublin Journal.*

CAPIVI IN CATARRH OF THE BLADDER, AND LEUCORRHŒA.

The following cases, in which this remedy was successfully employed, are given by Dr. La Roche in the 27th Number of the *American Journal.*

Case I. A French gentleman, aged sixty years, who, after two attacks of acute inflammation of the bladder, was suffering from a muco-purulent discharge, was cured in a few months by the capivi, during which period it was several times necessary to discontinue the medicine.

Case II. A gentleman, aged about sixty-five, whom Dr. La Roche saw only once, was then labouring under chronic inflammation of the bladder, and the author therefore prescribed leeches, tepid baths, &c., recommending the capivi to be taken when the inflammation was subdued. This was accordingly done, and the patient was very much relieved, indeed, almost cured. The ultimate termination of the case was not so fortunate.

"This gentleman suffered some time after a severe relapse, and had recourse to the same means, and with an equally happy result. After enjoying a tolerable share of health during two or three years, he again became a sufferer from disease of the bladder; the obstruction in the urethra increased gradually, and at length became almost unconquerable, except by mechanical means; the pain became more and more severe; the discharge of mucus from the bladder increased, was attended with pain, and effected with considerable difficulty. In this condition he removed to Philadelphia, and in the spring of 1829 once more placed himself under my care.

The usual remedies for complaints of that kind were resorted to. under the direction of two of the ablest surgeons of the city and myself, but were not productive of the least amelioration. The patient wasted away; and, after suffering unexampled agony during several months, sank into the grave. On examination after death, an ill-conditioned ulcer of the bladder, (in the centre of which was found a small calculus,) was discovered. The prostate gland was slightly enlarged."

Case III. Mr. R., about fifty years of age, was seized with inflammation of the bladder, after an attack of gonorrhœa. When the acute symptoms had subsided, tonics, chalybeates, and terebinthinous remedies, were tried without advantage. The balsam of capivi was then prescribed, but at first disagreed with the stomach; laudanum was added to it, and various vehicles tried, among which weak claret and water was found the best. When this difficulty was got over, the capivi was of admirable efficacy, and cured the patient in a fortnight.

Case IV. *Irritability of the Bladder.* Mr. G., æt. forty-five, of an amorous temperament, was labouring under incontinence of urine. He went through a variety of treatment without benefit, but was cured in a few weeks by the balsam. Dr. La Roche has since cured a similar case with greater rapidity; and Dr. Hays has had the like success.

Case V. A coloured woman, æt. thirty, was suffering from inflammatory leucorrhœa, which was treated with antiphlogistic remedies. Her general health improved, and the fluid discharged, though still abundant, was no longer so dark, or so viscid. Twenty-five drops of the capivi were now exhibited three times a day in a wineglassful of milk: the patient was much better in a fortnight, and cured soon after.

Case VI. Madame B., æt. forty, complained of dyspepsia, inflammation of the bladder, and leucorrhœa. The inflammation was cured by antiphlogistic treatment, and the dyspepsia by prussic acid; nothing remained to combat but the leucorrhœa. This was accomplished by the balsam, but with some difficulty, for the remedy at first caused pain, nausea, and occasional vomiting. The capivi was taken for a month with great advantage, and the cure was completed by astringent lotions.

Case VII. Mrs. B., a native of New Orleans, æt. twenty. In this instance the leucorrhœa had been aggravated by astringents. The patient refused to lose blood, and therefore the treatment for the first ten days consisted only of a more slow and less efficient means, such as a low vegetable diet, acidulated and emollient drinks, saline purgatives, rest in a horizontal position, emollient vaginal injections, and tepid baths. The capivi was then administered with great relief, though the patient was several times obliged to discontinue its use, from the gastric irritation which it occasioned.

[We agree with Dr. La Roche that the capivi is an admirable

remedy in several diseases; and the chief reason that it is not more frequently administered, is the difficulty of accommodating it to sensitive palates and irritable stomachs.]

ON THE DIAGNOSIS OF FRACTURES OF THE NECK OF THE FEMUR.

There is a well-written paper on this subject, by Mr. Robert William Smith, in the last Number of the *Dublin Journal.* When speaking of shortening, the author says,

"In the museum of the Richmond Hospital there are fifteen examples of fracture of the cervix femoris; thirteen of these are taken from patients who died in the hospital; the degree of shortening in each case was carefully noted, and every precaution taken to insure accuracy of measurement. The following table shews the age and sex of the patients, the situation of the fracture, and degree of shortening.

No	*Age.*	*Sex.*	*Situation.*	*Shortening.*
1	36	Male	Internal.	¾ Inch.
2	48	Do.	Do.	½
3	74	Do.	External.	1½
4	80	Female.	Internal.	½
5	80	Male.	External.	2
6	70	Female.	Do.	1½
7	75	Do.	Internal.	1
8	80	Do.	Do.	½
9	60	Do.	Do.	1½
10	82	Do.	External.	¾
11	78	Do.	Internal.	¼
12	80	Do.	Do.	¾
13	90	Do.	Do.	½

"From this table it appears that, with the exception of No. 9, the shortening did not exceed one inch in any case of intracapsular fracture, and reached that extent in only one instance; nor, with the exception of No. 10, was it ever less than one inch and a half in the extra-capsular fracture. With respect to No. 9, the fracture, at the time the measurement was made, had existed for years, and the neck of the bone was absorbed, so that the degree of shortening was of course considerable. With respect to No. 10, I shall relate the particulars of the dissection.

"The neck of the bone was broken at its base, external to the capsule, and was forced a short distance, about three quarters of an inch, into the cancelli of the shaft, between the two trochanters; it was firmly impacted, and the line of fracture remarkably obscure; the trochanter minor was broken transversely, the line of fracture passing at right angles with the shaft of the bone, but without detaching any part of the process; the descending ramus of the pubis was broken obliquely, the fracture passing downwards

and inwards from the thyroid foramen. The patient, a female, ætat. eighty-two, was thrown down by a cart loaded with hay; the horse and cart were stated to have both passed over her. She died upon the fourth day after the injury.

