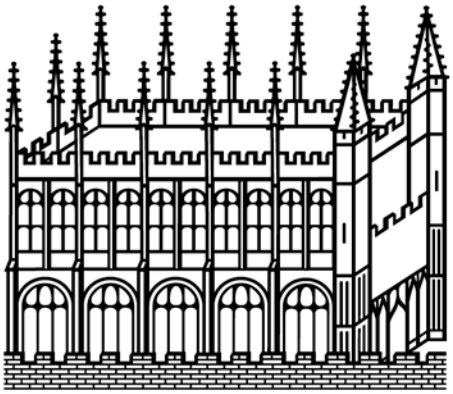


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MEDICAL COMMENTARIES

FOR THE YEAR M.DCC.XCV.

EXHIBITING A CONCISE VIEW
OF THE
LATEST AND MOST IMPORTANT DISCOVERIES
IN
MEDICINE AND MEDICAL PHILOSOPHY,

COLLECTED AND PUBLISHED BY
ANDREW DUNCAN, M.D.F.R & A.SS. ED.
PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES
FOR SCOTLAND,
FFLLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH,
MEMBER OF THE ROYAL SOCIETIES OF MEDICINE OF
PARIS, COPENHAGEN, EDINBURGH, ETC.
AND PROFESSOR OF THE INSTITUTIONS OF MEDICINE
IN THE UNIVERSITY OF EDINBURGH.

Neglecta reducit, sparsa colligit, utilia seligit, necessaria ostendit, sic utile.
BAGLIVIUS.

DECADE SECOND.

VOL. X.

EDINBURGH:
PRINTED FOR G. MUDIE & SON, SOUTH BRIDGE; AND FOR
G. G. & J. ROBINSON, LONDON.

1795.


BIBLIOTHECA · BODLEIANA

TO

DR. MAXWELL GARTHSHORE,

OF LONDON,

F.R.S. &c.

AS A TESTIMONY OF ESTEEM,

FOR INDEFATIGABLE ZEAL AND INDUSTRY,

BOTH IN THE PURSUITS OF SCIENCE,

AND IN THE

PRACTICE OF BENEVOLENCE,

THIS VOLUME OF

MEDICAL COMMENTARIES

IS INSCRIBED,

BY HIS SINCERE ADMIRER AND FRIEND,

ANDREW DUNCAN.

Vivet extento Proculeius ævo
Notus in fratres animi paterni.

HORATIUS.

PREFACE.

THE volume now preſented to the Public completes the Second Decade of Medical Commentaries. And I have no inconſiderable ſatisfaction in reflecting, that I have brought to a concluſion the twentieth volume of this periodical work with ſo few interruptions. I truſt, that although the preſent may not be juſtly entitled to all the approbation which partial friends have beſtowed on former volumes of theſe Commentaries, it will yet be conſidered as meriting a careful peruſal from thoſe candid practitioners, who wiſh to be acquainted with propoſed improvements for the alleviation of

diſeaſe, although their unavoidable engagements do not admit of extenſive reading. Both in the analyſis, which is here given, of books lately publiſhed, and in the original obſervations which this volume contains, many particulars will be found immediately connected with ſucceſsful practice, which, in my opinion, well deſerve a ſerious conſideration.

The general Alphabetical Table of Contents, with which the preſent volume is concluded, may be conſidered as the termination of this work. But, in putting a period to it, I may alſo take the opportunity of announcing my intention of commencing a ſimilar annual work, upon nearly the ſame plan, although under a title ſomewhat different. And I hope I ſhall be enabled to conduct it with ſome advantages which I have not hitherto enjoyed.

It is my intention to publiſh, at the commencement of every year, a volume under the title of Annals of Medicine, containing what to me appear to be the moſt important recent diſcoveries in the practice of the healing art. In the conduct of this work, I flatter myſelf with the hopes, that I ſhall receive no inconſiderable aid from my ſon, whom I ſoon expect to return from the continent of Europe, where he has been for ſome time engaged proſecuting the ſtudy of medicine.—From the acquaintance which he has formed with eminent phyſicians at different univerſities abroad, I truſt I ſhall be furniſhed with more early and more accurate accounts of foreign medical publications of merit, than I have hitherto been able to obtain.

With reſpect to original communications, I have no doubt, that the practitioners of the preſent period will be as

accurate in marking important facts, and as liberal in imparting them to the public, as any of their predeceſſors. I hope, therefore, that my future volumes ſhall not want that value which may be derived from important obſervations, which have not before been publiſhed. Thoſe who propoſe to favour me with their aſſiſtance in this way, and who have not a proper opportunity of tranſmitting their papers to Edinburgh, may addreſs them to the care of my friend Dr. George Pearſon, phyſician, Leiceſter Square, London. All obſervations tranſmitted to him for the Annals of Medicine, by thoſe who may incline to employ this channel for communicating to others facts which have been inſtructive to themſelves, will be carefully forwarded to their moſt obedient ſervant,

ANDREW DUNCAN

EDINBURGH,
Dec. 1. 1795.

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MEDI-

MEDICAL COMMENTARIES,

FOR THE YEAR 1795.

VOL. X. DECADE II.

SECT. I.

Account of New Books.

I.

An Inquiry into the Medical Efficacy of a New Species of Peruvian Bark, lately imported into this Country under the name of Yellow Bark, including Practical Obſervations reſpecting the choice of Bark in general By John Relph, M. D. Phyſician to Guy's Hoſpital. 8vo. London.

PERUVIAN BARK, as Dr. Relph remarks, has been long and deſervedly regarded as a medicine of the firſt eſtimation; and it is ſo extenſively employed, that the quantity

imported into Britain for ſeveral years prior to the preſent publication, exceeded one hundred thouſand pound weight annually.

The trees, from which the Peruvian, or as it is, by ſome, more properly named, the Cinchona Bark, is collected, are now known to be of various ſpecies; and Dr. Relph begins the preſent inquiry with ſome obſervations reſpecting theſe. He tells us that no botanical hiſtory of the Arbor Febrifuga Peruviana, or Cinchona Officinalis, as it is now called, is to be found worthy of attention before 1730, although the bark had been brought to Spain near a century before. He preſents us with the accounts given of it by Mr. Arnot, Monſ. de la Condamine, and Dr. Joſeph de Juſſieu.

After a ſhort view of theſe original authorities, to which the knowledge of the Cinchona was long confined, he next examines the further information which has been obtained by the rapid extenſion of ſcientific botany, and he here preſents us with the following deſcription and arrangement of the different ſpecies given by Profeſſor Vahl in the tranſactions of the Natural Hiſtory Society at Copenhagen.

1ſt. Cinchona

1*ſt.* Cinchona officinalis.
Cinchona foliis lanceolatis glabris, capſulis oblongis.

2*d.* Cinchona pubeſcens.
C. foliis ovatis baſi elongatis, ſubtus pubeſcentibus capſulis cylindricis.

3*d.* Cinchona macrocarpa.
C. foliis oblongis, ſubtus pubeſcentibus coſtatis.

4*th.* Cinchona caribæa.
C. pedunculis axillaribus unifloris.

5*th.* Cinchona corymbifera.
C. foliis oblongo-lanceolatis, corymbis axillaribus.

6*th.* Cinchona lineata.
C. panicula terminali, foliis ovatis, acuminatis glabris, capſulis pentagonis.

7*th.* Cinchona floribunda.
C. panicula terminali, capſulis turbinatis levibus, foliis elipticis acuminatis.

8*th.* Cinchona brachycarpa.
C. panicula terminali, capſulis obovatis coſtatis, foliis ellipticis obtuſis.

9*th.* Cinchona anguſtifolia.

C. panicula terminali, capſulis oblongis pentagonis, foliis lineari-lanceolatis pubeſcentibus.

After ſome remarks on each of theſe ſpecies, Dr Relph concludes that it muſt be a taſk of the utmoſt difficulty to refer the different Peruvian barks now employed, to one or other of the ſpecies above-mentioned; and he thinks there is room for well-founded hope, that ſome ſpecies of Cinchona may yet be diſcovered of more advantage to medicine than any that has hitherto been employed.

To this conſideration Dr. Relph has been led from having of late uſed a ſpecies of Peruvian bark; which, till very lately, has been unknown in this country, and which, from the trials made with it, promiſes to ſurpaſs in efficacy all the others at preſent uſed for the purpoſes of medicine.

This is now known in London by the name of the Yellow Bark. It is different from the yellow kind noticed by Arrot and Condamine, but is accurately deſcribed by Profeſſor Murray in his Apparatus Medicaminum, where he gives the following account of it: It conſiſts, according to him, of flattiſh

flattiſh pieces of about the length of a finger, the breadth of the thumb, and a line in thickneſs. Its colour is yellow, inclining to that of the ruſt of iron. It partakes more of the ferruginous colour on its external, than on its internal ſurface, owing to the cloſe adheſion of the epidermis to the bark. Both in its fracture, and on the ſurface, it appears fibrillous, breaking ſo eaſily between the fingers, that it may be rubbed into a yellow powder. Its taſte is intenſely bitter, with a ſlight degree of aſtringency.

This bark, Dr. Relph obſerves, though denominated yellow, is only to be underſtood as approaching nearer to that colour than any other ſpecies of Peruvian bark, imported into this country, eſpecially when reduced to powder. The yellow bark, ſold in London, correſponds, he tells us, ſo exactly with the deſcription given by Profeſſor Murray, that there can be no doubt of their being of the ſame ſpecies.

On the the authority of a letter from a drug-merchant in Cadiz, Dr. Relph concludes, that the yellow Peruvian bark-tree grows in the interior parts of Spaniſh Ame-

rica, in a mountainous country, and at ſuch a diſtance from Lima, that the expence of conveying it thither muſt be very conſiderable.

After finiſhing his obſervations on the external characters of this bark, Dr. Relph next proceeds on the experimental part of his inquiry. Theſe experiments, he tells us, were projected and entirely conducted by Mr. Babington, a gentleman of whoſe accuracy and fidelity no doubt can ariſe; and they are related by Dr. Relph in Mr. Babington's own words.

The decoction of yellow bark, according to Mr. Babington, if made in the ſame proportion with the Decoctum Cinchonæ of the London Pharmacopœia, ſo much reſembles it, that it is difficult by the eye to diſtinguiſh the one from the other. But in almoſt every particular, excepting with regard to flavour, the decoction of the yellow bark is ſuperior, not only to the common, but even to the ſoundeſt and moſt genuine red bark. The decoction of yellow bark, diluted with twice the quantity of water, was fully as bitter as the decoction of the beſt common bark. The difference

difference is alſo remarkable in the aſtringency of the decoctions, when the yellow, the common, and the red, are compared. If a ſolution of vitriolated iron be added to equal quantities of theſe, till no further decompoſition enſue, there will be produced in the firſt a darker and much more copious precipitation than in either of the other two; and when a pint of each was ſet by in common quart bottles, it was found that the mouldineſs and acidity obſervable in the common in three, and in the red at the end of ſix weeks, had not taken place in the yellow for nearly two months.

We are next preſented with an account of ſome trials made with the yellow bark in the way of infuſion, both in hot and in cold water. The powder of this bark, macerated in common water, communicates to it the properties of a weak decoction. If, inſtead of being macerated with hot water, the powder be either triturated with cold water, or infuſed in it for the ſpace of twenty-four hours, the liquor receives a very ſtrong impregnation, not ſo much from the aſtringency, as from the pure and intenſe bitter-

neſs of the ſubject. The circumſtances which here, in a particular manner, engaged Mr. Babington's attention, were the predominancy of its bitterneſs when compared with other barks, and the determined fixity with which it ſeems attached. Theſe are ſuch, that he is even doubtful whether it be poſſible, by an aqueous menſtruum, to extract all its bitterneſs, without the aſſiſtance of heat. He took five pounds of the fineſt powder of this bark, and at the end of eleven days, when he had uſed above one hundred gallons of water, he found the powder was ſo far from being inſipid, that it was ſtill as bitter as the common powdered bark of the ſhops. The water, in which the bark had been infuſed, on being filtered and evaporated by the heat of a water bath, yielded fifteen ounces of extract of a dark brown colour and pilular conſiſtence, extremely bitter, and poſſeſſing a certain degree of tranſparency.

From the ſame procedure as is directed by the College of Phyſicians of London, with reſpect to common bark, the powder of yellow bark produces a tincture differing very little

little from the common in colour and tranſparency, but far ſurpaſſing it in bitterneſs and aſtringency: and in both theſe properties it ſurpaſſes even the tincture of red bark. Mr. Babington found that the proportional weight of theſe tinctures were as follows:

Tincture of yellow bark	918
——— common bark	912
——— red bark	911¼

Upon evaporating a pint of each of theſe tinctures in a water bath, the firſt yielded 311, the ſecond 210, and the third only 201 grains of ſolid reſiduum.

Mr. Babington concludes his obſervations on the pharmaceutic treatment of yellow bark, with ſome remarks on the aqueous and ſpirituous extracts. The London College order two kinds of extract of common bark. The one is made by boiling in repeated portions of water, ſtraining the decoction whilſt hot, and evaporating them to a proper conſiſtence. The other by digeſting firſt in rectified ſpirit, and then making a decoction of the reſiduary matter in water, and uniting the products after each liquor has been ſeparately evaporated. According to the firſt proceſs Mr. Babington

Babington tells us, that ten pounds of the yellow bark, yielded four pounds and two ounces of extract of a pilular conſiſtence. Ten pounds of red bark, yielded four pounds one ounce of extract, and ten pounds of common bark yielded but two pounds nine ounces. The extract of common bark appeared to be the ſmootheſt and moſt plaſtic, the red the moſt brittle; and the yellow of a lighter colour than either of the others, and far more powerful in taſte.

Of the reſinous extracts the products are alſo different. By the uſe of both water and ſpirit, a pound of common bark yields only two ounces three-fifths, a pound of red bark two ounces ſix-eighths, and a pound of yellow bark no leſs than four ounces of this extract. The reſinous extract of the yellow bark is rather of a lighter colour than the aqueous. It has likewiſe a certain degree of tranſparency, but in its other properties there is no remarkable difference.

Mr. Babington thinks that the pureſt and moſt elegant extract is not to be obtained from this bark by either of the foregoing proceſſes. What appears to him preferable,

is

is to digeſt it firſt in rectified ſpirit, which he conſiders as the moſt perfect menſtruum; and after filtering the tincture, to diſtil off the ſpirit in a balneum. By this ſimple method, whatever be the virtues of the bark, the extract, he thinks, muſt of neceſſity contain them. For, on the one hand, the bark is rendered completely inert, and on the other, the ſpirit is brought over without the ſlighteſt trace of impregnation. Three ounces of this ſpirituous tincture are obtained from twelve of the bark; and although it be exceedingly powerful, both as to its bitterneſs and aſtringency, yet it poſſeſſes a peculiarity of flavour to many by no means unpleaſant.

From the account here given of the natural and chemical properties of the yellow Peruvian bark, Dr. Relph infers, that every impartial reader muſt be convinced that it promiſes to be of important uſe to the medical practitioner; as a chemical inveſtigation has proved it to contain a greater proportion of efficient and ſoluble matter, than the beſt pale or even red bark now in uſe. Without pretending to enter into any account of the the *modus operandi* of Peruvian bark, Dr. Relph

Relph contents himſelf with conſidering the yellow bark as only poſſeſſing the medical powers of common bark in a greater degree. He obſerves that the power of Peruvian bark, by which it ſtops the recurrence of febrile paroxyſms, firſt eſtabliſhed its importance. And he aſſures us, that from the general and ſucceſsful experience which he has had with the yellow bark, in many inveterate agues, it will ſeldom, if ever, be found neceſſary in ſuch caſes to employ any other febrifuge.