"In this case the slight degree of shortening may, I think, be fairly referred to the manner in which the fragments were disposed of with regard to each other, and the firmness with which the upper was impacted into the lower, by which muscular force was completely counteracted. It seems probable that the difference of opinion which exists upon this point, is in some measure owing to a proper distinction not having been made between the shortening which comes on during the first two or three days after the accident, the result of muscular action, and removable by extension, and that which we notice at a later period, the consequence of absorption, and permanent. Indeed, the period at which shortening occurs is subject to great variety: it may manifest itself instantaneously, immediately after the receipt of the injury, and that to a considerable degree; in such cases I have generally found a comminuted fracture external to the capsule. Sometimes the shortening does not become evident, until perhaps five or six days after the accident: in such cases the muscles have been paralysed by severe contusion; according, however, as they recover their tone, the limb is slowly shortened, and this independent of any process of absorption. Again, there are cases in which the retraction, slight at first, becomes, at the end of a month or six weeks, considerable. No. 11 in the table was an instance of it; the shortening, which at first was only a quarter of an inch, at the expiration of six weeks amounted to one inch and a half. It was found after death (which took place about two months after the accident,) that the neck of the bone was absorbed. Lastly, there are instances in which the limb retains its natural length for many weeks, and then becomes shortened, not gradually, but suddenly: these are the cases in which diagnosis has been found so very difficult. The cause which has produced the fracture is, in general, comparatively slight, and the patient has made no attempt to walk after the receipt of the injury. The eversion of the foot is by no means so well marked as when the shortening occurs early; nor is there much, if any, change in the position of the trochanter. The patient, no doubt, is unable to raise the limb *en masse;* but from this we can draw no certain conclusion, as it may be owing to a paralysed state of the muscles. If we can ascertain crepitus, the diagnosis is no longer difficult; if we cannot, we must only watch the progress of the case attentively, and if, after a period of two, three, or four weeks, the powerless state of the limb continues, we have reason to suspect some more serious injury than contusion. The eversion of the foot is now more clearly marked, and now also it frequently happens that the limb becomes shortened suddenly. The knowledge of this fact is not unimportant, as it usually indicates a fracture within the capsule. In the first case in which I

observed it, it took place at the end of three weeks: in the second, after the lapse of six, when the patient, having left his bed, and attempted to walk, the limb (which up to this period retained its natural length,) became suddenly shortened. The circumstance has been observed by Sabatier, occurring twenty-four hours after the accident. In these instances we must suppose that, at the time of the accident, the close coverings of the neck of the bone having escaped without injury, prevented the retraction of the limb, but that subsequently they were torn, either in consequence of some imprudent exertion on the part of the patient, or too eager a desire on that of the surgeon to ascertain crepitus by powerful extension and rotation of the limb: the retraction then takes place as the immediate consequence of their laceration."

He terminates by the following deductions:

"1. The less the degree of shortening, the greater is the probability that the fracture is within the capsular ligament.

"2. The degree of shortening, when the fracture is within the capsular ligament, varies from a quarter of an inch to one inch; when external to the capsule, from one inch and a half to two inches and a half.

"3. The limb may remain without any change in length for many weeks after the receipt of the injury; then retraction may suddenly occur.

"4. This sudden retraction, at a period more or less remote from the receipt of the injury, indicates a fracture within the capsule.

"5. The presence of morbus coxæ senilis may not only lead us to suppose that a fracture exists, when the bone is entire, but also when there is no doubt as to the existence of fracture, may render diagnosis difficult as to the seat of the injury with respect to the capsule.

"6. Inversion of the foot may accompany fracture within the capsular ligament.

"7. The accident most liable to be confounded with dislocation upon the dorsum ilii, is fracture through the trochanters, together with inversion of the foot.

"8. The degree of shortening, when the fracture is within the capsule, chiefly depends upon the extent to which the fibrous reduplications have been torn.

"9. When the hip-joint, long affected by that disease peculiar to old people, receives a severe contusion, we distinguish the accident from fracture of the neck of the bone, by the impossibility of restoring the limb to its natural length by extension, and also by an inquiry into previous history."

We cut down to the trunk of the left saphena, where it was about to enter the femoral vein, and introduced the pipe of a syphon and threw water into the vessel, which immediately distended the trunk and all the varicose branches along the tibia. On removing the vein, its coats were found to be hypertrophied and thickened like those of an artery, and the inner surface of the vessel was rugous in the longitudinal direction. The valves were thin, pellucid, and perfectly healthy in appearance, though insufficient to close the vessel. Two enlarged and indurated glands pressed on the trunk of the saphena where entering the femoral vein. Around the cicatrix there was a large cluster of enlarged veins, and passing from these, through the fascia, was a large branch, which formed a communication with the deep-seated veins of the leg.—*Dr. Lee; in Cyclop. Pract. Med.*, Part xxiii.

DIFFICULTY OF DIAGNOSIS.

I shall now point out to you several cases in which we may be led, by the very instruments we use for the detection of diseases, into an error in the diagnosis. I was consulted last winter by a very interesting patient, the brother of a medical friend at Fowey, in Cornwall: he had been taken with difficulty in swallowing; this difficulty gradually became greater, until the dysphagia passed into absolute inability to perform, or at least to complete, the act of deglutition; yet a certain portion of fluid could be apparently swallowed, as a small cupful; but, on adding to its quantity, it regurgitated through the throat and nostrils, and by an act precisely similar to that of vomiting. I took my patient to one of our first surgeons: he passed an œsophagus-tube, and the fluid recently swallowed flowed through it freely. It was concluded that the tube had entered the stomach, and, of course, that there was no obstruction to its course along the œsophagus. Nevertheless, the symptoms remained, and I was persuaded that, in fact, the act of deglutition, and the tube, had never passed beyond the œsophagus. The event confirmed my opinion. The patient emaciated, and died in eight weeks: on examination, the cardia was found completely obstructed by a morbid growth. If you will look at the drawing, you will understand what occurred in this case; the first acts of deglutition distended the lower part of the œsophagus; the subsequent ones filled this tube, until at length the fluid remaining in contact with the fauces irritated and excited the muscles which close the larynx and accomplish expiration, and produced the act of vomiting; the œsophagus-tube, and this œsophageal vomiting, merely emptied the lower and distended portion of this canal, without extending into the stomach.

A mistake is still more liable to occur in the use of the rectum-bougie. This instrument is apt to rest upon the promontory of the sacrum, in the manner represented in the drawing, giving great pain to the patient, and exciting in the mind of the surgeon the idea of stricture, or other obstruction. In other cases, the bougie

catches a fold of the mucous lining of the intestine. A medical friend of mine, residing at Ollerton, in Nottinghamshire, fell into a state of indisposition, and remained nine weeks under my roof. I never suspected any disease of the intestine. He then went to Bath. In that city he consulted a young surgeon, who passed a rectum-bougie, and fancied he discovered stricture. The use of the bougie was continued daily for several weeks, giving great pain, and causing much irritation. I then met the patient in London; I saw no sufficient evidence of stricture, and I stated my opinion upon the case. I took the patient to Sir Charles Clarke, who, after an examination, confirmed that opinion. The bougie was relinquished, and from that time the factitious disease of the rectum, for such it was, was forgotten.—*Dr. Marshall Hall's Introductory Lecture.*

CASE OF HEPATIC ABSCESS.

A case of this disease, in which paracentesis was performed, is narrated by Dr. Horner, in the 27th Number of the *American Journal.*

The patient was a tax-collector, aged fifty-five, suffering from hepatitis. There was an indurated swelling in the right hypochondrium, with evident fluctuation, but, as it was not clear whether an adhesion had formed between the liver and the anterior wall of the abdomen, an operation would obviously run the risk of producing a fatal inflammation, by allowing the pus to fall into the cavity of the peritoneum. Still, as the patient was sinking under the malady, it was necessary to encounter the possibility of this calamity; with what success the following quotation will show.

"The case being in this unpromising condition in every view of it which could be taken, a choice of evils only was left, and with the consent of the family, and the advice and assistance of Dr. Harris, the operation was undertaken, October 1st. An incision was first of all made horizontally on a line with the anterior end of the eighth rib on the right side, a little in front of its cartilage, and through the side of the abdomen, which brought the liver into view; the latter was seen to rise and fall with the diaphragm in respiration; moreover, a knife-handle was introduced between the surface of the liver and of the contiguous part of the abdomen; these two facts made clear the thing apprehended, to wit, want of adhesion. In this dilemma I determined to stitch the liver to the side, which was accomplished with a large crooked needle, armed with a ligature of kid-skin, and of bulk sufficient to fill up the hole made by the needle. One stitch was made in this way parallel with the upper margin of the incision, at the distance of four lines from it, and another in the same manner, below. The liver being thus fixed closely to the side, a trochar and canula were plunged into the abscess, and five gills of purulent matter were immediately discharged, to the great relief of the patient; the matter continued to flow during the night, so that three or four more gills were dis-

charged. The operation being ended, a bandage was put around the abdomen, so as to keep its viscera as still as possible. The canula was left in for fifty-four hours, and then a piece of a flexible catheter was substituted; the abscess discharging all this time small quantities of pus and serum mixed.

"On the second day the bowels became tympanitic, and there was hiccup, with colicky pains. On the third day there was a manifest declension of strength, and it became evident that the previous exhaustion of the patient must render the operation nugatory. The symptoms of debility increased, and the patient died on the 5th inst. No sign of peritonitis followed this operation.

"In twenty-two hours after death an examination was made. A recent adhesion between the liver and side had occurred immediately around the puncture of the trochar, and which, along with the stitches, had prevented any pus from getting into the cavity of the peritoneum. The latter membrane was entirely sound, and had no appearance of being irritated by the operation. The cavity of the abscess was collapsed very much, and contained shreds of coagulating lymph mixed with pus, amounting in all to about one gill; its parietes were lined by a membrane. The right lobe of the liver being the seat of it, the anterior half was gone, but it appeared to be rather by pressure and absorption than by dissolution, as no remains of the liver were seen in the discharges. There was no preternatural adhesion of the liver to the parietes of the abdomen, excepting what was made by the operation. The left half of the stomach was destitute of mucous coat, it having been dissolved completely, so as to exhibit the cellular coat naked. Six inches of the beginning of the colon were studded with ulcers, having red, injected, and elevated edges. The small intestines were sound.

"Though life was not saved by this operation, evidently owing to the exhaustion of the patient at the time of its performance, I yet consider it as illustrating the fact, that hepatic abscess may be managed by opening it, even when adhesion to the side has not occurred; provided the liver be secured in the way described, or by an equivalent process; and, after a deliberate review of the case, I only regret that I did not resort to this treatment when the abscess first fluctuated."

NOTES OF A CASE OF FISTULOUS OPENING OF THE STOMACH, SUCCESSFULLY TREATED BY DR. J. H. COOK.

Some time in the month of February, 1832, Dr. Bardwell and myself were called to visit the widow D., aged thirty-nine years. We found her, as near as may be, in the following condition: A fistulous opening, immediately by the side of the umbilicus, into which a buck-shot might have been readily passed; on removing the bandage, a gill of bile was suddenly discharged; after which, a small quantity of a different (the gastric?) fluid, came slowly away. These discharges were attended with great pain, on account of their acrid quality. The whole surface of the abdomen

was excoriated, inflamed and intolerably painful. We introduced a flexible catheter its whole length, thirteen inches, before meeting with any resistance, when the extremity suddenly met with an obstacle. By pushing it against the resisting body, or even by slightly agitating the instrument, strong efforts to vomit were produced.

Withdrawing the catheter, we desired her to drink a glass of water; she did so, and in twenty seconds, the whole was discharged through the fistula, as we ascertained, by measuring it. The direction of the fistula was upward, and slightly inclining backwards, with about the same inclination to the right side. We came to the conclusion, that the opening within, was at, or about, the pyloric orifice of the stomach; and that the catheter entered the stomach, and pressed against its cardial portion. The patient even felt it there, and applied her hand externally over that part.

Treatment. Taking a large beef's bladder, we cut it open longitudinally, spread it well with adhesive plaster, and after washing the inflamed surface, and dressing it with basilicon spread on fine linen, we applied the bladder over the abdomen, and made an opening over the fistula, through which the matter might escape. We then applied a bandage and compress, and directed that it should be reapplied immediately after each discharge. We advised mucilaginous drinks, and a diet of rye-mush and molasses, and nourishing enemata. The patient was much emaciated for want of proper nourishment, as every thing passed off undigested through the fistula. No evacuation had taken place in the natural way for ten days previous to our visit. The external irritation of the abdomen soon healed, and the bladder was then applied to the skin as a protection, and continued there with the happiest effect. The bandage was gradually tightened, and a compress of a cylindrical form was laid over the course of the fistulous canal. By these means our patient regularly, but slowly, recovered. In a few days the alvine evacuations were restored to their natural outlet, and the discharges from the fistula began to decrease. In thirty days the opening was closed, and the fistula apparently obliterated. Several months have elapsed since that event, and she continues in excellent health.

All we could collect from her, as to the history of her case, was this: Six months before, in one of the south-east counties of this state, she was attacked with constipation and violent pain at the pit of the stomach, which resisted every remedy, till the 19th day, when the fistula showed itself.—*Western Journal of Med. and Phys. Sciences, January*, 1834; *in American Journal.*

USE OF OPIUM IN MANIA.