Although intermittents do not frequently originate in London, yet many patients, in every ſtate and type of intermittent fever, from the labourers employed at the harveſts in the fenny parts of Eſſex, and the hop-gatherers in Kent, annually come into Guy's Hoſpital. And it has been found, not only in Dr. Relph's own practice, but in that likewiſe of his colleagues, Dr. Saunders and Dr. Hervey, that the yellow bark has been invariably ſucceſsful in combating theſe fevers.

Dr. Relph has repeatedly preſcribed this bark in the various forms of powder, decoction and extract, on each of which he offers ſome obſervations.

Bark

Bark, in powder, is juſtly conſidered as the moſt efficacious form in which it can be adminiſtered. Half a dram of the yellow bark, given in this ſtate, every two hours, has manifeſted, in general, nearly a double proportion of febrifuge power, to that of the common bark, which required to be given in doſes of a dram every two hours, for ſubduing intermittents.

The bitterneſs of the yellow bark, though exceſſive, is not of the nauſeous kind, and has, in many inſtances, proved more acceptable to weak dyſpeptic ſtomachs, than an equal quantity of common bark.

In ſome conditions of the ſtomach, the powder of none of the ſpecies of bark can be taken in ſuch dozes as many intermittents require. The decoction of yellow bark, though ſtrongly impregnated with the ſapid principles of the drug, has not been found more diſagreeable to the organs of digeſtion, than that prepared from the common bark. Dr. Relph has never obſerved that the decoction of yellow bark was complained of as unpleaſant, by thoſe who took it, even when they employed a quart of it, between the hours

hours of breakfaſt and dinner; while his experience enables him to ſay, that moſt intermittents may be completely cured by this decoction, and that it will be found an effectual and pleaſant ſubſtitute for the powder. But where he was particularly ſolicitous to avert a ſubſequent paroxyſm, he has commonly directed ten grains of the powder to be added to an ounce and a half of the decoction, and by giving this every two hours, he has never been diſappointed in preventing the return of the diſorder.

In typhus, and other continued fevers, the decoction of the yellow bark has alſo been ſucceſsfully employed; and to theſe, Dr. Relph obſerves, he may alſo add acute rheumatiſm. For, though this laſt diſeaſe be manifeſtly of the inflammatory kind, yet he remarks, that a remiſſion of the ſymptoms gerally takes place to a degree more or leſs evident in the courſe of every diurnal revolution. In ſuch caſes he has no heſitation in ſaying, that, notwithſtanding the ſizineſs of the blood, and the continuance of the inflammatory ſymptoms, bark may be ſafely and efficaciouſly employed: And in ſuch circumſtances

cumſtances he has had recourſe to the frequent and free exhibition of the yellow bark. For the uſe of the bark, in rheumatiſm, Dr. Relph acknowledges himſelf to be indebted to Dr. Saunders, who has employed it with great ſucceſs for many years; and who frequently orders the bark to be accompanied with both general and topical blood-letting.

In Scarlatina, Eryſipelas, and all the common diſorders, either acute or chronic, requiring Peruvian bark, Dr. Relph has had much experience of this new ſpecies, eſpecially in the form of decoction; and he is fully convinced, that, on every conſideration, it ſhould ſuperſede all the other kinds of the Cinchona, now in uſe.

To Dr. Relph's obſervations are ſubjoined, letters from different medical practitioners, particularly from Doctors Woodville and Lind, Meſſrs. Jones, Gaitſkell, James, and others, confirming the ſuperior efficacy of this ſpecies of bark; and recommending its being adopted in practice, to the total excluſion of other barks.

II.

An Eſſay on the Rhus Toxicodendron, Pubeſcent Poiſon Oak or Sumach, with Caſes ſhewing its Efficacy in the Cure of Paralyſis, and other Diſeaſes of extreme Debility. By John Alderſon, M. D. 8vo. Hull.

IN the Eſſay before us the author tells us that his only wiſh is to announce a remedy which he conceives will prove a benefit to the public, by alleviating ſome of the moſt diſtreſſing diſorders that are incident to the human frame. Without attempting to account for the *modus operandi* of the plant, which is the ſubject of the preſent eſſay, he means ſimply to relate what has taken place under his own obſervation.

His firſt acquaintance with the article of which he here treats, began, he informs us, about four years ago, while he was examining the plants in the nurſery-grounds at Cottingham. The proprietor then mentioned to him many wonderful effects of the poiſon-

oak;

oak; that if touched, by the fingers, the acrimony which it imparts, if not immediately waſhed off, would be retained for a long time; that where the virulence of the deleterious particles continues unimpaired, a ſwelling and troubleſome itching would come on, and continue for ſome time; and that ſome of his men had even ſuffered ſo much, as to loſe, by ſphacelation, ſuch parts of the ſkin, as the acrid juice had touched.

From theſe circumſtances he was determined to make ſome further inquiry into its powers. And ſoon afterwards he became acquainted with ſome experiments made in France, by Monſ. Freſnoi, with the Rhus Radicans, to which this plant is nearly allied. From theſe it appeared that he had employed, with ſucceſs, the diſtilled water and extract of that plant, in caſes of paralyſis of the lower extremities. This information induced Dr. Alderſon to hope that the Sumach might be exhibited with equal advantage in ſimilar complaints. And the trials which he has made, in actual practice, tend to confirm this conjecture.

Dr. Alderſon firſt preſents the reader with an account of the different names affixed to this plant, and the deſcriptions given of it by the moſt eminent botanical writers. After an accurate deſcription of the plant, illuſtrated by an elegant engraving, he obſerves, that although the Rhus Toxicodendron be a native of America, it has been introduced into England ever ſince the year 1640. And what Dr. Alderſon has repreſented in the plate here given, and has employed in practice, were the luxuriant produce of young plants, growing in the ſtrong moiſt loam of a Yorkſhire nurſery.

To enable the reader to judge of its power, as a medicine, he next gives a ſhort account of the caſes in which it has been employed. The firſt caſe here related is that of Mrs. B. the wife of an eminent ſurgeon: After having been repeatedly ſubjected to diſtreſſing ſymptoms, from conſtipation, in the year 1789 ſhe had two fits, which Dr. Alderſon believed were epileptic. In the month of September ſhe was ſeized with pains in her hands and feet, which were ſuppoſed to be gouty; and when theſe went off, ſhe loſt entirely

tirely the uſe of the extenſor muſcles of the wriſts, and ſoon after thoſe of the feet, which was followed by the loſs of the extenſors of the fingers and toes. A tumour now roſe on the metacarpal bones of each hand, which ſeemed a ſwelling either of the perioſteum or bone itſelf, and had much the appearance of a ſcrophulous affection. The tumours, ſometimes, ſeemed likely to ſuppurate; but, about the end of the year 1790, they gradually diſappeared. The hands now looked livid, and the entenſor muſcles, upon the arms and hands, waſted and ſhrivelled. Her feet felt like logs of wood, and the fingers and toes were contracted, from the action of the flexor muſcles. She could not walk without help, and when ſhe attempted it, ſhe always complained of ſomething drawing her backwards.

After having taken a variety of cardiac, volatile, and tonic medicines, without any effect, Dr. Alderſon was conſulted, and adviſed her to take the toxicodendron. Six grains of the powder of the leaves of that plant were infuſed in eight ounces of boiling water, and a table ſpoonful of this infuſion

given three times a day. The whole of this was taken in the end of September 1791, without any ſenſible effect, except a ſlight pricking ſenſation in the feet and hands.

About the beginning of October ſhe begun this medicine in another form: She took, twice a day, one fourth of a grain of the powdered leaves, made into a bolus, with conſerv. Aurant. This was followed by a continuance of the pricking ſenſation; and the arms, to the ends of the fingers, felt as if ſomething warm were running down them. In a few days an irregular ſpaſmodic fluttering was felt in the toes, and ſhe was agreeably ſurpriſed to find that ſhe could extend her fingers and toes a little. She was ſoon able to walk up ſtairs, without help, and found her hands alſo ſtronger and better. The medicine was continued for ſome time longer, gradually increaſing the doſe to four grains thrice a day. It ſeemed to act as a gentle aperient; and frequently, when large doſes were taken, it occaſioned a ſlight vertigo, with a pain acroſs the forehead, and a nauſea for about half an hour after taking it.

In

In July 1793, by which time ſhe had left off the medicine for twelve months, ſhe had entirely recovered the uſe of her hands, and was able to walk a mile or two very well.

Beſides this, three other caſes are related by Dr. Alderſon, two of them obſtinate inſtances of paralyſis, in which various remedies had before been tried, without effect. In both, the uſe of the toxicodendron was attended with evident benefit. The laſt caſe was a recent inſtance of the diſeaſe: And as here its effects were more remarkable, and the ſucceſs more complete, than in any other, we ſhall preſent our readers with a ſhort account of it.

A ſhip-carpenter, in the twenty-fourth year of his age, of a ſtrong athletic make, and full habit of body, was admitted into the Hull Infirmary, on Wedneſday the 13th of November 1793, for a paralytic affection, which had deprived him of the uſe of his right ſide.

His recollection was ſo impaired, that he could not himſelf give any account of the attack. But his wife informed Dr. Alderſon, that, for a week before he loſt the uſe of his

limbs, he had, at times, complained of a dull pain in his head, and numbneſs in his right hand and foot; that, by the advice of ſome old women, he had been bled on the Monday, and that upon going out of doors, ſoon afterwards, he was ſuddenly ſeized with hemiplegia; in this ſtate he was admitted into the Infirmary on the ſecond day after.

A vomit was given him on his admiſſion, which was followed, the next day, by a warm purgative. Volatile ſtimulant medicines were next employed for the courſe of the firſt week. But, as Dr. Alderſon found he was not likely to gain any ground from the uſual plan; and as he was deſirous of trying the power of the toxicodendron in a recent caſe, he ordered for this patient, half a grain of the powdered leaves of the plant, in pills, three times a day. On the ſecond day after the exhibition of this medicine, he felt a ſudden convulſive twitching, or involuntary motion, in certain muſcles of the affected ſide. From that moment he found he had the ſame motion at will. Every ſucceeding day he felt ſome muſcle or other convulſively moved. And it was always remarked

by

by the other patients, in the ſame ward, that he afterwards poſſeſſed the power of voluntarily employing theſe muſcles, which had been once convulſively affected, in conſequence of the toxicodendron.

Thus encouraged in the uſe of the medicine, he regularly purſued it, and gradually increaſed the doſe to one grain every four hours, taking care always to add to the doſe, till he found ſome convulſive action was produced.

In the courſe of three weeks, during which time every injured muſcle had felt the influence of this powerful drug, he regained the free and perfect motion of his legs and arms; and he recovered the full enjoyment of his mental faculties.

In the caſe here related, there does not remain any room for doubt, that very remarkable benefit was derived from the toxicodendron. And, although we do not know that equal confirmation of its efficacy has been afforded, in the experience of other practitioners; yet, from the inſtances here related, we have reaſon to hope, that the toxicodendron may prove a remedy of very

great utility in the treatment of paralyſis. And, if this ſhall be found to be the caſe, there is good ground for believing, that it may, with advantage, be extended to ſome other affections.

III.

III.

An Hiſtorical Account of the Climates and Diſeaſes of the United States of America, and of the Remedies and Methods of Treatment, which have been found moſt uſeful and efficacious, particularly in thoſe Diſeaſes which depend upon Climate and Situation. Collected principally from perſonal obſervation, and the communications of Phyſicians of talents and experience, reſiding in the ſeveral States. By William Currie, *Fellow of the College of Phyſicians of Philadelphia.* 8vo, Philadelphia.

ALTHOUGH this work be principally intereſting to American practitioners, it contains a number of facts, from which practitioners of every country may derive much important information. Our limits do not permit us to follow Dr. Currie regularly through all his details; we ſhall, however, offer a few remarks, which may not only prove uſeful to our readers, but alſo excite

cite a deſire for the peruſal of the original work.

In his account of the diſeaſes which occur in the ſeveral States of New England, he mentions, that the Ricketts, which, about thirty-five or forty years ago, had been pretty common, has now become ſo rare, that he has not ſeen the diſeaſe more than three or four times theſe eight or ten years. The Colica Pictonum too, alſo formerly pretty frequent, occurs now only among thoſe who deal in lead, ſuch as painters, &c. Dr. Currie offers an opinion, that this proceeds from the ſubſtitution of ſtone ware, inſtead of pewter, as the materials of table furniture. Acute diſeaſes, he further remarks, are much leſs frequent, as well as much leſs fatal, than formerly: And chronic diſeaſes, particularly Phthiſis Pulmonalis, have taken their place. In ſpeaking of the ſmall-pox, he mentions the following facts: In the year 1752, there was an exact account taken, by order of the magiſtrates of the town of Boſton, rendered upon oath, in order to remove the prejudices and objections made againſt innoculation, of all who had the ſmall-pox, either in the natural

tural way, or by innoculation, and of the preciſe number of thoſe who died of it in either way. By this account, it appears, that the number of thoſe who had the diſeaſe in the natural way, including blacks, amounted to 5544; of which number there died, including blacks, 574. The whole number innoculated, including blacks, 2113; of which 30 died. At this time all preſent had the ſmall pox, except 174; the total reſidenters, at that time, including 1544 negroes, was 9710. The number of thoſe who fled, to eſcape the ſmall-pox, was eſtimated at 1800. In 1764, of 3000 innoculated patients, only 5 died, and theſe were children under five years of age. Three Hoſpitals were afterwards erected, in different parts of Maſſachuſets, for the purpoſe of receiving patients, deſirous of being innoculated, and regulated in ſuch a manner, as to prevent the infection from ſpreading, or being communicated to any of the reſt of the inhabitants, as was expected; but, through ſome treſpaſs of the rules, and the refractory diſpoſition of ſome of the patients, the whole utility of the inſtitution was fruſtrated; whereupon the law,

permitting

permitting innoculation, was repealed, and another paſſed, prohibiting it, under ſevere penalties. Since that time, any perſon who has the misfortune to enter that ſtate, with the diſeaſe, or with any of the infection adhering to his apparel or goods; and if any one be thereby infected with the diſeaſe, he is liable to pay to the party, ſo infected, treble damages, and coſts of ſuit. Thus, Dr. Currie adds, the practice of innoculation, for the ſmall-pox, ſtands wholly interdicted, within the New England States, and the inhabitants are deprived, through a miſtaken policy, of rendering one of the moſt formidable and loathſome diſeaſes mild and harmleſs.