When opium was prescribed by our judicious friend, Dr. Adair Crawford, while he was in charge of the Richmond Lunatic Asylum, Dublin, during the febrile stage of mania, either in small or large doses, with a view of quieting the excessive cerebral excitement and

procuring rest, it always failed, and sometimes aggravated the delirium. It became evident, therefore, if benefit was to be derived from opium, that this could be expected only in the second stage, when there is no increased vascular action, and the maniacal delirium depends chiefly on cerebral irritation of a nervous character. No decided advantage even in this stage was obtained from opium, when given at night only, how large soever the dose. Then the plan of repeated doses throughout the day was tried, commencing with a grain every four hours, and gradually increasing or lessening the dose, according to the effect produced. Dr. Crawford soon observed that very large doses of opium could be taken without making the slightest impression on the delirium, and without any apparent effect on the system. Eight, ten, or twelve grains, were taken in the twenty-four hours, without affecting the state of the appetite, condition of the tongue, regularity of the bowels, or disturbing the circulation. It seemed as if the cerebral excitement protected the constitution from the ordinary influences of the remedy. By persevering in the use of cautiously graduated doses of opium in every case, the delirium was sooner or later overcome. The patient first appeared drowsy, and then became calm and rational. In some cases he suffered for a day or two from nausea, thirst, constipation, and vertigo, and the other usual effects of opium, which however soon disappeared. It is remarkable that the remission of delirium thus obtained was not merely temporary; in several cases the relief was permanent, and the patient left the hospital cured. In some the delirium returned after a remission of several days, but was again subdued by opium, and the paroxysm of mania was ultimately cut short. The quantity of opium borne was proportionate to the violence of the delirium; the largest dose to which the remedy was carried, was sixteen grains in twenty-four hours. It is remarkable, that while there was a great tolerancy of opium in the second stage of mania, there was an equally great tolerancy of tartar emetic in the first or febrile stage; and there is no more simple and effectual means of subduing the febrile action than by full doses of the latter remedy.—*Dr. Cheyne, in Cyclopædia of Practical Medicine,* Part xxiv.

MISCELLANEOUS.

CHARITABLE ESTABLISHMENTS AT FLORENCE.

There are in Florence two large hospitals, and a Foundling hospital, where between two and three thousand infants are received annually. Scarcely any, however, are kept in the hospital; they are mostly put out to nurse in the country, and are supported by the establishment for the first ten years, and after that period otherwise provided for. The manner in which infants are swaddled up in cloths, something like an Egyptian mummy, the head only being left to move freely, is productive of frequent distortions of the limbs, and other bad effects.

The hospitals here, as elsewhere upon the continent, are superintended by the government, and patients are admitted on application, without any other recommendation than that of their requiring professional assistance. The Spedale Santa Maria Nuova is a handsome building, containing eight hundred beds. The wards are clean, spacious, and well ventilated. The professional treatment of the sick is in general judicious, and somewhat similar to the practice followed in France.

The Spedale di Bonifazio contains about the same number of beds as the other hospital, and is divided into two parts; one being for the insane, the other for persons afflicted with incurable diseases, and military men.

The average number of insane in the hospital is about three hundred. Small cells, having each a window with iron bars, and containing a bed, are placed upon either side of passages about fifty feet long. Each patient has a cell; but, in the day time, they are allowed to walk about the passages, and in open court-yards, and are all clothed alike, in a white woollen dress. The greatest attention is paid to cleanliness throughout the establishment; and patients, on their first arrival, are placed in separate rooms, in order that the peculiarities of their insanity may be observed by the physician. When confinement of the hands is necessary, a wooden case (manchôt) is used, into which both hands are placed, and confined, by means of a strap passing round the waist. Furious patients are confined singly in a small darkened room, well padded round the walls. The darkness and solitude are generally found to render them tractable. Moral means are adopted in the treatment; many of the patients being employed in mechanical occupations, or gardening; the women in knitting, spinning, &c. The system formerly in use of indiscriminately employing depletory measures every summer is now discontinued.

In the Casa dei Poveri, the poor are taught to work at various occupations. Those who, from age or other causes, are unable to work, are maintained by the establishment. Manufactures of cloth, carpeting, articles of clothing, &c. are carried on within the building.

The Societâ della Misericordia is another charitable establishment, instituted in the beginning of the fifteenth century, at the time of the great plague, and counts several of the nobility among its members. Its object is to render assistance to the sick poor, for whom the members perform many kind offices, and supply them with the necessaries of which they may stand in need. The society also undertakes the burial of the bodies of poor persons; and, in cases of accident, send to the spot where assistance is required, to convey the person to the hospital, or to his own residence. The brethren meet in a building in the Piazzo del Duomo, where their affairs are conducted by a committee. One or more members of the committee are always in attendance at the central institution, to indicate to the brethren on duty the place where their services

are required. The sick are carried, in covered litters, on the shoulders of the brethren, who maintain a profound silence, and are clothed from head to foot in a black domino, in order to conceal the persons of those thus engaged, who are sometimes members of some of the first families in Florence. Ten, twelve, and often more brethren accompany each litter, and relieve each other in supporting the burden. There is a branch of this establishment at Pisa.—*Notes on Italy and Rhenish Germany, by Edwin Lee, Esq. M.R.C.S.*

CAUSE OF THE COLOURS OF PLANTS.

Nothing can be named in the whole range of botany upon which information is so much wanted as the cause of the various colours of plants. It was indeed long since suspected by Lamarck that the autumnal colouring of leaves and fruits was a morbid condition of those parts, and it has subsequently been ascertained that all colours are owing to the presence of a substance, called chromule by De Candolle, which fills the parenchyma, assuming different tints. Green has also been clearly made out to be connected with exposure to light, and has been considered to be in all probability owing to the deposition of the carbon left upon the decomposition of carbonic acid. Some botanists have also observed the connexion of red colour with acidity; but still we had scarcely any positive knowledge of the cause of the production of any colour except green, till M. Macaire of Geneva remarked, that, just before leaves begin to change colour in the autumn, they cease parting with oxygen in the day, although they go on absorbing it at night; whence he concluded that their chromule is oxygenated, by which a yellow colour is first caused, and then a red, for he found that in all cases a change to red is preceded by a change to yellow. He also ascertained that the chromule of the red bractæ and calyx of *Salvia splendens* is chemically the same as that of autumnal leaves. Coupling this with the fact that petals do not part with oxygen, it would seem as if their colour, if yellow or red, may also be owing to a kind of oxygenation. But, according to M. Theodore de Saussure, coloured fruits part with their oxygen; so that, if this be true, red and yellow cannot always be ascribed to such a cause. M. De Candolle has some excellent observations upon this subject, in his recent admirable digest of the laws of vegetable physiology, in which he concludes, from the inquiries hitherto instituted, that all colours depend upon the degree of oxygenation. When oxygen is in excess, the colour seems to tend to yellow or red; and when it is deficient, or when the chromule is more carbonized, which is the same thing, it has a tendency to blue. Local additions of alkaline matters are also called in aid of an explanation of the various shades of colour that flowers and fruits present.

Dr. Dutrochet is of opinion that the whitish spots we sometimes see in leaves, and the paler tint that generally characterizes the under side of the same organs, are owing to the presence of air be-

neath the cuticle. He finds that the arrow-head shaped blotch on the upper side of the leaf of *Trifolium pratense*, and the whitish spots on *Pulmonaria officinalis*, disappear when the leaves are plunged in water beneath the exhausted receiver of the air-pump, and that the lower surface of leaves acquires the same depth of colour as the upper, under similar circumstances. This he ascribes to the air naturally found in the leaves being abstracted, and its place supplied with water; a conclusion which agrees with what might be inferred from the anatomical structure of the parts in question.—*Professor Lindley, in the Third Report of the British Association for the Advancement of Science.*

EXPERIMENTS ON ATOMIC WEIGHTS. BY DR. TURNER.

Dr. Turner reported to the Meeting that he had continued his researches into atomic weights, and had to his own conviction determined the points which had induced him to undertake the inquiry. These were, first, to form an opinion of the relative accuracy of the tables of equivalents employed in this country and on the continent; and, secondly, to ascertain whether there existed any trustworthy evidence in proof of the hypothesis that the equivalents of bodies are multiples by whole numbers of the equivalent of hydrogen. To examine these questions he endeavoured to ascertain by careful and often-repeated experiments the equivalents of silver, chlorine, lead, barium, mercury, and nitrogen, in relation to oxygen. These were selected in consequence of their frequent use in analysis. An error in these could not exist without affecting the equivalents of nearly all the other elementary substances. The researches on this subject had been lately read before the Royal Society, and would probably ere long be published in some form or other. The general result is, that the atomic weights current in this country are much less exact than those given by Berzelius; that though they had been recommended to British chemists as rigidly correct, they were often very inexact, and had been determined by methods which in some important cases were defective. Further, he finds that, as far as experimental evidence at present goes, the hypothesis above alluded to is unsupported. In some instances the equivalents are so nearly simple multiples of that of hydrogen that they may be taken as such without appreciable error; but in many other cases the numbers given by experiment cannot be reconciled with the hypothesis. The following are the numbers which he is disposed to believe very nearly correct: lead 103.6; silver 108; chlorine, 35.42; barium, 68.7; mercury, 202, perhaps slightly higher, but not higher than 202.3: nitrogen, 14.2. Dr. Turner states that his methods for ascertaining nitrogen were not so advisable as that in which Dr. Prout is occupied by weighing the gases. This weight should be kept in abeyance for the present. He conceives that it does not fall below fourteen, nor exceed 14.2. During these researches he incidentally obtained some facts for inferring the equivalent of silver; and from these it appears that

the equivalent of sulphur is nearer 16.1 than 16. He would not venture, however, to make a positive statement without further inquiry.

He then mentioned that Dr. Prout had kindly informed him of a fact which he conceived analytical chemists in general to be ignorant of, and which he thought might have had an influence on these researches. The fact is, that chloride of silver, however white and well washed, gives out a little muriatic acid at the moment of fusing. This fact Dr. Turner has examined, and can confirm. It especially ensues when fusion takes place before the chloride has been well dried; but, in the event of the chloride of silver being first well dried at 300° (when no acid is given out,) and then, without exposure to the atmosphere while cold, fused, the loss of acid is not appreciable in weight, though it is still sufficient to redden delicate litmus paper. In two experiments about fifty grains of chloride of silver were fused, (previously dried at 300°, introduced while hot into a dry bottle furnished with a tight cork, and weighed in that state,) and the loss was inappreciable. From this circumstance, taken in conjunction with the mode in which he habitually weighs the chloride of silver, he is satisfied that the fact observed by Dr. Prout does not necessarily produce any error in the determination of chlorine by means of silver.—*Third Report of the British Association.*

VEGETATION NEAR QUITO.

It seems more easy to naturalize the vegetable productions of Europe in the regions of the Andes, than *vice versa*. European flowers adorn the gardens, and European vegetables supply the tables of Quito, as of every part of the table lands. The introduction of the *Cerealia* is one of the few benefits conferred by the Spaniards on the New World. The Indigenes appear to have used only *Maize*, the *Chenopodium Quinua*, the *Potato*, and the *Oxalis tuberosa*, the *Oka*. Barley meal constitutes at present the chief article of their diet; for bread, though cheap, scarcely falls within their scanty resources. Oats and rye are as yet unknown, though well adapted to many of the poorer soils, especially the sandy tracts round Ambato and Riobamba. The same cause which prevents the perfection of European fruit limits the number of those of native growth; about the elevation of Quito, we find none wild but the *Capuli*, a species of *Blackberry*, and, on sandy soils, the *Tuna;* currants, gooseberries, and raspberries, seem adapted to the climate, but have not yet been introduced. Strawberries are abundant, but they are probably natives of Chili. Pears and apples are plentiful, but small and ill-flavored. The celebrated peaches of Ambato remind the European traveller less of the likeness than of the difference. *Pine Apples, Cherimoyas, Oranges, Limes, Aguacatis* (*Laurus Persea*), *Granadilla* (*Passiflora*—?) and other tropical fruits, are brought from the adjacent valleys or *Calientes;* but, it may be supposed, little improved by the journey.

The idea of *perpetual spring* is pleasing to the imagination, but the reality is purchased in the Andes by the want of those glowing forms and colours which nature sheds over tropical climates, while the monotony of earth and sky scarcely observable by the traveller, would be gladly exchanged, by the less fortunate resident, for the varied interest of European seasons.—*Colonel Hall, in Hooker's Journal of Botany.*

THE PLATYSMA MYOIDES.

Resuming the subject, then, the first thing to which I beg your attention is a single muscle, the platysma myoides, and I venture to say, that so long as this muscle is viewed by the student only as Albinus or Cowper, or any other authority upon the anatomy of this part, represents it on paper, he remains ignorant of its functions, and scarcely understands that it is anything more than a cutaneous muscle, which in brutes, for example, is an aid for digging up insects and other food, whereas it is a powerful muscle both of respiration and circulation.

In a certain condition of the respiratory organs the blood experiences great difficulty in descending from the head, and nature, by the position and action of this very muscle, guards the head, and prevents the congestion which would otherwise take place. It arises broad on the side of the chest, passes over the veins, the great and external jugulars, and passes up to the face. In difficult respiration, you will observe the shoulder raised and brought back again; with the clavicle is raised the sterno-cleido-mastoideus muscle, and at the moment the clavicle is raised, and the sterno-cleido-mastoideus muscle is heaved up, as it were, this muscle is in a state of relaxation, at which period all the great veins, which might with much propriety be called sinuses, the large veins of the neck, fill easily with the blood which is returning from the head. And, again, when the action comes to be the very reverse, and more especially when this muscle is brought into action, then the blood does not return from the head; it is prevented from returning, but the muscle presses out the blood into the heart, even against the power of respiration.