Dr. P. Muſheau, in a letter to Dr. Currie, makes the following obſervations on the fox-glove. I have never ſeen any harm done by the Digitalis Purpurea in any ſpecies of dropſy: On the contrary, I have exhibited it lately, in form of extract, with very great ſucceſs. I tried its virtues on a patient, in a very debilitated condition, after the operation of the Paracenteſis. The Peruvian bark was given along with it, which, together with the exerciſe of riding on horſeback, prevented any further

further accumulation of water, and effected a cure. But, unleſs the digitalis be aſſiſted by exerciſe and tonics, it is ſeldom of much avail. Some further remarks, on the uſe of this medicine, are given, in a letter to Dr. Currie, by a phyſician at Dorcheſter, whoſe name he was not permitted to mention. That gentleman has reaped much ſucceſs from the employment of digitalis, in decoction, which he prefers to the powder. The following is his formula: Boil of the freſh green leaves of the fox-glove, four ounces, in common water, from two pints to one, and add to the ſtrained liquid, of vinous ſpirit, two ounces. Of this decoction, one large table ſpoonful is to be given early in the morning, in every variety of Idiopathic dropſy, whether in the form of Hydrocephalus, Hydrothorax, Aſcites, or Anaſarca, and ſhould be repeated every hour, till the patient has taken from three to eight or nine ſpoonful, or till ſickneſs, or ſome other diſagreeable ſenſation, be induced. The hydropic fluid generally diſappears on the next day, or on the third day, without any repetition of the medicine, and frequently without any apparently increaſed evacuation; at

at other times with vomiting, and a large flow of urine, and ſometimes with purging ſtools. To ſome, whoſe conſtitutions appeared more robuſt, the doſe was increaſed to a half or a whole ſpoonful more, if the firſt two or three ſpoonfuls occaſioned no naufea. But, as ſome of theſe patients complained of very great debility during its operation, it was judged more prudent to uſe rather an under, than an exceſſive doſe. In ſome, who had been two or three times relieved, by the ſame method, in the ſpace of eight or ten months, a leſs quantity was found to ſucceed; to theſe half an ounce of the decoction, mixed with an ounce of ſimple peppermint water, or with a decoction of bark or ſnake-root, was given twice or thrice a day, for two or three ſucceſſive days. On the day after the exhibition of the digitalis, or on the third day, or as ſoon as the ſickneſs, occaſioned by it, ceaſed, an infuſion of the ſtem leaves of artichoke, or a ſtrong decoction of the Peruvian bark, with a ſmall quantity of ſome chalybeate medicine, ſuch as the flores martiales, from two to ſix grains, or in lieu of this, the vitriolum martis, or common copperas, as it is improperly called,

called, from one quarter of a grain to two grains, diſſolved in ſome aromatic water, or mixed with ſyrup of ginger, was generally given twice a day, and one grain of opium, every night, with as much rhubarb or aloes as occaſioned a ſtool next day. This quantity of opium was perſiſted in for ſome weeks, without increaſe or diminution, as it ſeemed to be particularly ſerviceable.

In treating of the diſeaſes of Pennſylvania, Dr. Currie obſerves, that the diſeaſes, to which women of faſhion are moſt ſubject, proceed from too great abſtemiouſneſs from meats of a nutritive quality, and from wine, but eſpecially from the want of exerciſe; while they indulge too much in regaling themſelves with ſtrong infuſions of palatable, but noxious tea. A conſiderable number of their complaints alſo proceed from the frequent changes of dreſs, and the alternate viciſſitudes from heat to cold, to which faſhion, and the love of pleaſure, expoſe them. There are inſtances of young ladies, in Philadelphia, who, for the ſake of an elegant and admired ſhape, apply a leather bandage, dipped in water, round their waiſts, every night on going to bed,

bed, which contracts as it becomes dry. The pernicious effects of this experiment muſt, Dr. Currie obſerves, be obvious to every one of common ſenſe.

In his remarks on Pulmonary Conſumption, Dr. Currie adopts a very oppoſite opinion from that communicated to him in a letter from Dr. Iſaac Senter, noticed by us in our account of the tranſactions of the College of Phyſicians of Philadelphia. The pulmonary conſumption, he tells us, appears to be the moſt frequent, as well as the moſt fatal of the chronic diſeaſes which occur in Philadelphia. The greateſt proportion of thoſe who die of this malady, from the moſt accurate obſervations which he has been able to make, belong to the Society of the Friends; and of theſe the number is nearly in the proportion of three females to one male. Perhaps the want of vivacity in the people of this ſociety, and the ſedentary lives of their females, are the principal cauſes of this difference; theſe certainly, in ſome meaſure, counterbalance the advantages which they enjoy from their ſuperior cleanlineſs, neatneſs, and ſobriety.

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The method of treating this complaint, by the daily exhibition of emetics, as recommended by Dr. Reid, is, in general, he thinks, a very injudicious and pernicious one.

The improvements propoſed by Dr. Ruſh, Dr. Currie has never had an opportunity of ſeeing put in practice, but he has had conſiderable experience of the good effects produced, by obſerving the method recommended by Dr. Fothergill, particularly in the incipient ſtage of the diſeaſe. When the diſeaſe is contracted in a northern climate, the patient ſhould always paſs his winters, if poſſible, in a climate within the tropics.

We ſhall finiſh our account of this publication, by quoting a part of the ingenious author's concluſion: We learn, ſays he, from the account of the diſeaſes contained in the preceding pages, that the cold of the Northern States, properly guarded againſt, produces but few diſeaſes of a dangerous nature; and that intermitting, remitting, or bilious fevers and fluxes, are ſcarcely known there; but in proceeding to the Southward, in Maryland and Virginia, where the heat is more intenſe, and of longer continuance, and the ſoil more

moiſt, eſpecially upon lands in an imperfect ſtate of cultivation, the diſeaſes laſt mentioned are very prevalent, eſpecially to foreigners, though the natives, who fix their habitations in dry and elevated ſituations, and obſerve a medium between exceſs and abſtinence, enjoy a tolerable ſhare of health. In South Carolina and Georgia, fevers and fluxes are ſtill more epidemic, violent and obſtinate, eſpecially after the rice-harveſt in Auguſt and September, when the waters are diminiſhed, and permitted to ſtagnate and corrupt. The fevers, which occur at this ſeaſon, are very anomalous, neither intermitting nor remitting perfectly, but participating much of that commonly called the yellow fever, which is often ſo fatal within the tropics.

Although the United States of America cannot boaſt of the ſuperiority of their climates, over other countries, in parallel latitudes, they are exceeded, he thinks, by few in fertility of ſoil, and equalled by none in political advantages.

And, from whatever cauſes it may proceed, the inhabitants in the middle, and particularly

ticularly in the Northern States, enjoy a greater proportion of health, and live to a greater age, than the inhabitants of Europe. The diſeaſes which do occur are more ſimple and uniform; and this country is intirely exempt from ſome of the moſt formidable and deſtructive, which infeſt the other quarters of the globe.

The Spotted Peſtilence, he obſerves, the fatal offspring of famine, uncleanlineſs, and vitiated air, has never yet reached our favoured ſhores.

The Small Pox, the Meaſles, the Malignant Quinſey, the Influenza, and almoſt every other contagious diſeaſe, were foreigners to this continent, till they were introduced, through the medium of commerce, from Europe, into which they were firſt conveyed from Aſia, or the dominions of the deſpotic Turk, bordering on that immenſe continent.

The Leproſy, the Yaws, the Eliphantiaſis, and other loathſome diſorders, are endemic to Africa.

Whether Africa or South America gave origin to the Syphilis, remains uncertain,

though that diſhonour is generally aſcribed to the latter.

Nor is North America, like many other countries, ſubject to earthquakes, to the eruption of volcanos, hurricanes, periodical deluges, impetuous whirlwinds, noxious and conſuming blaſts of wind, or withering and protracted drought.

That America poſſeſſes many advantages, we are very far from denying. But it can hardly, with reaſon, boaſt any remarkable exemption from fatal diſeaſes. Dr. Currie would not probably have conſidered theſe ſhores, as in this reſpect, particularly favoured, had the preſent treatiſe been publiſhed poſterior to his account of the Synochus Icteroides, in which he deſcribes one of the moſt fatal contagious that ever depopulated any country. That work affords a melancholy proof, how ſoon we may be convicted of error, when we boaſt of ſuperior advantages, either natural or political.

IV.

IV.

An Enquiry into the Cauſes and Cure of Sore Legs. Vide *Medical Enquiries and Obſervations*, By Benjamin Ruſh, M. D. Vol. II. 8vo, Philadelphia.

DR. RUSH aſcribes the bad ſucceſs, generally experienced in the treatment of ſore legs, to the want of a theory which ſhall explain their proximate cauſe. In attempting to eſtabliſh a theory, which ſhall lay the foundation for more ſucceſsful inquiries, upon this ſubject hereafter, he begins with the following propoſitions: 1*ſt*, That ſore legs are a diſeaſe of general debility: and 2*dly*, That they are a diſeaſe of the whole ſyſtem. In ſupport of the firſt propoſition, he urges, the occupations and habits of thoſe who are ſubject to the diſeaſe: Such perſons are, day-labourers, ſailors in the habit of lifting great weights, waſher-women, and all others, who paſs the greater part of their time upon their feet, and hard drinkers of every rank and deſcription. When

ſtrong drink, labour, and ſtanding long on the feet, are united, they more certainly, he ſays, diſpoſe to ſore legs, than when they act ſeparately. That ſore legs are a diſeaſe of the whole ſyſtem, he infers, 1*ſt*, From the cauſes which induce them, which act, more or leſs, upon every part of the body. 2*dly*, From their following or preceding diſeaſes, which obviouſly belong to the whole ſyſtem, ſuch as fevers and dyſenteries, pulmonary conſumption, and apoplexy. 3*dly*, From their appearing almoſt univerſally in one diſeaſe, which is evidently a diſeaſe of the whole ſyſtem, namely, ſcurvy. 4*thly*, From their becoming, in ſome caſes, the outlets of menſtrual blood, which is diſcharged in conſequence of a plethora, which affects, more or leſs, every part of the female ſyſtem. 5*thly*, From the ſymptoms of ſore legs, which are, in ſome caſes, febrile, and affect the pulſe, in every part of the body, with preternatural frequency and force. *Laſtly*, From the manner in which they are, ſometimes, cured, by nature and art, as they often prove the outlets of many general diſeaſes, and all the remedies which cure them, act, more or leſs, upon the whole ſyſtem.

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How far our readers will be convinced, by this reaſoning, muſt be left to their own determination. It muſt, however, be allowed, that every circumſtance, here mentioned, affords an equally ſtrong argument againſt his theory. Thus, if it be contended that ſore legs are a diſeaſe of general debility, becauſe they are ſometimes induced by cauſes, acting on every part of the body, it may, with ſtill greater juſtice, be argued, that they are not a diſeaſe of general debility, becauſe much more frequently the cauſes inducing them act on the legs alone. If it be maintained that they are a diſeaſe of general debility, becauſe they ſometimes follow fever, dyſentery, or phthiſis pulmonalis, it may be concluded, that they are not a diſeaſe of debility, becauſe in ninety-nine of a hundred inſtances of theſe diſeaſes, no ſore legs take place, though, from each of theſe diſeaſes, the greateſt poſſible degrees of debility ariſe.

But, though Dr. Ruſh's theoretical opinion, reſpecting this diſeaſe, be ſingular, and, in many reſpects, exceptionable, yet, the mode of cure he recommends, and which he has deſcribed with great accuracy, is nearly the

ſame with that of other practitioners. For, in ſuch affections, every practitioner has recommended attention to the ſtate of the ſyſtem, in general, as well as of the local diſeaſe.

In all caſes of ſore legs, there is, Dr. Ruſh remarks, a tonic or an atonic ſtate of the whole ſyſtem; and the ſame ſtate of exceſſive, or deficient action, takes place in the parts which are affected by the ſores. The remedies, to cure them, therefore, ſhould be general and local. In caſes where the arterial ſyſtem is affected, by too much tone, the general remedies ſhould be, 1*ſt*, Blood-letting. 2*dly*, Gentle purges. 3*dly*, Nitre. 4*thly*, A temperate diet, and a total abſtinence from fermented and diſtilled liquors. And, *laſtly*, Cool and pure air. The local remedies, in this ſtate of the ſyſtem, ſhould be, 1*ſt*, Cold water. 2*dly*, Soft poultices of bread and milk, or of bread moiſtened with lead water. 3*dly*, When the inflammation ſubſides, dry lint, confined by means of a ſoft plaiſter of wax and ſweet oil. *Laſtly*, Above all, reſt and an horizontal poſture of the leg. In ſore legs, attended by too little general and local action, the following remedies are proper:

1*ſt*,

1ſt, Bark. *2d*, Mercury. *3d*, Mineral tonics. *4th*, Gentle exerciſe. *5th*, A nutritious and moderately ſtimulating diet. And, *6thly*, Opium. The local applications ſhould conſiſt of ſuch ſubſtances as are gently eſcharotic, and which excite an action in the torpid veſſels of the affected part. They ſhould all be uſed, if neceſſary, in ſucceſſion to each other; for there is often the ſame idioſyncraſy in a ſore leg, to certain topical applications, that there is in the ſtomach, to certain aliments. After the uſe of theſe remedies, aſtringents and tonics ſhould be applied, ſuch as an infuſion of Peruvian or white oak bark, the water in which the ſmiths extinguiſh their irons, lime water, bread dipped in a weak ſolution of green vitriol, ſo much commended by Dr. Underwood, and compreſſes wetted with brandy, or ardent ſpirits of any kind. Tight bandages are likewiſe highly proper. In ſcorbutic ſores, on the legs, navy ſurgeons have ſpoken in high terms of an application of a mixture of lime juice and molaſſes. It is of the utmoſt conſequence, in the treatment of ſore legs, to keep them clean, by frequent dreſſings and waſhings. The ſucceſs of old

women,

women, is oftener derived from their great attention to cleanlineſs, in the management of ſore legs, than to any ſpecifics they poſſeſs, which are unknown to phyſicians. Dr. Ruſh concludes this inquiry by four obſervations, which are naturally ſuggeſted by what has been delivered upon this diſorder.

1ſt, If it has been proved, ſays he, that ſore legs are, in moſt caſes, diſeaſes of the whole ſyſtem, is it not proper to inquire, whether many other diſeaſes, ſuppoſed to be local, are not, in like manner, diſeaſes of the whole ſyſtem? And, if ſore legs have been cured by general remedies, is it not proper to uſe them, more frequently, in other local diſeaſes? I am led to make this remark, by having ſeen two inſtances of tumours, the one on the breaſt, and the other in the proſtate gland, nearly cured by long journies.

2d, If there be two ſtates of action in the arteries, in ſore legs, it becomes us to inquire, whether the ſame oppoſite ſtates of action do not take place in many diſeaſes in which they are not ſuſpected: I have before obſerved that they occur in the ſcrophula. It would

would be eaſy to prove that they exiſt in ſeveral other local diſeaſes.

3*d*, If the efficacy of the remedies for ſore legs, which have been mentioned, depends upon their being accommodated exactly to the ſtate of the arterial ſyſtem, and if this ſyſtem be liable to frequent changes, does it not become us to be more attentive to the ſtate of the pulſe, in this diſorder, than is commonly ſuppoſed to be neceſſary by phyſicians? Indeed, if one of the principles I have aimed to eſtabliſh in this, and ſeveral of the foregoing eſſays, be juſt, that is, That all preſcriptions ſhould be ſuited to the ſtate, and not to the name of a diſeaſe, it follows, that ſucceſs in the practice of phyſic, will depend chiefly upon the occaſional change of the doſe, or quality of a medicine, with the changing ſtate of the whole ſyſtem.

4*th*, It has been a misfortune in medicine, as well as in other ſciences, for men to aſcribe effects to one cauſe, which ſhould be aſcribed to many. Hence diſeaſes have been attributed, excluſively, to morbid affections of the fluids by ſome, of the muſcles and nerves, by others. Unfortunately the morbid ſtates

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of the arterial ſyſtem, and the influence of thoſe ſtates upon the brain, the nerves, the muſcles, the lymphatics, the glands, the viſcera, the alimentary canal and the ſkin, as well as the reciprocal influence of the morbid ſtates of each of thoſe parts of the body upon the arteries, and upon each other, have been too much neglected, in moſt of our ſyſtems of phyſic. I conſider, ſays he, the pathology of the arterial ſyſtem as a mine. It was firſt diſcovered by Dr. Cullen. The man who attempts to explore it, will probably impoveriſh himſelf by his reſearches. But the man who comes after him, will certainly obtain from it a treaſure, which cannot fail of adding greatly to the riches of medicine.

V.

V.

An Account of the State of the Body and Mind in Old Age, with Obſervations on its Diſeaſes, and their Remedies. Vide *Medical Obſervations and Enquiries*, By B. Ruſh, M. D. Vol. II. 8vo, Philadelphia.