Thus I conceive that nature is bountiful and careful to this end, that in all natural postures of the body, the brain shall not sustain that injury which it often would do, if there were no particular provision against congestion of the vessels which convey the blood away from the brain. Accordingly, in powerful exertion, during a fit of coughing, or at any other time when the respiration is powerfully occupied, you will see that this muscle acts most beneficially; and you will further observe, that in attacks of asthma, where a difficulty of respiration is frequent, where there are returns of pain and excitement greater each time, this muscle may, like all other muscles of the body, become proportionably strong and powerful as it is oftener employed. There is, in fact, a drawing down of the angle of the mouth, and a prominent character, ac-

quired in asthmatic persons by the action of this muscle.—*Sir C. Bell's Lectures.—Lancet.*

MORTALITY FROM PHTHISIS AT DIFFERENT AGES.

	Place of observation.	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	Above 60
1	Edinburgh	6	9	13	8	11	8	6	3	9	4
2	Berlin	18	28	27	27	39	29	20	32	39	53
3	Nottingham.....	42	73	76	46	51	28	20	11	5	6
4	Philadelphia	182	974		875		565		338		258
5	Chester	15	27		24		22		16		6
6	Carlisle	15	45		34		31		15		15
7	Paris (*Louis*).....	11	39		33		23		12		5
8	Ditto (*Bayle*).....	10	23		23		21		15		8
9	Charleston		26		24		13		21		4
10	Ditto, Whites		14		17		10		3		3
11	Ditto, Blacks		15		13		9		3		3

Dr. Clark, in Cyclop. of Pract. Med. Part xxii.

EXCRETIONS OF PLANTS.

It has long been known that some plants are incapable of growing, or at least of remaining in a healthy state, in soil in which the same species has previously been cultivated. For instance, a new apple orchard cannot be made to succeed on the site of an old apple orchard, unless some years intervene between the destruction of the one and the planting of the other: in gardens, no quantity of manure will enable one kind of fruit-tree to flourish on a spot from which another tree of the same species has been recently removed; and all farmers practically evince, by the rotation of their crops, their experience of the existence of this law.

Exhaustion of the soil is evidently not the cause of this, for abundant manuring will not supersede the necessity of the usual rotation. The celebrated Duhamel long ago remarked, that the elm parts by its roots with an unctuous dark-coloured substance; and, according to De Candolle, both Humboldt and Plenck suspected that some poisonous matter is secreted by roots; but it is to M. Macaire, who at the instance of the first of these three botanists undertook to inquire experimentally into the subject, that we owe the discovery of the suspicion above alluded to being well founded. He ascertained that all plants part with a kind of fæcal matter by their roots, that the nature of such excretions varies with species or large natural orders: in *Chicoraceæ* and *Papaveraceæ* he found that the matter was analogous to opium, and in *Leguminosæ* to gum; in *Gramineæ* it consists of alkaline and earthy alkalies and carbonates, and in *Euphorbiaceæ* of an acrid gum-resinous substance. These excretions are evidently thrown off by the roots on account of their presence in the system being deleterious; and it

was found by experiment that plants artificially poisoned parted with the poisonous matter by their roots. For instance, a plant of *Mercurialis* had its roots divided into two parcels, of which one was immersed in the neck of a bottle filled with a weak solution of acetate of lead, and the other parcel was plunged into the neck of a corresponding bottle filled with pure water. In a few days the pure water had become sensibly impregnated with acetate of lead. This, coupled with the well known fact that plants, although they generate poisonous secretions, yet cannot absorb them by their roots without death, as for instance is the case with *Atropa Belladonna*, seems to prove that the necessity of the rotation of crops is more dependent upon the soil being poisoned than upon its being exhausted.—*Third Report of the British Association.*

ENTRIES IN THE OLD BILLS OF MORTALITY.

One of the regular entries, two centuries ago, was " Chrisomes and infants;" thus substituting the age of the deceased for the disease. By *chrisome* was meant merely a child not yet a month old, the appellation being derived from the *chrisom*, or cloth anointed with holy unguent, which infants wore till they were christened. Graunt observes, that, as the number of deaths put down to this head decreased, the number set down to convulsions increased. The reason of this is quite obvious; the more diligent searchers, not satisfied with being told that an infant had died a chrisome, asked for the name of the disease, and convulsions are certainly the most fatal malady by which young infants are carried off. The following table will show the gradual decrease of deaths under this head:

	Years.	Deaths.
Chrisomes and infants . .	1657	1162
— . .	1678	301
— . .	1680	183
— . .	1688	209
— . .	1699	70

In the bill for 1701 the number is stated separately for the two subdivisions—

Chrisomes, 44; Infants, 29; making 73.

In 1702, we have, Chrisomes 49

— Infants 18

In 1726 there are but three chrisomes, being the last time this entry appears: " infants" occurred for the last time in 1722.

" Blasted and planet," is another very curious entry: we find five deaths under this head in 1657, five in 1658, three in 1659, and eight in 1660. " Planet" is then found no more, and " blasted" soon disappears. " Planet-struck," however, (of which " planet" seems to be an awkward abbreviation), occurs during the casualties for several years afterwards. These appellations were probably bestowed on persons who wasted away without any very obvious cause, and whose deaths would be attributed by physicians to

"marasmus or wide-wasting atrophy," but by the vulgar to the influence of some sinister planet. The Latin word *sideratus* implies a theory of the same kind.

Three deaths are set down to "Calenture" in 1657, three in 1673, one in 1681, and one in 1708. This is a disease, say the books, (for we have never seen a case ourselves,) in which sailors throw themselves into the sea, imagining it to be green fields. It would seem, therefore, to be a form of *nostalgia*, the *maladie du pays*, or longing for home, a malady capable of producing death among the enthusiastic inhabitants of mountainous countries. "Calenture" does not occur in the modern bills.—*The Companion to the Almanac; art. Bills of Mortality.*

FALSIFICATION OF WRITINGS.

A medical student was recently convicted and punished in France, for forging a will, by altering the handwriting; and it is said that frauds of this nature are becoming alarmingly frequent in that country of late. We should not be surprised if similar attempts were made here, ere long, by some of our *chevaliers d'industrie;* but fortunately the mode of detecting falsifications of the kind is not difficult, if suspicion be once awakened. Old writing is removed, and place made for new, either by erasure, by the application of muriatic acid, or by both. A supposed erasure should be examined by a magnifier; and, if it seem to have been touched with size or sandarac, as a ground for the new writing, these substances may be dissolved with water or alcohol respectively. If muriatic acid have been used, it is not unlikely that all the acid may not have been washed out, when the excess may be readily tested with litmus paper. But, whether chlorine or muriatic acid have been employed, it is probable that some trace of the oxide of iron of the old ink may still remain; and these may be rendered visible by washing the part with a camel- hair pencil dipped in diluted gallic acid. The latter process may have to be repeated several times, and on successive days, allowing the dilute acid to evaporate slowly each time. We are indebted to a paper by M. Chevallier, in the last Annales d'Hygiène, for these brief but valuable suggestions.—*Med. Gazette.*

ACCIDENTAL VACCINATION.

A practitioner in the neighbourhood of St. Mary Axe, who was a few days since called to vaccinate a child, met with the following accident. At the moment he was about to perform the operation, the little patient, by a sudden struggle, drove the hand of the surgeon towards his face, and made the lancet slightly penetrate his nose. The vaccine matter in a short time took effect on the practitioner's frontispiece, and so marked it with the eruption, that he has been compelled to leave his practice for a time, and seek a clean face in the country.—*Lancet.*

THE DEATH OF HANNIBAL.

But what was the poison contained in that "Cannarum Vindex, et tanti sanguinis ultor *Annulus*," by which Hannibal destroyed himself? When the tyrant of Bithynia had pointed out to his enemies, who were in pursuit of him, the house in which Hannibal lodged, the unfortunate general, finding his fate inevitable, said, according to Livy, "Now* will we liberate these Romans from their unceasing solicitude about us: they are tired, it seems, of waiting for the death of an old man;" and took the poison. What it was it is almost impossible that we should ever know. Modern chemistry, indeed, could furnish twenty poisons capable of being comprehended within the space of a ring. One drop of *Prussic acid*, contained in a small glass tube open at both ends, and held between the finger and thumb, so as to touch both when in motion, would paralyze the arm almost instantaneously, and, of course, if taken into the stomach, would forthwith arrest the current of life. But, although the Carthaginians were a much more civilized people than their enemies the Romans (who happen to be their historians,) are willing to allow, yet it is too much to suppose that they knew how to prepare the Prussic acid. No, *Lybia ferax venenorum*, Lybia abounding in the venom of serpents, and in the inspissated juices of deleterious vegetables, more probably furnished them with the poisons in question, and afforded to Hannibal a sure resource whenever his circumstances should become desperate.†

As to the report of his being poisoned by drinking *bullock's blood*, mentioned by Plutarch, it must be a fable; as was that also of the death of Themistocles, by drinking a similar draught, for the blood of that animal is not poisonous. An accomplished nobleman told me that he was present at one of the bull-fights at Madrid, when a person rushed from the crowd, and, having made his way to the bull, which the matador had just stricken, caught the blood as it flowed from the wound in a goblet, and drank it off before the assembly. On inquiring into the object which the poor Spaniard had in view, it appeared that the blood of a bull just slain was a popular remedy for consumptive symptoms.—*Sir H. Halford's Essays. Deaths of Illustrious Persons of Antiquity.*

* Solvamus diuturnâ curâ populum Romanum, quando mortem senis expectare longum censet.—Livy.

† My friend Mr. Hatchett conjectures that the poison which Hannibal took might have been the inspissated exudation of the Euphorbia officinalis. The Euphorbia is a native of Africa, abundant there, and was well known as one of the most powerful acrid vegetable poisons.

INTELLIGENCE.

THE following document, by which a charter is conferred on the greatest of our medical societies, seems worthy of being recorded in our pages.

CHARTER.

WILLIAM THE FOURTH, by the Grace of God of the United Kingdom of Great Britain and Ireland King, Defender of the Faith,—To all to whom these presents shall come greeting.

Whereas John Elliotson, doctor of physic, Sir Astley Paston Cooper, baronet, and John Yelloly, doctor of physic, have, by their petition, humbly represented unto us that a society was formed in the year 1805, by a considerable number of physicians and surgeons of eminence in London, for the cultivation and promotion of physic and surgery, and of the branches of science connected with them, of which the two last-named of the petitioners were original members; and that the said society has expended considerable sums of money in the purchase and collection of a large and valuable library, and has published eighteen volumes of Transactions, which have had a very extensive circulation. And whereas they, the said petitioners, have humbly besought us that we should give to them, and to the other persons who have already become members of the said society, or who may at any time hereafter become members of our Royal Charter of Incorporation, for imparting greater stability and effect to the designs of the said society. Now know ye that we, being desirous of encouraging a design so laudable, have, of our special grace, certain knowledge, and mere motion, willed, granted, and ordained, and do by these presents, for us, our heirs and successors, will, grant, and ordain that the said John Elliotson, Sir Astley Paston Cooper, and John Yelloly, and such others of our loving subjects as are now members of the said society, or who shall at any time hereafter become members thereof, according to such bye-laws as shall hereafter be framed or enacted, shall by virtue of these presents be called fellows of the said society, and shall be one body politic and corporate, by the name of "The Royal Medical and Chirurgical Society of London;" of which society we do hereby declare ourselves and successors, if they shall think fit, the patron, by which name they shall have perpetual succession, and a common seal, with full power to alter, vary, break, and renew the same at their discretion, and by the same name to sue and be sued, to implead and be impleaded, to answer and be answered unto, in every court of us, our heirs, and successors, and be for ever able and capable in the law to purchase, receive, hold, possess, and enjoy, to them and their successors, any goods and chattels whatsoever, and also be able and capable in the law (notwithstanding the statutes of mortmain,) to take, purchase, hold, and enjoy, to them and their successors, any lands, tenements, or hereditaments whatsoever, the yearly value of which shall not exceed in the whole the sum of two thousand pounds, computing the same respectively at the rackrent which might have been had or gotten for the same respectively at the time of the purchase or acquisition thereof; and shall have full power and authority to sell, alien, charge, or otherwise dispose of any real or personal property so to be by them acquired as aforesaid, and to act and do in all things relating to the said corporation in as ample manner and form as any other our liege subjects, being persons able and capable in the law, or any other body politic and corporate in our said United Kingdom of Great Britain may or can act or do.

And we do further declare and grant that, for the better government of the said society, and for the better management of the concerns thereof, there shall be, from the date of these presents thenceforth and for ever, a president of the said society, who with twenty fellows, to be elected in manner hereinafter mentioned, shall form the council. And we do hereby appoint the said John Elliotson the first president of the said society, and the said Sir Astley Paston Cooper and John Yelloly the first members of the council, to continue in office

till the 1st day of March next. And we further direct that, within four months from the date of these letters patent, a general meeting of the fellows of the said society shall be held, who shall be authorised by method of ballot to elect eighteen fit and proper persons as officers or other members of the council, to complete the number of twenty-one, of whom, including the president, we have willed that the council shall be composed, and that such additional persons shall likewise continue in office till the 1st day of March next, and till other fit and proper persons be chosen in their room.