DR. RUSH, in this Eſſay, mentions, 1*ſt*, The circumſtances which favour the attainment of longevity. 2*dly*, The phenomena of body and mind which attend it. And, 3*dly*, Its peculiar diſeaſes, and the remedies which are moſt proper to remove or moderate them.

The circumſtances which favour longevity, are, 1*ſt*, Deſcent from long-lived anceſtors. 2*dly*, Temperance in eating and drinking. 3*dly*, The moderate exerciſe of the underſtanding. 4*thly*, Equanimity of temper. And, 5*thly*, Matrimony.

He has never met, he tells us, with a ſingle inſtance of a perſon having lived to be eighty years old, who was not deſcended from

from long-lived anceſtors. In ſome inſtances the deſcent was only from one, but, in general, it was from both parents. He found, however, ſeveral exceptions, to temperance in eating and drinking; but he did not meet with a ſingle perſon, who had not, for the laſt forty or fifty years of his life, uſed, as part of his diet, tea or coffee, and bread and butter twice a-day. The duration of life, he remarks, does not appear to depend ſo much on the ſtrength of the body, as upon an exact accommodation of ſtimuli to that ſtrength. A watch-ſpring will laſt as long as an anchor, provided the forces, which are capable of deſtroying both, are always in an exact ratio to this ſtrength. It has long been an eſtabliſhed truth, that literary men, other circumſtances being equal, are longer lived than other people. As a proof that equanimity of temper is conducive to old age, perſons who live upon annuities, or enjoy life rents, generally live longer than others. In the courſe of his inquiries, he met with only one perſon, beyond eighty years of age, who had never been married; while, on the contrary, he ſaw ſeveral old women, who had borne

borne from ten to twenty children, and ſuckled them all. The reader will perhaps hardly refrain from ſmiling, when he is informed that the Doctor met with one woman, a native of Herefordſhire in England, who is now in the hundredth year of her age, who bore a child at ſixty, menſtruated till eighty, and frequently ſuckled, at the ſame time, two of her children, though born in ſucceſſion to each other. She had paſt the greateſt part of her time over a waſhing tub. Dr. Ruſh has not found that ſedentary employments prevent long life, where they are not accompanied with intemperance in eating or drinking. He obſerves, that although there appears, in the human body, a certain capacity of long life, which ſeems to diſpoſe it to preſerve its exiſtence, in every ſituation; yet this capacity does not always protect it from premature deſtruction. For, among the old people, whom he examined, he ſcarcely met with one who had not loſt brothers or ſiſters, in early and middle life, who were born under circumſtances, equally favourable to longevity with themſelves.

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The phenomena of the body and mind, in old age, which he mentions, are, 1*ſt*, There is a great ſenſibility to cold. 2*dly*, Impreſſions upon their ears, excite ſenſation and reflection much quicker than thoſe made upon their eyes. 3*dly*, The appetite for food is generally increaſed. 4*thly*, The pulſe is generally full, and frequently affected with pauſes in its pulſation. 5*thly*, The marks of old age appear earlier, and are more numerous, in perſons who have combined with hard labour, a vegetable or ſcanty diet, than in perſons who have lived under oppoſite circumſtances. 6*thly*, Old people tread upon the whole baſe of their feet at once, in walking. 7*thly*, The memory is the firſt faculty of the mind which fails. 8*thly*, He never knew a ſingle inſtance, he ſays, in which the moral or religious faculties were impaired. 9*thly*, Dreaming is univerſal among old people. 10*thly*, Many circumſtances, in old age, mark a ſecond childhood. 11*thly*, A ſecond infancy, ſometimes, even appears in old age. 12*thly*, There is a diſpoſition in the ſyſtem, in extreme old age, to renew certain parts. *Laſtly*, The fear of death appears to be much

much leſs in old age, than in early or middle life.

The diſeaſes of old age are, he obſerves, chronic and acute. The chronic are, *1ſt*, Weakneſs of the knees and ankles, a leſs ability to walk, and tumours in the head and limbs. *2dly*, Pains in the bones. *3dly*, An exceſſive flow of tears, and mucus from the noſe. *4thly*, Difficulty of breathing, and a ſhort cough, with copious expectoration, generally attended with a weak or hoarſe voice. *5thly*, Coſtiveneſs. *6thly*, An inability to retain the urine, as long as in early or middle life. *7thly*, Wakefulneſs. *8thly*, Giddineſs. *9thly*, Deafneſs. And, *10thly*, Imperfect viſion. The acute diſeaſes, moſt common amongſt old people, are, *1ſt*, Inflammation of the eyes. *2dly*, Pneumonia notha. *3dly*, Colic. *4thly*, Palſy and apoplexy. *5thly*, Piles. *6thly*, Difficulty in making water. *7thly*, Quartan fever.

All the diſeaſes of the old people, he adds, both chronic and acute, originate in debility. The remedies for the chronic diſeaſes, where no morbid action takes place in the ſyſtem, are ſtimulants. The *firſt* of theſe is

heat. *2dly*, Generous diet and drink. *3dly*, Young company in preference to old. *4thly*, Gentle exercise. *5thly*, Cleanliness. And, *laſtly*, Opium. Heat, he adviſes, to be communicated by means of the warm bath, or ſtove rooms, and of warm cloathing, more eſpecially warm bed clothes. Old people, he imagines, ſhould be indulged in eating between the ordinary meals of families, and in the uſe of wine, in moderation. He thinks they enjoy better health and ſpirits in the families of their children, where they are ſurrounded by grandchildren, than when they live by themſelves. Moderate and regular exerciſe, always in fair weather, is highly beneficial to old people. Their dreſs, he remarks, ſhould not only be clean, but more elegant than in youth or middle life. It ſerves to divert the eye of ſpectators from obſerving the decay and deformity of the body, to view and admire that which is always agreeable to them. Opium not only abates the pains of the chronic rheumatiſm, and the uneaſineſs of the old man's cough, but alſo removes wakefulneſs, and reſtrains, during

during the night, the troubleſome inclination to make water.

For the cure of the acute diſeaſes of old people, Dr. Ruſh refers to the ordinary medical books, contenting himſelf with ſtrongly recommending blood-letting, as, in his opinion, inflammatory diſeaſes are more fatal to old people than is generally ſuppoſed. How is this recommendation of blood-letting to be reconciled to his opinion, that all the diſeaſes of old people, even the acute, originate in debility? Will the debility be removed by blood-letting?

Death, from old age, is the effect, he thinks, of a gradual palſy. It ſhews itſelf firſt, in the eyes and ears, in the decay of ſight and hearing. It appears next in the urinary bladder, in the limbs and trunk of the body, then in the ſphincters of the bladder and rectum, and finally in the nerves and brain, deſtroying in the laſt, the exerciſe of all the faculties of the mind.

Few perſons, he obſerves, appear to die of old age. Some one of the diſeaſes which have been mentioned, generally cuts the laſt thread of life.

VI.

An Enquiry into the Cauſes and Cure of the Pulmonary Conſumption, By Benjamin Ruſh, M. D. Vide *Medical Enquiries and Obſervations*. Vol. II. 8vo, Philadelphia.

PULMONARY Conſumption, by the united teſtimony of American Phyſicians, appears not only to have become very prevalent, but alſo to be ſtill increaſing in frequency in the weſtern world. Dr. Ruſh had publiſhed, in the firſt volume of his Medical Enquries, an Eſſay, intitled, "Free Thoughts upon the Cauſe and Cure of Pulmonary Conſumption," and he now offers the preſent Eſſay, with a view to fill up the ſketch of his former one, by eſtabliſhing, more fully, the truth of the opinions therein advanced. His firſt endeavour is to ſhew that this diſeaſe is the effect of cauſes which induce general debility. In ſupport of this, he adduces the remote and exciting cauſes of the diſeaſe, the nature of the occupations and habits of perſons

ſons moſt liable to it, and the period of life at which it attacks. The remote cauſes are, he ſays, Pneumony—Catarrh—Hæmoptyſis—Rheumatiſm—Gout—Aſthma—Scrophula—Nervous and Intermitting Fevers—Meaſles—Repelled Humours from the ſurface of the body—The Venereal Diſeaſe—Obſtructed Menſes—Sudden Growth, about the age of puberty—Grief, and all other debilitating paſſions of the mind—Hypochondriaſis—Improper Lactation—Exceſſive Evacuation of all kinds, more eſpecially by ſtool—Cold and Damp Air—External Violence, acting upon the body—And, finally, every thing that tends, directly or indirectly, to impair the vigour of the ſyſtem.

The moſt frequent exciting cauſe, he obſerves, of Conſumption, is the alternate application of heat and cold to the whole external ſurface of the body; but all the remote cauſes, which have been enumerated, operate as exciting cauſes of conſumption, when they act on previous debility. Original injuries of the lungs, ſeldom induce this diſorder, except they firſt induce a debility of

the whole ſyſtem, by a troubleſome and obſtinate cough.

The perſons moſt liable to the diſeaſe are, ſtudious men, mechanics, who lead ſedentary lives in confined places, women, and all perſons of irritable habits, whether of body or mind. Although in children, and in perſons beyond the fortieth, or even the fiftieth year, the diſeaſe ſometimes appears, yet the moſt general appearance of its attack, is between the eighteenth and thirty-ſixth year of life; a period, Dr. Ruſh remarks, in which indirect debility is oftener produced, than in any other ſtage of life, by the exceſſive exerciſes of the body and mind in the purſuits of buſineſs or pleaſure.

Dr. Ruſh, *2dly*, alledges that Pulmonary Conſumption is a primary diſeaſe of the whole ſyſtem. This, he thinks, demonſtrated, *1ſt*, From the cauſes which produce it, acting on the whole ſyſtem. *2dly*, From the ſymptoms of general debility, which always precede the affection of the lungs. *3dly*, From the diſeaſe alternating with other diſorders, as rheumatiſm, gout, madneſs, &c. which obviouſly belong to the whole ſyſtem. *4thly*, From

From its analogy with ſeveral other diſeaſes, which, though accompanied with local affections, are produced by a morbid ſtate of the whole ſyſtem, as the rheumatiſm, the gout, the meaſles, ſmall-pox, the different ſpecies of cynanche, and more eſpecially apoplexy and pneumony. *5thly*, From the diſeaſe exiſting without ulcers in the lungs. And, *laſtly*, From its being relieved or cured only by remedies which act upon the whole ſyſtem. Beſides theſe arguments, Dr. Ruſh inquires into the ſuppoſed proximate cauſes of conſumption, from whence he concludes, that they are totally inadequate to the production of the diſeaſe, unleſs preceded or accompanied by general debility. In confirmation of this, he obſerves, that he does not recollect a ſingle inſtance of the diſorder having followed a wound in the lungs, either by the bayonet or a bullet, during the late war; that Hæmoptyſis is not always followed by conſumption; that tubercles in the lungs are the effects of general debility, communicated to the tronchial veſſels; that catarrh often continues for twenty or thirty years, without inducing pulmonary conſumption in perſons

perſons who purſue active occupations; that, in the hereditary conſumption, there is either an hereditary debility of the whole ſyſtem, or an hereditary malconformation of the breaſt; that contagion, by which conſumption may certainly be communicated, produces debilitating effects: and that, where conſumption is produced by the repulſion of cutaneous humours, it is either preceded by general debility, or not induced till the whole ſyſtem hath been previouſly debilitated by a tedious and diſtreſſing cough.

From theſe premiſes he concludes, in the *third* place, that the cough, tubercles, ulcers, and purulent or bloody diſcharges, which occur in the pulmonary conſumption, are the effects, and not the cauſes, of the diſeaſe; and that all attempts to cure it, by inquiry after tubercles or ulcers, or into the quality of the diſcharges from the lungs, are as fruitleſs as any attempt would be to diſcover the cauſes or cure of dropſies, by an examination of the qualities of collections of water; or to find out the cauſes and cure of fevers, by the quantity or quality of the diſcharges which take place, in thoſe diſeaſes, from the kidneys and ſkin.

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In reaſoning upon the circumſtances by which it may be explained, how general debility ſhould terminate in a diſorder on the lungs, although Dr. Ruſh leaves the explanation doubtful, he obſerves, that it would ſeem as if the debility, in the caſes of conſumption, is ſeated chiefly in the blood veſſels, while that debility, which terminates in the ſtomach and bowels, is confined chiefly to the nerves; and that the local affections of the brain ariſe from a debility, invading alike the nervous and arterial ſyſtems.

We have thus endeavoured to give a ſhort view of Dr. Ruſh's opinion reſpecting the nature and cauſe of pulmonary conſumption. Without pretending to enter into any particular examination of his arguments, of which the limits of our publication will by no means admit, we may with confidence aſſert, that, by arguments equally concluſive, debility may be proved to be the cauſe of every diſeaſe whatever to which the human body is ſubject. No expreſſion has of late been more frequently employed, by medical writers, as a cloak for ignorance, than the term Debility. There is no diſeaſe, to which the human

human body can be ſubjected, which will not, either directly or indirectly, induce debility; and, accordingly, the neceſſity of ſupporting the *vis vitæ* in certain ſtages of every affection, has never been queſtioned. But, becauſe debility exiſts in palſy, in pulmonary conſumption, and in ulcerated legs, to ſuppoſe that it is the cauſe of theſe diſeaſes; and, which is an unavoidable conſequence of this doctrine, that theſe are, in reality, the ſame diſeaſe, is a doctrine too abſurd to require a ſerious refutation. And thoſe who reſt ſatisfied with this ſuppoſition, that all diſeaſes depend on debility, in place of having made any real progreſs in the inveſtigation of truth, only ſhut the door againſt all rational and uſeful inquiry.

In treating of the method of cure, the firſt object on which Dr. Ruſh inſiſts, is to attempt the removal of the diſeaſe in its earlieſt ſtage, that is, before it produce the ſymptoms of cough, bloody or purulent diſcharges from the lungs, and inflammatory or hectic fever. The ſymptoms which mark this firſt ſtage are, he ſays, too ſeldom obſerved, or, if obſerved, they are too often treated

treated with equal neglect by patients and phyſicians. Theſe ſymptoms, according to Dr. Ruſh, are a ſlight fever, increaſed by the leaſt exerciſe; a burning and dryneſs in the palms of the hands, more eſpecially towards evening; rheumy eyes upon waking from ſleep; an increaſe of urine; a dryneſs of the ſkin, more eſpecially of the feet, in the morning; an occaſional fluſhing in one, and ſometimes in both cheeks; a hoarſeneſs; a ſlight or acute pain in the breaſt; a fixed pain in one ſide, or ſhooting pains in both ſides; headach; occaſional ſick and fainty fits; a deficiency of appetite, and a general indiſpoſition to exerciſe and motion of every kind. The remedies for this ſtage of the diſorder conſiſt, he obſerves, in a deſertion of all the remote and exciting cauſes, particularly ſedentary employments, damp or cold ſituations, and whatever tends to weaken the ſyſtem. When the diſeaſe has not yielded to this deſertion of its remote and exciting cauſes, he has, he tells us, recommended the cold bath, ſteel, and Peruvian bark, with great advantage.

When the firſt ſtage has been neglected, the diſeaſe generally terminates, he ſays, in different

different periods of time, in pulmonary affections, which ſhow themſelves under one of the three following forms: *1ſt*, A fever, accompanied by a cough, a hard pulſe, and the diſcharge of blood or mucous matter from the lungs. *2dly*, A fever of the hectic kind, accompanied by chilly fits and night ſweats, and a pulſe full quick, and occaſionally hard. The diſcharges from the lungs, in this ſtate of the diſorder, are frequently purulent. And, *3dly*, A fever with a weak quick pulſe, a troubleſome cough, and copious purulent diſcharges from the lungs, a hoarſe and weak voice, and chilly fits and night ſweats, alternating occaſionally with a diarrhœa. As theſe different forms do not ſucceed each other in the order juſt ſtated, Dr. Ruſh, to diſtinguiſh them from each other, ſtiles the firſt the Inflammatory, the ſecond the Hectic, and the third the Typhus ſpecies; and he then proceeds to point out the means of palliating the diſeaſe in each of this ſpecies. In the treatment of the firſt ſpecies, he recommends blood-letting very ſtrenuouſly, as a principal palliative; and even aſſerts, from experience, that where inflammatory

tory action attends the laſt ſcene of the diſorder, there is often more relief obtained by a little bleeding, than by the uſe of opiates; and it is always a more humane preſcription, in deſperate caſes, than the uſual remedies of vomits and bliſters. He recommends, in this ſpecies, alſo, a vegetable diet, nitre in moderate doſes of ten or fifteen grains, three or four times a day, and the exerciſe of walking while the air is cold and dry. Vomits he thinks rather hurtful.

In the treatment of the ſecond ſpecies, which he ſtiles the Hectic, Dr. Ruſh confeſſes, that he has been ſeldom able to afford much relief by the uſe of any medicines. The treatment in the third ſtage, he imagines, ought to conſiſt of ſtimulating medicines, cordials, and ſtimulating diet.

He thinks that a dry ſituation, country air, looſe dreſſes, with a careful accommodation of them to the changes of the weather; artificial evacuations, by the means of bliſters and iſſues; certain fumigations and vapours, as the vapour from a mixture of equal parts of tar, bran, and boiling water; lozenges, ſyrups, and demulcent teas; opiates; thoſe poſitions

poſitions of the body favourable to the abatement of cough; ſleeping between blankets in winter, and on a matraſs in ſummer; and the moderate uſe of the lungs in reading, public ſpeaking, laughing and ſinging, afford palliative means, applicable to every ſpecies or ſtage of the diſorder.

Dr. Ruſh next treats of the radical remedies for the pulmonary conſumption: For this purpoſe he depends ſolely on the various ſpecies of exerciſe, which he divides into active, paſſive, and mixed: The active including walking and the exerciſe of the hands and feet in working and dancing: The paſſive including the rocking in a cradle, ſwinging, ſailing, and riding in carriages of different kinds: And the mixed being confined chiefly to riding on horſeback. Theſe various exerciſes muſt be ſuited to the different ſtates of the patients. In caſes of extreme debility he recommends the following order: 1*ſt*, Rocking in a cradle, or riding on an elaſtic board, commonly called a chamber-horſe. 2*dly*, Swinging. 3*dly*, Sailing. 4*thly*, Riding in a carriage. 5*thly*, Riding on horſeback. 6*thly*, Walking. And, 7*thly*, Running,

ning, dancing, &c. Sailing, Dr. Ruſh ſuppoſes, to be principally uſeful to thoſe, who, during the voyage, uſe the exerciſe attending a ſea-faring life. In ſlight caſes of conſumption, ſhort journeys on horſeback are ſerviceable; but in dangerous caſes, in Dr. Ruſh's opinion, benefit can alone be derived from long journeys. To render travelling on horſeback effectual in a conſumption, it ſhould, he ſays, be continued, with moderate intervals, from ſix to twelve months; but the cure ſhould not be reſted upon a ſingle journey. It ſhould be repeated, he tells us, every two or three years, till the patient has paſſed the conſumptive ſtages of life. Nay, he muſt do more, he muſt acquire a habit of riding conſtantly, both at home and abroad; or, to uſe the words of Dr. Fowler, he muſt, like a Tartar, learn to live on horſeback; by which means he will acquire, in time, the conſtitution of a Tartar.

How far the method of cure here propoſed is the beſt hitherto diſcovered againſt phthiſis we will not pretend to ſay. Phyſicians, we fear, will ſtill have to lament, that,

that, in moſt caſes, they can do but little to palliate, and far leſs to remove this diſeaſe. But, if the modes of cure here recommended be, in reality, the moſt uſeful, we may, without heſitation, venture to aſſert, that from thence many ſtrong objections may be brought againſt Dr. Ruſh's own theory of the diſeaſe.

VII.

VII.

An Eſſay on the Malignant Peſtilential Fever, introduced into the Weſt Indian Iſlands from Boullam, on the Coaſt of Guinea, as it appeared in 1793 *and* 1794. By C. Chiſholm, M. D. Surgeon to his Majeſty's Ordnance in Grenada. 8vo, London.

IN an introduction to this eſſay, the author gives ſome account of Grenada, as far as relates to the face of the country, its productions, its diſeaſes, and the ſtate of the weather. With regard to the face of the country, Dr. Chiſholm obſerves, that the windings of the innumerable hills in Grenada produce a change of temperature at the end of every hundred yards. Under their ſhelter the heat is almoſt inſupportable, and the body is bathed in the moſt profuſe ſweat. But beyond this, upon turning an angle and being ſuddenly expoſed to the prevailing winds, which there blow with violence proportioned to the narrow valleys which confine

them, the body is in an inſtant dried up, an aguiſh ſenſation takes place, and not unfrequently topical pains, and inflammations of a moſt dangerous nature, are inſtantaneouſly produced. And this, Dr. Chiſholm thinks, is the principal cauſe why topical inflammations, particularly thoſe of the liver, are met with at all ſeaſons, during the hot and rainy, as well as the cool and dry weather. It alſo, he thinks, accounts for the efficacy, as a preventive, of any medium between the ſhirt and ſkin, which may abſorb the perſpired fluid, whilſt it keeps up an equal temperature on the ſurface, though changes take place in the ſurrounding atmoſphere. Thus he tells, a flannel ſhirt, however ſtrange it may ſeem to an European, not acquainted with this iſland, is the beſt preſervative of health in Grenada, and he adds, perhaps through the torrid zone.

After an elegant deſcription of the ſingular and romantic ſcenery of different parts of the iſland, and an account of ſome of its vegetable and animal productions, particularly of the Holothuria Priapus of Linnæus, he obſerves, that the ſoil of Grenada may be divided into four kinds: 1*ſt*, A black rich mould,

mould, found chiefly in low valleys, and on the gentle ſlopes of the more rounded hills. *2d*, A mixture of light ſand and black mould, generally found near the ſea, and containing a large portion of ſea ſalt. *3d*, A mixture of black mould, ſand, and a metallic earth of a rediſh colour, found in the ſteeper parts of what may be called the ſecond region of the iſland, or where the cultivation is extended with difficulty. *4th*, A red earth or ochre, frequently intermixed with black ſhining metallic particles, ſterile and incapable of culture, with even the aid of the ſtrongeſt manure.

With regard to the productions of the iſland, after an animated detail, Dr. Chiſholm obſerves, that whatever can contribute to the eaſe and comfort of man, to his food, his drink, his medicine, his clothing, his bedding, or his dwelling, are here abundantly, and, in moſt inſtances, ſpontaneouſly produced. Nor is food confined to the vegetable kingdom; cattle, ſheep, hogs, and fowls of various kinds, may be had in great abundance; while an inexhauſtible ſupply of fiſh, of uncommon variety and goodneſs, may be

reſorted to throughout the whole year, and conſtitute a conſiderable part of the food of the lower claſs of people. It is not therefore ſurpriſing, Dr. Chiſholm obſerves, that foreign luxuries, too liberally uſed, ſhould ſhorten the lives of one deſcription of inhabitants; whilſt another, confining themſelves to the wholeſome indigenous aliment of the country, live to an age uncommon even in the temperate regions of cold climates. Grenada, therefore, Dr. Chiſholm thinks, notwithſtanding the variable temperature occaſioned by the irregularity of its ſurface, and the moiſture of its atmoſphere, is certainly healthy, particularly when compared to other countries of the ſame latitude.

Our author is of opinion, that were we to exclude the effects of the miaſma of marſhy diſtricts, and thoſe proceeding from the irregular temperature of the air, we ſhould find, that, in common years, there is by no means much ſickneſs; and that, in general, it is only in thoſe places where marſhes are abundant, that diſeaſes *mali moris* prevail. There, indeed, one year with another, fully an eighteenth part of the inhabitants annually periſh. But in other

other diſtricts, where theſe dreadful cauſes of diſeaſe do not exiſt, the mortality is not more than one in thirty-ſeven or thirty-eight.

After his obſervations on the face of the country, the productions, and the diſeaſes of Grenada, he deſcribes the changes which took place in each month of the years 1784, 1785, 1786, and 1793, and to this he ſubjoins the following table of the higheſt, loweſt, and medium height of the Thermometer during theſe years. The Thermometer employed was graduated according to Fahrenheit's ſcale.

Months.		1784	1785	1786	1793	Months		1784	1785	1786	1793
January.	H.	85	82	84	89	July.	H.	87	86	88	88
	L.	81	80	82	83		L.	82	84	76	77
	M.	83	80	83	86		M.	84	84	87	82
Feb.	H.	85	85	84	88	Aug.	H.	88	88	87	89
	L.	81	82	82	81		L.	84	78	78	79
	M.	83	82	83	84		M.	85	80	82	84
March.	H.	86	85	86	87	Sept.	H.	86	90	90	84
	L.	83	83	83	80		L.	81	78	84	80
	M.	84	83	84	83		M.	83	86	88	86
April.	H.	86	85	86	87	Oct.	H.	88	85	90	90
	L.	81	83	83	84		L.	82	74	79	80
	M.	83	81	84	85		M.	85	80	87	85
May.	H.	87	87	86	87	Nov.	H.	84	84	88	88
	L.	82	83	85	80		L.	82	80	78	78
	M.	84	84	84	83		M.	83	81	83	83
June.	H.	86	87	88	87	Dec.	H.	84	88	86	88
	L.	84	81	77	77		L.	78	75	77	80
	M.	85	84	83	82		M.	82	81	84	84

After

After this introduction, Dr. Chiſholm proceeds to give a particular account of the appearance of the Malignant Peſtilential Fever in Grenada; and from this account, there can be no doubt of its being brought into Grenada, by the ſhip Hankey, from the coaſt of Africa. The Hankey, loaded with ſtores and adventurers, arrived at Boullam, from England, about the beginning of April 1792. She lay there for nine months, and during that time the ſettlers were obliged to live on board. As the rainy ſeaſon came on almoſt immediately after their arrival, and as the heat was at the ſame time exceſſively great, they endeavoured to ſhelter themſelves from both, by raiſing the ſides of the ſhip ſeveral feet, and covering her with a wooden roof. In this ſituation upwards of two hundred people, of whom women and children conſtituted a part, were confined in a ſultry moiſt atmoſphere.

Want of cleanlineſs, joined to depreſſion of mind, a conſequence of diſappointment, muſt certainly, Dr. Chiſholm thinks, be conſidered as the cauſes of the very fatal fever which broke out among them, ſome time after

after their arrival at Boullam. The Hankey arrived at the port of St. George, in Grenada, on the 19th of February 1793, after the death of almoſt the whole of her crew, and alſo of ſeveral ſeamen, who had been procured at St. Jago, in the paſſage from Boullam to Grenada.

From this period Dr. Chiſholm dates the commencement of a diſeaſe, which, he believes, was before unknown in Grenada, and certainly unequalled in its deſtructive tendency. The manner in which it was firſt communicated, and its ſubſequent progreſs, he thinks, clearly evinced its malignant and peſtilential nature.

Captain Remington, an intimate acquaintance of Captain Coxe's of the Hankey, was the firſt perſon who viſited that ſhip after her arrival in St. George's Bay: He was ſoon after ſeized with a fever, which terminated fatally on the third day. The boatſwain, and four ſailors of the Defence, were the next who ſuffered. They went on board the Hankey the day after her arrival, and ſtaid all night. All of them were ſeized with the fever, and died alſo in three days. Theſe

communicated the infection to many others, and the diſeaſe extended itſelf with ſuch rapidity, that, before the end of May, of 500 ſailors who manned the trading ſhips in the harbour, upwards of 200 died of this fever.

About the middle of April the diſeaſe began to appear on ſhore. It was introduced by a negro-woman, who took in ſailors clothes to waſh: The whole of her family were ſucceſſively afflicted with it; and by them it was communicated to thoſe with whom they had any intercourſe. And, in fine, all who from friendſhip, buſineſs, or duty, communicated with the diſeaſed, were themſelves ſoon affected with it. And no inſtance occurred wherein the contagion could not be traced to its particular ſource. Where people were expoſed to contagion, all prophylactics, of which a great variety were tried, were found to be of no avail. But from ſeveral circumſtances, particularly, as Dr. Chiſholm thinks, from ſuperior care and attention to cleanlineſs, the fever was much milder when it appeared among the inhabitants, than it had been among the ſailors.

Not

Not long after this, the diſeaſe appeared among the ſoldiers in garriſon. Of 280 men belonging to the 45th regiment, 24 died of it; that is, ſomething leſs than one in twelve. About the 1ſt of June, it began to appear among the negroes, belonging to the eſtates in the neighbourhood of the town. And, although great apprehenſions were entertained, yet they were ſoon found to be groundleſs; for it did not ſpread much among them, nor was it marked with the fatality which attended it, when it appeared among the whites. Not above one in four were affected with it; and among thoſe infected, it did not prove fatal to more than one in eighty-three.

Dr. Chiſholm has been particular in ſtating the progreſs of this fever, chiefly with a view to demonſtrate, *1ſt*, That it was uncommonly infectious. *2dly*, That it aroſe from human contagion, heightened by various cauſes to a peſtilential degree of violence. And, *3dly*, That, like the plague, it was communicated in every inſtance, either by actual contact with an infected perſon, or by breathing air, charged with effluvia, perſpired or diſcharged from

from the lungs of the affected perſon; or by touching the clothes of the infected, or by ſleeping in a place where they had been.

It is curious, and may, he thinks, be uſeful to obſerve the gradation of this fatal malady, with reſpect to the various deſcriptions of people expoſed to its infection. Neither age nor ſex were exempted from its attack. But ſome were more obnoxious to it than others; and the colour had evidently much influence in determining its violence. The gradation it obſerved, with regard to the different claſſes of inhabitants, appeared to be the following:

1*ſt*, Sailors, more eſpecially the robuſt and young, thoſe leaſt accuſtomed to the climate, and thoſe moſt given to the drinking new rum.

2*d*, Soldiers, more eſpecially recruits lately from Europe; and the moſt intemperate.

3*d*, White males, in general, lately arrived, more eſpecially young men from Europe.

4*th*, All other white males, more eſpecially the lower claſſes, and of them the moſt

moſt intemperate; thoſe debilitated by recent ſickneſs.

5th, White females, more eſpecially thoſe connected with the ſhipping, and thoſe lately from Europe.

6th, People of colour, from Muſtees to Cabres.

7th, Negro-men, more eſpecially ſailors and porters.

8th, Negro-women, more eſpecially houſe wenches.

9th, Children, more eſpecially thoſe of colour.

In giving an account of this diſeaſe, Dr. Chiſholm firſt deſcribes it, as it appeared in thoſe ſeized with it, in its moſt violent and fatal form; and afterwards treats more particularly of its moſt remarkable ſymptoms. In the worſt inſtances the patient, without any previous complaint, ſuddenly becomes giddy. He loſes his eye-ſight, every thing ſeems to move round with inconceivable velocity, he falls down almoſt inſenſible, and in that ſtate remains for half an hour or upwards. During this paroxyſm the body feels cold, and is overſpread with cold ſweat, which

which iſſues from every pore in aſtoniſhing abundance. On his recovery the cold goes off, and is inſtantly ſucceeded by intenſe heat, and a quick ſmall hard pulſe; the head aches dreadfully, particularly the forehead, generally accompanied with pain in the right ſide, and at the præcordia. The eyes are much inflamed, watery, protruded, and wildly rolling. The face is much fluſhed, and much heat is felt at the pit of the ſtomach, which is ſoon attended with nauſea, retching and vomiting. The patient ſoon after complains of intolerable pain in the ſmall of his back, and in the calves of his legs.