And our further will and pleasure is, that the fellows of the said society shall and may on the 1st day of March, 1835, and also shall and may on the 1st day of March in every succeeding year, or as near the same as conveniently may be, assemble together at the then last or other usual place of meeting of the said society, and proceed by method of ballot to nominate and appoint a president of the said society, and such officers and other members of the council as may with the president form the number of twenty-one, of whom we have willed that the council shall consist; and also may, in case of the death, resignation, or removal of the president, or any officer or other member of the council, within the space of three months next after such death, resignation, or removal, elect some other person, being a fellow of the said society, to supply the place of such president, or officer or other member of the council. And our further will and pleasure is, that no fellow who has filled the office of president for two successive years shall be again eligible to the same situation until the expiration of one year from the termination of his office, and that not more than two thirds of the fellows who have formed the council of the preceding year shall be re-elected members of the council at such annual meeting. And we do further grant and declare that the fellows of the said society, or any ten or more of them, shall and may have power from time to time, at the meetings of the said society, to be held at the usual place of meeting of the said society, or at such place as shall have in that behalf been appointed, by and with the consent of not less than four fifths of the fellows present, to elect such persons to be fellows of the said society, and all fellows to remove from the said society as they shall think fit; and that the council hereby directed to be appointed, and the council of the said society for the time being, or any three or more of them, all the members thereof having been first duly summoned to attend the meetings thereof, shall and may have power, according to the best of their judgment and discretion, to make and establish such bye-laws as they shall deem proper and necessary for regulating the affairs of the said society, and also the number and description of its officers, and also the times, place, and manner of electing and removing the fellows of the said society, and all such subordinate servants, officers, and attendants as shall be deemed necessary or useful for the said society, and also for filling up from time to time any vacancies which may happen by death, resignation, removal, or otherwise, in any of the officers or appointments constituted or established for the execution of the business and concerns of the said society, and for regulating and ascertaining the qualifications of persons to become fellows of the said society respectively, and also the sum and sums of money to be paid by them respectively or any of them, whether upon admission or otherwise, towards carrying on the purposes of the said society, and also the number, qualifications, and privileges of such persons as they may from time to time deem it proper to admit as honorary fellows; and such bye-laws from time to time to vary, alter, or revoke, and make such new and other bye-laws as they shall think most useful and expedient, so that the same be not repugnant to these presents or to the laws of this our realm: Provided that no bye-law hereafter to be made, or alteration or repeal of any bye-law which shall hereafter have been established by the said council hereby directed to be appointed, shall be considered to have passed and be binding on the said society, until such bye-laws, or such alteration or repeal of any bye-laws, shall, after such notice to the fellows as from time to time may be deemed expedient by the said society, have been confirmed by ballot by the members at large of the said society, ten at least of the fellows of the said society being present; and provided that no such bye-law, or alteration or repeal of any bye-law, shall be deemed or taken to pass in the affirmative, unless it shall appear upon such

ballot that not less than two thirds of the fellows present at such meeting shall have voted for the same. And our further will and pleasure is, that it shall be lawful for any three fellows, by writing under their hands, transmitted to the president or such other officer or officers as may by the bye-laws hereafter to be designated for the purpose, to recommend to the council any new bye-laws, or alteration or repeal of any existing bye-laws; and in case the council shall not agree to such new bye-laws, or alteration or repeal of any existing bye-laws, then our will and pleasure is, that such propositions shall, if required by the said three fellows, be submitted to the consideration of the society at large, and determined on by them in the same way as has been directed with regard to new bye-laws, or alterations or repeals of existing bye-laws which have been approved by the council. In witness whereof we have caused these our letters to be made patent. Witness ourself, at our palace at Westminster, this 30th day of September, in the fifth year of our reign.

By writ of privy seal, EDMUNDS.

METEOROLOGICAL REGISTER,

FROM SEPTEMBER 1 TO NOVEMBER 30.

By Messrs. HARRIS and Co., Mathematical Instrument Makers, 50, High Holborn.

	Thermometer.		Barometer.		De Luc's Hygrometer		Winds.		Atmospheric Variations.		
1834.	*max.*	*min.*	9 *a.m.*	10 *p.m.*	9*a.m.*	10*p.m.*	9 a.m.	10 p.m.	9 *a. m.*	2 *p.m.*	10 *p.m.*
Sept. 1 to 7	71	53	29.84	29.56	75	67	SSW	SW	fine	cloudy	rain
7 to 14	65	50	30.18	.16	78	69	S	SW	rain	fine	cloudy
14 to 21	74	49	.07	.75	78	69	E	NE	fine	cloudy	fine
21 to 30	66	49	.07	.70	79	70	NE SE	WSW	rain	cloudy	fine
Oct. 1 to 7	69	46	.04	.88	76	70	SW	ESE	foggy	fine	foggy
7 to 14	66	45	29.90	.57	77	70	SSW	SE	cloudy	fine	cloudy
14 to 21	60	40	30.05	.11	78	68	WSW	SW	fine	fine	fine
21 to 31	57	37	.44	.40	78	68	NW	NE	rain	showery	fine
Nov. 1 to 7	65	46	29.92	.25	80	74	SSW	S	cloudy	fine	rain
7 to 14	54	36	30.20	.26	80	64	N	NE	rain	rain	fine
14 to 21	51	34	.20	.57	81	75	NNW	E	fine	fine	rain
21 to 30	52	35	29.90	.06	84	76	NNE	WSW	fine	fine	rain

The quantity of Rain fallen in September, 1 inch.
— — — October, 36-100ths.
— — — November, 1 inch and 16-100ths.

NOTICES.

MR. VALENTINE *will see that we have taken advantage of one of his suggestions; the other is still under consideration.*

We regret that we cannot comply with the requests of Dr. COWAN *and* Mr. SPENDER; *but literary intelligence appears only in our Advertising Sheet.*

We are much obliged to Dr. STANLEY *for his paper on Animal Magnetism: he will find a notice of it in our Collectanea.*

The Review of GRIFFIN *may be obtained by the author, from our publisher's.*

We have received the following Books:

FORBES's *Translation of* LAENNEC, *fourth Edition.*
DUFFIN *on Lateral Deformity of the Spine.*
CLOQUET *on Inguinal and Femoral Hernia, translated by* Mr. M'WHINNIE.
PETTIGREW's *Clinical Lecture on a Case of Hydrophobia.*
CURTIS's *Essay on the Deaf and Dumb. Second Edition.*
FORD *on Dropsy.*
MARSDEN *on Cholera.*
GEORGE *on Cholera.*
WAITE *on the Gums.*
MACILWAIN's *Introductory Lecture.*
LEESE *on Gout.*
GAITSKELL *on Mental Derangement.*

We shall review several of them in our next.

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PLATE.

Two English Mummies, found at Wymondham, near Norwich, *to face page* 169