During twelve, eighteen, twenty-four, or thirty-ſix hours, theſe ſymptoms continue encreaſing, and are then ſucceeded by general coldneſs, cold ſweat, and a greater or leſs degree of coma or delirium, or a ſtate very much reſembling intoxication. With the patient in this ſtate, life is lengthened out to ſixty or ninety hours from the firſt attack: A ſhort interval of reaſon then takes place: The patient thinks himſelf better, and is for a moment flattered with the proſpect of recovery. But a ſecond fit, as ſudden and unexpected

expected as the firſt, comes on, during which he foams at the mouth, rolls his eyes dreadfully, and throws out and pulls back his extremities in violent and quick alternate ſucceſſion.

This, according to Dr. Chiſholm, has been the general progreſs of the diſeaſe in its worſt form. The ſymptoms which chiefly diſtinguiſhed the diſeaſe were, he tells us, the uncommon ſuddeneſs of the attack; the remarkable acute pain in the loins and calves of the legs; the watery, inflamed, and rolling eyes; the fluſhing of the face; the tendency to coma from the very onſet; the peculiarity of the delirium; and, the pain confined to the forehead, ſeldom extending even to the temples.

The delirium attending this fever is very peculiar. The countenance, the eyes, and the action reſemble very much thoſe of a perſon inebriated. It is accompanied with a conſtant reſtleſſneſs and efforts to get out of bed; and the mind ſeems agitated by the objects which were moſt its purſuit during health. Coma alſo, Dr. Chiſholm tells us, is often a moſt remarkable ſymptom in this fever.

fever. After the firſt day, there is, in general, more or leſs tendency to it: And if the patient ſurvived the third, he has found it in almoſt every inſtance preſent. The patient in this ſtate lies on his back, with his eyes half open. He is drowſy and inſenſible of pain or irritation, but moans and ſighs much. And in all thoſe who became comatoſe, Dr. Chiſholm has uniformly obſerved a very conſiderable and permanent dilatation of the pupils.

Another appearance which unequivocally marked the character of this fever, was a ſpecies of efflorescence, which reſembled more patches of red or livid ſpots, than what is generally underſtood by the word Petechiæ. This Dr. Chiſholm conſidered as a very fatal ſymptom; and he does not recollect a ſingle inſtance of recovery when it took place. The neck, ſhoulders, and breaſt, were generally the parts on which it appeared. But, in a very few violent caſes, almoſt the whole body became of a deep livid or black colour, a few hours before death.

Although in the commencement of this fever the pulſe be, in general, quick, hard, and

and ſmall, yet, in ſome inſtances at this period, it is full, which, Dr. Chiſholm thinks, affords a favourable prognoſtic. But in no diſeaſe is the pulſe more ſubject to variation than in this. With conſiderable heat of the ſkin he has often obſerved the pulſe not above fifty in the minute. Upon the whole, however, he never found it quicker than 130, nor ſlower than 30 in the minute.

Subſultus tendinum was by no means a common ſymptom; but tremor of the hands and of the lips, and violent ſpaſmodic contractions of the legs and arms, were very frequent, and always prognoſticated much danger.

The appearance of the tongue was very various: In ſome patients it continued white, with florid edges, to the very laſt; in others it became dark coloured very early, and changed to a black a little before death.

Aphthæ ſometimes occurred, and were, Dr. Chiſholm thinks, generally a bad ſymptom. There were two kinds of eruption about the lips of a very oppoſite nature: one ſuch as frequently appears at the termination of common remittents, and indicating a favourable

vourable change; the other conſiſting of black ſpots, ſuch as might be made by the point of a painter's fine pencil, all round the mouth, but eſpecially on the upper lip.; and indicating, with certainty, a fatal termination.

Hæmorrhage, Dr. Chiſholm tells us, occurred in this diſeaſe much oftener, and more frequently, and was attended with more dangerous conſequences, than in any other he has met with, the ſcurvy excepted. Robuſt, plethoric, and groſs habits, were moſt ſubject to hæmorrhage. It was obſerved to occur from various places; but the moſt profuſe diſcharge was either from the noſtrils or anus, and has frequently amounted to three or four pounds at a time. In ſeveral inſtances, the diſcharge, he thinks, has evidently been the immediate cauſe of death. He has never obſerved this hæmorrhage to be critical, nor has it, in any inſtance, permanently relieved the headach, or pain in the breaſt or ſide. Patients indeed ſometimes at firſt thought, that in conſequence of it, the headach was abated. But cold clammy ſweats, an almoſt imperceptible pulſe, and ſupervening delirium

rium or coma, even evinced the fallacy of the prognoſtic.

A rawneſs of the noſe, often terminating in eſchars, remarkably itchy, was alſo not unfrequently obſerved. Theſe ulcers diſappeared in proportion to the patient's recovery; but when the iſſue of the diſeaſe was fatal, they became gangrenous.

Another ſymptom, obſervable in many inſtances, which, from its ſingularity, Dr. Chiſholm thinks it proper to mention, was a peculiar affection of the teſticles and ſcrotum. About the end of the ſecond day patients often began to complain of a violent pain in the teſticles. With this they were ſenſible of a contraction of the ſpermatic cord, and a drawing up of the teſticles towards the abdomen. On examination this was felt to be the caſe, while, at the ſame time, it ſeemed to be much leſſened in ſize, and the ſcrotum remarkably flaccid and empty. Soon after this the ſurface of the ſcrotum became painful, and an excoriation took place upon it, from which a conſiderable quantity of offenſive matter iſſued. A ſimilar diſcharge took place alſo from the urethra.

When the event of the diſeaſe was favourable, this gradually ceaſed; but in caſes which afterwards terminated fatally, it became ichorous or bloody, and inſufferably fœtid. In favourable caſes, the purulent diſcharge from the ſcrotum, formed an incruſtation on the parts; which, when ſeparated in the convaleſcent ſtate, either ſpontaneouſly, or by means of a warm bath, was found very much to reſemble moiſtened parchment. In fatal caſes, the affection of the ſcrotum always terminated in gangrene, a few hours before death.

In this fever the change of voice was a very remarkable circumſtance. From a ſtrong tenor or manly ſound, it was often obſerved to ſink to a treble, or a ſound much ſofter, lower, and ſhriller than the natural one. In caſes terminating fatally, this change was moſt remarkable, and took place at an early period. But, if in the courſe of the diſeaſe, there took place an alteration of the voice, to its natural tone, it was an almoſt certain ſign of a favourable change.

A ſuppreſſion of the urine, a ſymptom by no means uncommon in other fevers, was particularly

particularly remarkable in this, for its coming on early, its duration, and the cauſe which ſeemed to produce it. For, upon diſſection, Dr. Chiſholm found the urinary bladder in a thickened ſtate, ſimilar to what is deſcribed by Dr. Gilchriſt, to have occurred in ſome caſes, recorded in the third volume of the Edinburgh Phyſical Eſſays.

The urine was generally of a deep red colour; ſometimes it was browniſh, ſometimes green, very frequently bloody; and, in a few inſtances, much inclining to black, and of an oily conſiſtence. Its ſmell was generally offenſive in the higheſt degree.

Conſtipation almoſt univerſally prevailed, and appeared to ariſe from a ſuſpenſion of tone in the inteſtinal canal; for, upon exciting the fibres to act, a redundant evacuation was generally the conſequence. The fæces, at the commencement of the diſeaſe, were ſeldom very fœtid; but, during its progreſs, became exceſſively ſo; and, a little before death, when they were diſcharged inſenſibly, the ſmell was intolerable. The colour and appearance of the diſcharge varied much, from a yellow, or a yellowiſh white,

black; and, from a conſiderable degree of thickneſs, to the exact appearance of coffee grounds.

The thirſt, in general, was not conſiderable; it was, however, a bad ſign when it ceaſed, eſpecially if at the ſame time the tongue appeared parched, cracked, and black.

A principal diſtinction, according to Dr. Chiſholm, between this diſeaſe and the typhus icterodes, is the yellow ſuffuſion, which, in the former, very ſeldom happened; while, in the latter, it is almoſt always preſent. He however obſerves, that, in ſome protracted caſes on ſhore, and, in ſome of the ſailors, where there might have been a combination of the peſtilential and yellow fevers, this ſymptom appeared about the fifth, ſeventh, or ninth day.

Dr. Chiſholm is of opinion, that the contagion always acted within four days from its application to the body; and his ſituation afforded him many opportunities of knowing this with ſufficient exactneſs.

Another point of great importance is, the aſcertaining the diſtance at which it is poſſible to communicate contagion. The reſult of

Dr.

Dr. Chiſholm's inquiries and obſervations, on this ſubject, amounted to the following facts: *1ſt*, That thoſe, who moſt carefully avoided the houſes where the infection was, were the moſt certain to eſcape. *2dly*, That when the diſeaſe was in a houſe, avoiding the chamber of the ſick prevented infection. *3dly*, That merely entering the chamber of the ſick, without approaching near to the diſeaſed perſon, never communicated infection. *4thly*, That approaching ſo near to the diſeaſed perſon, as to be ſenſible of the fœtor of his breath, or, of the peculiar ſmell which is always emitted from the bodies of the ſick, in this diſeaſe, or touching the bed clothes, on which he lay, generally occaſioned nauſea, ſlight rigors, and often headach, at the moment, and, ſome hours afterwards, produced the diſeaſe itſelf. *5thly*, That actual contact, ſo that the perſpired fluid of the ſick perſon might adhere to the hands, &c. of the healthy perſon, more certainly produced the diſeaſe. *6thly*, That touching the wearing apparel of a perſon, actually diſeaſed, or who had juſt recovered from the diſeaſe, communicated infection, as certainly as actual contact of the

ſkin. *7thly*, That frequently the merely paſſing an infected perſon, or one who wore the clothes he had on, when labouring under the diſeaſe, if the effluvia, proceeding from them, were blown upon him, produced the diſeaſe.

From all theſe obſervations, Dr. Chiſholm thinks it evident, that the infectious effluvia do not extend themſelves beyond a limited diſtance from the perſon or thing, from which they are emitted; and that this diſtance may be fixed, at the utmoſt, from ſix to ten feet.

The danger, which attended the opening of bodies, prevented Dr. Chiſholm from extending his inquiries far in that way. He opened only five, and he preſents us with an account of the appearances which he diſcovered in theſe. Three of them were ſailors, who died on the fifth day, and laboured under the worſt ſymptoms of the diſeaſe. In one of them, it began and terminated in convulſive affections. In his body, the inteſtines were much inflated, inflamed, and ſphacelated, particularly the duodenum, a little beyond the pylorus; the liver had ſhrunk to leſs than one half its natural ſize, was uncommonly flaccid,

flaccid, and of a colour nearly approaching to buff; the gall bladder was flaccid, and contained a ſmall quantity of very dark coloured ropy bile. The ſpleen and pancreas were in a natural ſtate; but the lungs were highly inflamed, and of a livery texture and hue, though no ſymptom of marked pulmonary affection could be perceived, during the exiſtence of the diſeaſe. The bladder contained nearly three quarts of urine; it was dilated to a conſiderable ſize, and its coats much thickened. The patient had been much tormented with pain through the pelvis, and an almoſt total ſuppreſſion of urine.

The ſecond who had been ſeized with the diſeaſe, under the form of an aguiſh paroxyſm, died ſtrongly convulſed. The viſcera, in general, were in the ſame ſtate, particularly the liver. All the veſſels of the inteſtines were uncommonly turgid. The right kidney was mortified, although, during his illneſs, no ſymptom of inflammation of that organ was perceived. The quantity of urine was ſmall, and the bladder a good deal enlarged, and much thickened.

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In the third and fourth, the appearances in the abdomen and thorax were very much the ſame, as in thoſe already mentioned. But, in theſe caſes, Dr. Chiſholm alſo examined the brain, and found it conſiderably affected. In one of them, a young man, about eighteen years of age, belonging to the artillery, the quantity of blood in the brain was ſurpriſingly great; for, excluſive of what was loſt in opening the cranium, fully two pounds were collected. In the left ventricle, the quantity of water was alſo conſiderable, but there was none in the right. The fourth ventricle contained a larger quantity than ordinary, but the plexus choroides was almoſt obliterated.

In the fifth body opened, a young man of the royal artillery, who died in twenty-nine hours from the commencement of the fever, the appearance of the viſcera was exactly the ſame, as in thoſe already deſcribed.

In treating of the nature of this malignant fever, Dr. Chiſholm judiciouſly points out many circumſtances, in which it differs eſſentially from the typhus icterodes, or yellow fever of the Weſt Indies. The yellow fever, he obſerves, is endemic and ſporadic; the

other

other epidemic, and imported from another country: the one is evidently cauſed by marſh effluvia, heat, violent exerciſe in that heat, night air and dews, and the abuſe of ſpirituous liquors; the other, on the contrary, is cauſed by contagion alone. While the peſtilential fever was evidently highly contagious, Dr. Chiſholm aſſures us, that of the numerous inſtances of yellow fever, of which he has had occaſion to treat, he has never once known it to be contagious. It has always been evidently produced by ſome one or other of the cauſes above-mentioned; and other perſons, on board the ſame ſhips, or in the ſame houſes, have continued in perfect health. Upon the whole, therefore, judging from the remote and proximate cauſes, from the ſymptoms, and from the diſſections, he is inclined to conſider the fever, introduced into the Weſt Indies from Boullam, as truly peſtilential, and differing from the plague, ſtrictly ſo called, only in not always exhibiting the ſymptoms, that are ſaid to be peculiar to that malady.

It appeared evident to Dr. Chiſholm, that the firſt ſtage of this fever was an inflamma-

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tory diatheſis, in which the tendency to gangrene was much greater, than in any other diſeaſe he had ever met with. And it was, he thinks, no leſs evident, that this ſtage was ſucceeded by one in which nervous excitement and a putreſcent diatheſis were equally remarkable, and equally tended, with an uncommon rapidity, to the diſſolution of the patient. It was alſo, he obſerves, evident, that theſe diatheſes had an extraordinary aptitude to run into each other, without ſhewing any diſtinct termination of the one, or acceſſion of the other; and it appeared, that the imprudent uſe of the means of obviating either of theſe ſtates, inevitably haſtened the progreſs of the other, to its peculiar termination. From theſe data, the following indications naturally reſulted:

1*ſt*, To diſcharge, from the ſtomach and inteſtines, acrid and offenſive humours.

2*dly*, To obviate inflammatory diatheſis, without producing a tendency to putreſcence.

3*dly*, To moderate the tendency to putreſcence, and to obviate it when actually preſent.

4*thly*,

4thly, To reſtore tone and energy to the ſyſtem.

With the view of fulfilling the firſt of theſe indications, Dr. Chiſholm had recourſe to a remedy, formed of an ounce and a half of the ſoda vitriolata, and two grains of the antimonium tartariſatum, diſſolved in a pound and a half of pure cold water. Of this ſolution, a large wine glaſsful was given, every hour, to the patient, until a ſufficient effect was produced, or till the whole was taken. The two firſt glaſsfuls generally operated as an emetic, and fully evacuated the ſtomach. The medicine, after this, acted on the inteſtines, and excited a copious diſcharge of their contents. If, at the ſame time, a diaphoreſis broke out, which was commonly the caſe, the patient found himſelf conſiderably relieved. By this practice alone, in ſeveral inſtances where Dr. Chiſholm's aſſiſtance was called for very early, he had often the ſatisfaction of ſeeing a ſpeedy and complete termination put to the complaint.

To fulfil the ſecond indication was, Dr. Chiſholm obſerves, infinitely more difficult; and he indeed conſiders the fate of the patient

tient as altogether depending on the judicious ſelection of means for removing the inflammatory, without producing a tendency to the putreſcent diatheſis. In this diſeaſe, the ardent heat of the ſurface, the oppreſſed hard pulſe, the pain of the ſide, the oppreſſion at the præcordia, the headach, and throbbing at the temples, ſeemed ſtrongly to indicate the uſe of bleeding. But, although the blood, drawn in the caſes where this remedy was employed, was remarkably florid, and always threw up an inflammatory cruſt, of greater or leſs thickneſs, and although the pains ſeemed to undergo a temporary mitigation, yet the conſequence, at the expiration of a few hours, was, he tells us, always fatal.

Finding that bleeding was, on no account, admiſſible, and that different antiphlogiſtics, which he uſed, were totally ineffectual, Dr. Chiſholm had recourſe to mercury. He employed pills, compoſed of five grains of calomel, two of antimonial powder, and one of opium. This was repeated to the ſame extent, eight times in twenty-four hours. The propriety of this practice was juſtified by the ſucceſs.

ſucceſs. For if ſalivation was ſpeedily raiſed, the danger was removed, and the patient recovered. And to effect this, in ſeveral inſtances, it was puſhed to an incredible length, with aſtoniſhing ſucceſs. To ſome patients fully four hundred grains of calomel were given, before the ſalivary glands were affected.

Dr. Chiſholm was inclined to think, that mercury, when puſhed to ſalivation, brought about a change in the ſyſtem, which obviated inflammatory diatheſis, without weakening, in a dangerous degree, the powers of the living principle. This opinion he has been inclined to adopt, by what has uniformly happened to thoſe who have been cured of hepatitis by ſalivation, their ſtrength having been comparatively encreaſed, after the mercury had ceaſed to act. And, notwithſtanding the rapid courſe of this fever, he found that ſalivation was often induced early enough to ſave the patient. For, though in other climates its action may be tardy, yet in a warm climate, no ſuch difficulty, in general, exiſts.

But, independent of all reaſoning, the ſucceſs attending the uſe of mercury, in this fever,

fever, was an irreſiſtible argument for the employment of it. And this was demonſtrated, not only by the experience of Dr. Chiſholm, but alſo of other practitioners. Mr. White, in particular, who had the charge of the ſick of the 45th regiment, and who, on the recommendation of Dr. Chiſholm, had recourſe to the uſe of mercury, declared, that he did not loſe, afterwards, one man, who had taken a ſufficient quantity of calomel, to excite ſalivation. Both Dr. Chiſholm and Mr. White were themſelves ſtriking inſtances of the efficacy of the practice. They were both dangerouſly ill, and cured by ſalivation being excited.

In this fever, Dr. Chiſholm found bliſters of little or no uſe, at any period of the diſeaſe, or wherever applied. He had repeatedly recourſe to this practice, to mitigate headach, to leſſen pain, to remove irritability of the ſtomach, and to raiſe the vital powers in the low comatoſe ſtate, but always without ſucceſs, excepting in two caſes. In one of theſe, the irritability of the ſtomach was completely removed, by a bliſter applied to the ſcrobiculus cordis: In the other, from

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a bliſter applied between the ſhoulders, the effect was wonderful. The diſcharge was uncommonly large, black, and fœtid in an intolerable degree. The inſtant this took place, the patient became better, and ſoon after recovered, without the uſe of any other remedy. Dr. Chiſholm was alſo informed, by a medical gentleman of the 67th regiment, that in his own caſe, as well as thoſe of four or five ſoldiers, he experienced extraordinary relief from the application of a bliſter to the fore part of the head. But as, in his own practice, they were very generally employed without ſucceſs, he thinks it difficult to account for ſo great a difference of the reſult, on any other footing, than that theſe caſes of the diſeaſe were leſs violent, than moſt of the inſtances which occurred to him.

The ſuddenneſs of the changes, in this fever, and the apparent ſinking of the vital powers, a few hours after the acceſſion of the fever, might naturally, Dr. Chiſholm obſerves, have led to the belief, that in this fever, tonics, antiſeptics, and the whole tribe of cordials, could alone be uſeful. But innumerable inſtances, he tells us, occurred, demonſtrating

monſtrating the fatal conſequence of this practice. And the uſe of the Peruvian bark, immediately after the operation of evacuating medicines, was hurtful in the extreme. In every caſe, where ſalivation took place, little farther was required, than the plentiful uſe of nouriſhing ſimple food and wines. But when the mercury had not this effect, or when its operation was tardy, it was neceſſary, Dr. Chiſholm tells us, to have recourſe to the Peruvian bark. In this fever, however, the bark, we are informed, was extremely diſagreeable to the patient; and the irritability of the ſtomach was ſo great, that it could very rarely be retained.

Opium, ſo often uſeful in other fevers, attended with irritability of the ſtomach, was, in this, Dr. Chiſholm obſerves, ſeldom beneficial. Vitriolic æther was, he tells us, the only medicine permanently uſeful, in enabling the ſtomach to receive and retain Peruvian bark: and a few caſes occurred, in Dr. Chiſholm's practice, in which he thinks the cure was completed by æther alone. He gave æther in the following manner: After allowing the patient to remain undiſturbed for about

about an hour, he exhibited a tea ſpoonful of the æther, in about half a wine glaſsful of cold water. After this, the patient was kept undiſturbed for two hours, when the doſe was repeated; and, in this manner, it was continued every two or three hours, till the ſpaſm of the ſtomach was entirely overcome. Æther given in this manner, Dr. Chiſholm found extremely grateful to the patient; and, he adds, that thirſt, nauſea, and oppreſſion, have often fled before it.

Dr. Chiſholm made a trial, in this diſeaſe, of the practice mentioned by Dr. Guthrie, as having been found moſt ſucceſsful againſt the plague, by the Ruſſian Phyſicians. But, as the number of unſucceſsful caſes was equal to that of recoveries, he had no encouragement to proceed.

Among other remedies, Dr. Chiſholm made trial alſo of the Anguſtura bark. As this medicine poſſeſſes a pungent and ſpicy taſte, Dr. Chiſholm hoped, that, by ſtimulating the ſtomach, and thereby obviating ſpaſm, it might have a better chance of being retained, than the Peruvian bark, and operate powerfully as an antiſeptic and tonic. He

gave this remedy in twelve caſes: five of theſe were ſoldiers of the Royal Artillery; and the remaining ſeven, inhabitants, or ſailors. All the ſoldiers recovered with remarkable rapidity. Of the other patients, three recovered. So that, of the twelve patients, with whom it was tried, only one in three died. It appeared, therefore, to be evidently a more ſuitable medicine than the Peruvian bark. Previous to its uſe, Dr. Chiſholm had always recourſe to the evacuants already mentioned. He then gave the powder of the Anguſtura bark, mixed with water, to the extent of a ſcruple, every hour, or two ſcruples in three hours. And, in all the caſes which recovered, an almoſt immediate change took place. Inſtead of the heat being increaſed, and the ſurface becoming dry, which too often followed the early uſe of Peruvian bark, an agreeable glow, an increaſe of warm ſweat, and a diminution of pain were the conſequences.

With regard to the fourth indication, the reſtoration of tone and energy to the ſyſtem, when the patient was in a ſtate of recovery, change of air and ſuitable diet were the means

means, which he found moſt uſeful. For, contrary to what is obſerved in moſt other febrile diſeaſes, Peruvian bark was here either uſeleſs or hurtful.

As long as the patient remained in the infected room, although all the ſymptoms of the diſeaſe had diſappeared, the progreſs of recovery was remarkably ſlow. Extreme debility was the immediate conſequence of the diſeaſe, in all caſes. But this convaleſcent debility was, Dr. Chiſholm tells us, of much ſhorter duration, after treatment with mercury, than any other. Of all the means of recovery from this ſtate, change of air and ſituation were the moſt efficacious.

Suitable diet was the next means of reſtoring the tone and energy to the ſyſtem. As ſoon as ſigns of recovery took place, the great object was, to ſelect ſuch articles of food, as were moſt palatable, moſt ſimple, moſt nouriſhing, and of ſmalleſt bulk. Sago, panada, and the preparation of the Indian arrow root, with a large proportion of Madeira wine, were by far the beſt. To theſe, therefore, with occaſionally the addition of a ſoft, freſh egg, Dr. Chiſholm confined his convaleſcents. All the convaleſ-

cents were uncommonly fond of porter and ſmall beer; and, as theſe always agreed well with the ſtomach, he generally indulged them in the liberal uſe of theſe liquors. Riding, alſo, and moderate exerciſe, of any kind, contributed very much to the reſtoration of health.

During the prevalence of ſuch a fever, the great prophylactics, according to Dr. Chiſholm, are temperature in eating and drinking, regularity in exerciſe, the proper diſtribution of time, with reſpect to ſleep and watching, attention to cleanlineſs of perſon, and the avoiding ſuch gratifications as have a tendency to weaken the vital powers.

After theſe general obſervations, farther to illuſtrate the hiſtory of this malignant, peſtilential fever, and throw additional light on the mode of treatment, Dr. Chiſholm gives a particular account of fifteen caſes, ſelected from many hundred, which fell under his obſervation. For theſe, however, we muſt refer our readers to the work itſelf, which, as containing much important information, reſpecting this dreadful diſeaſe, may juſtly be conſidered, as well deſerving a careful peruſal.

VIII.

VIII.

An Account of the Bilious Remitting Yellow Fever, as it appeared at Philadelphia, in the year 1793. By Benjamin Ruſh, M. D. Profeſſor of the Inſtitutes, and of Clinical Medicine, in the Univerſity of Pennſylvania. 8vo. Philadelphia.

THE learned and indefatigable author of the treatiſe, now before us, has had too many opportunities of witneſſing the fatal diſeaſe, an account of which is here preſented to the public. And his philanthropic exertions, in the line of his profeſſion, give him an unqueſtionable title to no uncommon ſhare of merit. We muſt, however, obſerve, that we can by no means adopt all his ſentiments or reaſoning on this ſubject. It is not, however, our intention here, to enter into any minute examination of his opinions; or to give any particular account of thoſe controverſies, which were carried on between Dr. Ruſh and ſome other practitioners of Philadelphia,

in a manner ill ſuited to a ſubject of ſuch ſerious concern. We ſhall here chiefly confine ourſelves to a faithful detail of thoſe practices, which Dr. Ruſh, from extenſive experience, found to be moſt ſucceſsful in combating this affection. We may only briefly obſerve, that, notwithſtanding the arguments, which Dr. Ruſh has brought to prove, that this diſeaſe originated in Philadelphia, from a quantity of damaged coffee, it appears to us much more probable, as was decidedly the opinion of the College of Phyſicians of Philadelphia, that the contagion was imported, about the beginning of Auguſt, 1793; firſt, becauſe it is certain, that a diſeaſe in every reſpect ſimilar, and marked by a ſimilar mortality, had, for ſeveral months before, prevailed in ſeveral of the Weſt Indian iſlands, to which, as appears by Dr. Chiſholm's excellent treatiſe, it had alſo been imported from Africa; and, ſecondly, Dr. Ruſh himſelf allows, that this diſeaſe made its dreadful ravages, in Philadelphia, in conſequence of being propagated, not from the original exhalation, which he ſuppoſes at firſt gave riſe to it, but from one individual to another, by contagion, which indeed

indeed he too ſeverely felt from his own perſonal experience.

Of Dr. Ruſh's theoretical opinions, reſpecting the manner in which this contagion operated on the human body, after the remarks which we have already offered on his doctrine, concerning pulmonary conſumption, it is perhaps unneceſſary to ſay any thing. We ſhall only obſerve, that thoſe who ſuppoſe, they have a ſatisfactory explanation of the operation of every cauſe of diſeaſe, and of every remedy, from its either increaſing or diminiſhing excitement, exhauſting or accumulating irritability, deceive themſelves moſt egregiouſly. This is inconteſtibly demonſtrated, by what we obſerve of contagious diſeaſes, particularly the febrile contagions. Thus, it muſt be univerſally admitted, the ſmall-pox never is produced by any other cauſe whatever, but the introduction of a peculiar and ſpecific contagious matter into the body; and that this ſpecific contagion never produces, in the firſt inſtance at leaſt, any other diſeaſe but ſmall-pox. In like manner, we have the ſtrongeſt reaſons for believing, that the contagion, giving riſe to this peſti-

lential fever, never produced any other affection, excepting as a ſequela of the primary diſeaſe; and, that the diſeaſe itſelf never aroſe from any other cauſe, but from this ſpecific contagion: yet, innumerable other cauſes daily give riſe to every poſſible degree, either of increaſed or diminiſhed excitement. Although, therefore, various conditions of the body, induced by many different cauſes, may tend either to forward, or retard the peculiar action of the contagion, yet, as no other cauſe can induce the diſeaſe, we muſt neceſſarily hold all that has been ſaid, as to its operation, ariſing from its inducing either direct or indirect debility, to be chimerical and erroneous. For, were the doctrine well founded, not only the fever, which is the ſubject of the preſent publication, but alſo ſmall-pox, meaſles, and various other affections of a ſimilar nature, ſhould every day, and in all nations, be induced by different cauſes. Inconteſtable facts, however, afford the cleareſt demonſtration, that this never has been the caſe.

But although we cannot aſſent to many of Dr. Ruſh's opinions, reſpecting the origin of this

this contagion, and the manner in which it operated on the human body; yet, his obſervations reſpecting the method of cure, founded on extenſive experience, well deſerve the attention of every medical practitioner. And of this we ſhall here endeavour to give a ſhort account. In the beginning of Auguſt, at the commencement of this fever in Philadelphia, Dr. Ruſh employed, with ſucceſs, gentle purges; but, after the 20th of that month, finding, that they were not productive of the wiſhed-for effects, he laid them aſide, and had recourſe to a gentle vomit of ipecacuanha, on the firſt day of the fever, and to the uſual remedies for exciting the action of the ſanguiferous ſyſtem. He gave the Peruvian bark, in all its uſual forms of infuſion, powder, and tincture. He joined it with wine, brandy, and aromatics. He applied bliſters to the limbs, neck, and head. Finding all theſe ineffectual, he attempted to rouſe the ſyſtem by wrapping the whole body in blankets dipt in warm vinegar. To theſe practices, he added one more, he rubbed the right ſide with mercurial ointment, with a view of exciting the action of the veſſels in the whole ſyſtem,

tem, through the medium of the liver, which he then ſuppoſed to be principally, though ſymptomatically, affected by the diſeaſe. None of theſe remedies, however, appeared to be of any ſervice. For, although three out of thirteen recovered, to whom they were applied, yet he had reaſon to believe, that they would have recovered much ſooner, had the cure been truſted to nature.

Perplexed and diſtreſſed by his want of ſucceſs in the treatment of this fever, Dr. Ruſh waited upon Dr. Stevens, an eminent and reſpectable phyſician from St. Croix, who happened to be at that time in Philadelphia; and aſked for ſuch advice and information upon the ſubject of the diſeaſe, as his practice in the Weſt Indies would naturally ſuggeſt.

His information to Dr. Ruſh was, that he had long laid aſide evacuations of all kinds in the yellow fever; that he had found them to be hurtful, and that the diſeaſe yielded more readily to Peruvian bark, wine, and, above all, to the uſe of the cold baths. He adviſed the bark to be given in large quantities, by glyſter, as well as by the mouth; and he directed

rected buckets full of cold water to be thrown frequently on the patients, after laying them in a proper veſſel.

The next day after this interview, Dr. Ruſh began the uſe of each of theſe practices, with great confidence of ſucceſs. He preſcribed Peruvian bark in large quantities; and, in one caſe, he ordered bark injections every four hours. But he had the mortification to find, that the bark was either offenſive to the ſtomach, or rejected by it, in every caſe in which he preſcribed it. The application of the cold water was in general grateful, and in ſeveral caſes produced relief, by inducing a moiſture on the ſkin; and, for ſome time, he had hopes of benefit from it. But, he was ſoon diſtreſſed to find this plan not more effectual, than thoſe which he had previouſly uſed. And, of the patients, to whom the cold bath was adminiſtered, in addition to the other remedies recommended by Dr. Stevens, three out of four died of the diſeaſe.

Baffled in theſe attempts to ſtop the ravages of this fever, from farther reflection on the ſubject, and the peruſal of a manuſcript account of the yellow fever, as it prevailed in Virginia,

Virginia, in the year 1741, Dr. Ruſh reſolved to try the effects of copious evacuation by purging; and, to this he was encouraged from the account given, of the benefit derived from purging, by Sir John Pringle, Dr. Cleghorn, and Dr. Balfour, in diſeaſes of the ſame claſs with the yellow fever.

He reſolved, on mature deliberation, to make trial of a purgative, which he had often ſeen employed in bilious fever, by Dr. Thomas Young; ten grains of calomel combined with as much powder of jallap. But, finding ten grains of jallap inſufficient to carry the calomel through the bowels, in the rapid manner he wiſhed, he added fifteen grains of the former to ten of the latter. But, finding that even this doſe was ſlow and uncertain, in its operation, he iſſued to his patients three doſes, each conſiſting of fifteen grains of jallap and ten of calomel; and directed one to be given every ſix hours, till they procured four or five large evacuations. The effect of this powder, he tells us, not only anſwered, but far exceeded his expectations; for, it perfectly cured four, out of the firſt five patients,

to

to whom he gave it, though ſome of them were advanced ſeveral days in the diſorder.

After ſuch proof of the ſafety and ſucceſs of this purgative, Dr. Ruſh gave it afterwards with confidence. He imparted the preſcription to the College of Phyſicians, on the 3d of September, and he endeavoured to remove the fears of his fellow-citizens, by aſſuring them, that the diſeaſe was no longer incurable. Many other practitioners, the names of eight of whom he particularly mentions, immediately adopted the practice with equal ſucceſs.

Dr. Ruſh did not, however, he tells us, rely upon purging alone, to cure the diſeaſe. His theory led him to the uſe of other remedies, to abſtract exceſs of ſtimulus from the ſyſtem. Theſe were blood-letting, cool drinks, low diet, and the applications of cold water to the body.

According to Dr. Ruſh, the following effects were obſerved to reſult from purging in this diſeaſe.

1ſt. It raiſed the pulſe, when low, and reduced it, when præternaturally full.

2d. It revived and ſtrengthened the patient,

as

as was evident, from the facility with which patients, who had ſtaggered to a cloſe ſtool, walked back again to bed after a copious evacuation.

3d. It abated the paroxiſm of the fever.

4th. It frequently produced ſweats, when given on the firſt or ſecond day of the fever, after the moſt powerful ſudorifics had been taken to no purpoſe.

5th. It ſometimes checked the vomiting, which occurred in the beginning of the diſorder, and it always aſſiſted in preventing the more alarming occurrence of that ſymptom, about the 4th or 5th day.

6th. It removed obſtructions in the lymphatic ſyſtem.

7th. It prevented, in moſt caſes, a yellowneſs of the ſkin, by diſcharging the bile through the bowels, as ſoon, and as faſt, as it was ſecreted.

The reaſons, which determined Dr. Ruſh to have recourſe to blood-letting, were,

1ſt. The ſtate of the pulſe, which became more tenſe, in proportion as the weather became more cool.

2d. The appearance of a moiſt and white tongue,

tongue, on the firſt day of the diſorder, a certain ſign of an inflammatory fever.

3*d*. The frequency of hæmorrhagies from every part of the body, and the perfect relief given by them, in ſome caſes.

4*th*. The ſymptoms of congeſtion in the brain, reſembling thoſe which occur in the firſt ſtage of hydrocephalus internus.

5*th*. The character of the diſeaſes, which had preceded the yellow fever, and were all more or leſs inflammatory.

6*th*. The warm and dry weather, which had likewiſe preceded the fever.

After having begun to employ blood-letting in this diſeaſe, Dr. Ruſh was encouraged to continue it, by the appearance of the blood, and by the obvious and very great relief which his patients derived from it.

He gives the following account of the appearances of the blood, drawn from a vein in this diſeaſe.

1*ſt*. It was, in the greateſt number of caſes, denſe, and of a ſcarlet colour, without any ſeparation into craſſamentum and ſerum.

2*d*. There was, in ſome caſes, a ſeparation of

of the blood, into craſſamentum and yellow ſerum.

3d. There were a few caſes, in which this ſeparation took place, and the ſerum was of a natural colour.

4th. There were many caſes, in which the blood was as ſizy, as in pneumony and rheumatiſm.

5th. The blood was, in ſome inſtances covered above, with a blue pellicle of ſizy lymph, while the part, which lay in the bottom of the bowl, was diſſolved.

6th. It was, in a few inſtances, of a dark colour, and as fluid as molaſſes.

7th. In ſome patients, the blood, in the courſe of the diſeaſe, exhibited nearly all the appearances which have been mentioned.—They were varied, by the time in which the blood was drawn, and by the nature and force of the remedies, which had been uſed in the diſorder.

Dr. Ruſh repreſents the following as being the effects of blood-letting upon the ſyſtem.

1ſt. It raiſed the pulſe, when depreſſed, and quickened

quickened it when it was prematurely ſlow, or ſubject to intermiſſions.

2*d*. It reduced its force and celerity.

3*d*. It checked, in many caſes, the vomiting, which occurred in the beginning of the diſorder, and thereby enabled the ſtomach to retain the purging medicine.

4*th*. It leſſened the difficulty of opening the bowels.

5*th*. It removed delirium, coma, and obſtinate watchfulneſs. It alſo prevented and checked hemorrhagies.

6*th*. It diſpoſed, in ſome caſes, to a gentle perſpiration.

7*th*. It leſſened the ſenſibility of the ſyſtem; and accordingly patients, he tells us, frequently roſe from their beds, and walked acroſs their rooms, in a few hours after the operation had been performed.

8*th*. The redneſs of the eyes frequently diſappeared, in a few hours after bleeding.

9*th*. It eaſed pain.

10*th*. But, in many caſes, it had an effect, the oppoſite of eaſing pain. It frequently increaſed it in every part of the body, more

eſpecially in the head, which reſulted, Dr. Ruſh thinks, from too ſparing an abſtraction.

11*th*. When uſed early on the firſt day, it frequently ſtrangled the diſeaſe in its birth, and generally rendered it more light, and the convaleſcence more ſpeedy and perfect.

12*th*. In thoſe caſes which ended fatally, blood-letting reſtored or preſerved the uſe of reaſon, rendered death more eaſy, and retarded the putrefaction of the body after death.

With regard to the circumſtances, which regulated the uſe of blood-letting, Dr. Ruſh obſerves, that in acute caſes, where it had been omitted for three days, it was ſeldom uſeful. He preferred bleeding in the exacerbation of the fever, but he bled in ſeveral inſtances in the remiſſion, when the pulſe was tenſe and chorded. And if this was its ſtate, he bled, although it was præternaturally ſlow. He directed blood-letting alſo, both in thoſe caſes where the fever appeared in a tertian form, and where the patient was able to walk about, if he found the pulſe full and tenſe. For he obſerved, that theſe ſuppoſed mild forms of the diſeaſe, when left to themſelves, frequently

frequently terminated in death. A diſſolved ſtate of the blood, and the preſence of petechiæ, did not deter him from the repetition of blood-letting, provided the pulſe retained its fulneſs and tenſion. He conſidered a diminution of the force and frequency of the pulſe, together with the abſence of vomiting, as the only ſignals for laying aſide the lancet. And it was remarkable, he tells us, that fainting was much leſs common after bleeding, in this fever, than in ordinary inflammatory fevers.

Having thus endeavoured to give a full view of Dr. Ruſh's obſervations, reſpecting the uſe of cathartics, and of blood-letting, in this fever, it will be unneceſſary to ſay much of the other practices, which he employed; eſpecially as, with regard to the advantages derived from theſe, in fevers in general, almoſt all practitioners are agreed.

Cool and freſh air were found to be highly grateful and beneficial to thoſe labouring under this fever; and the ſame benefits reſulted from the uſe of cold drinks. Theſe conſiſted chiefly of lemonade, tamarind, jelly, and apple-water. Theſe drinks alone were taken

in the early ſtage of the diſorder. Towards the cloſe of it he permitted the uſe of porter and water, weak punch, and, when the ſtomach would bear it, weak wine whey.

Dr. Ruſh forbade all cordial and ſtimulating food; and he obſerved, that the leſs his patients ate, even of the mildeſt vegetable food, the ſooner they recovered. As the action of the pulſe diminiſhed, he indulged his patients with weak chocolate, with milk, to which roaſted apples were added, or the like. And, towards the criſis, he adviſed the drinking of weak chicken, veal, or mutton broth. After the criſis had taken place, he permitted mild animal food to be eaten in ſmall quantity, and to be increaſed according to the waſte of the ſyſtem.

Cold water, Dr. Ruſh obſerves, was a moſt agreeable and powerful remedy, in this diſorder. He directed it to be applied by means of napkins, to the head, and to be injected into the bowels by way of glyſter. He likewiſe adviſed the waſhing of the face and hands, and ſometimes the feet with cold water, and always with advantage.

Dr. Ruſh had obſerved, that ſuch of his patients

patients as were ſalivated by the mercurial purge, recovered in a few days. This led him to conclude, that calomel might be applied to other purpoſes, than that of diſcharging bile from the bowels. And he accordingly employed it with advantage, to excite a ſalivation as ſoon as poſſible.

There were ſeveral ſymptoms in this diſeaſe, which, according to Dr. Ruſh, required a ſpecific treatment. For the vomiting with a burning ſenſation in the ſtomach, which came on about the fifth day, he found no remedy equal to a table ſpoonful of ſweet milk, taken every hour, or to ſmall draughts of milk and water. The vomiting was ſometimes ſtopped by a bliſter, applied to the external region of the ſtomach. A mixture of liquid laudanum and ſweet oil, applied to the ſame place, gave relief, where the ſtomach was affected by pain only, without vomiting. A diſtreſſing pain, which often ſeized the lower part of the bowels, yielded, in almoſt every caſe, to two or three emollient clyſters, or to the loſs of a few ounces of blood.

Dr. Ruſh concludes this treatiſe, with ſome ſtrictures on the mode of treatment, adopted

by ſome other phyſicians. But of theſe we ſhall here ſay nothing; referring ſuch of our readers, as wiſh to conſider them, to the work itſelf. Dr. Ruſh is certainly entitled to the higheſt praiſe, for the unwearied attention which he beſtowed upon this diſeaſe, and for the benevolent liberality of ſentiment, with which he took the ſpeedieſt method of communicating, both to medical practitioners, and to the public at large, that practice, which he found to be moſt effectual. It is, however, to be lamented, that, notwithſtanding his beſt endeavours, the mortality from this diſeaſe was uncommonly great. From the liſt, which Dr. Ruſh has publiſhed, of the burials of each day, from the 1ſt of Auguſt, to the 10th of November, there is reaſon to preſume, that upwards of three thouſand of the inhabitants of Philadelphia, fell victims to this diſeaſe, during that period. It is, we think, no improbable calculation, that at leaſt one fifth of all who were affected with this diſeaſe, were cut off by it. And from the account, which Dr. Ruſh has given, it appears, that the deaths in his own family

family were not under this proportion.—More ſucceſsful methods, therefore, of combating, in future, the fatality of ſuch an affection, are ſtill a deſideratum in medicine.

IX.

A Treatiſe on the Synochus Icteroides, or Yellow Fever, as it lately appeared in the City of Philadelphia; exhibiting a Conciſe View of its Riſe, Progreſs, aud Symptoms, together with the method of Treatment, found moſt ſucceſsful; alſo Remarks on the nature of its Contagion, and directions for preventing the introduction of the ſame malady in future. By William Currie, *M. D. Fellow of the College of Phyſicians of Philadelphia, and Member of the American Philoſophical Society.* 8vo. Philadelphia.

THIS treatiſe is introduced by a ſhort ſketch of the riſe and progreſs of the diſeaſe which is here treated of. Dr. Currie aſſerts, contrary to the opinion of Dr. Ruſh, that this diſeaſe was imported into Philadelphia, by a veſſel which lay at a wharf, in the neighbourhood of Water Street, the place in which it was firſt obſerved. When it is con-

ſidered

ſidered, that this diſeaſe was moſt extenſively and readily communicated in Philadelphia, by contagion from one individual to another, that a ſimilar diſeaſe had, for ſeveral months before, prevailed with great fatality in the Weſt Indian iſlands, and that many opportunities muſt have occurred, for the diſeaſe being tranſported from thence, this opinion appears to us, as we have indeed formerly obſerved, much more probable than the conjecture of Dr. Ruſh, who ſuppoſes that it aroſe from an exhalation, afforded by ſome damaged coffee; a circumſtance, which may certainly be conſidered, as a much leſs powerful cauſe of diſeaſe, than many other exhalations, to which every large city is almoſt conſtantly expoſed.

Upon the firſt appearance of the diſeaſe, almoſt every caſe, which occurred for the firſt week or two, could be traced to the ſource, at which it at firſt commenced. From this ſource, it ſpread gradually by contagion, over the greateſt part of the city. It made its firſt appearance in the beginning of Auguſt. The greateſt number confined with it was about the middle of October, when it was computed

ted, that more than eight thouſand perſons laboured under it, at the ſame time. But after that time, its declenſion was ſo rapid, that it appeared, as if extinguiſhed by a miracle. For, by the 10th of November, there was ſcarcely a perſon to be found ſubjected to it.

Although this diſeaſe was highly contagious, yet the influence of this contagion, Dr. Currie tells us, was circumſcribed to a narrow ſphere; for none but thoſe who approached near to the ſick, or to ſuch articles as had been in contact with them, were affected.

All, who either ſhut themſelves up in their houſes, or even carefully avoided all intercourſe, either directly or indirectly with the ſick, though conſtantly abroad in the open ſtreets, eſcaped the diſeaſe. The priſoners in the jail and work-houſe, the penſioners in the poor-houſe, and the patients in the hoſpital, who were effectually excluded from all intercourſe, with the infected, alſo entirely eſcaped the diſeaſe.

Thoſe expoſed to the contagion generally began to be affected, we are told, between the third

third and the eighth day. The ſtate of mind ſeemed to have great influence in haſtening or retarding the effects of the contagion. Thoſe under the influence of fear were ſooner affected, after expoſure, than thoſe who were leſs concerned. Abſtemious regimen, exceſſive fatigue, frequent purging, blood-letting, and expoſure to night air, had a ſimilar effect. But a lax ſtate of the bowels appeared to have ſome influence in rendering the diſeaſe more mild. Neither age nor ſex were exempt from it, not even infants at the breaſt. But thoſe who were fat, corpulent, and indolent, were obſerved to be both moſt ſuſceptible of the contagion and to ſuffer moſt.

It was a remarkable circumſtance, that the French from St. Domingo, who had taken ſhelter in Philadelphia, from a ſanguinary war, almoſt to a man eſcaped the diſeaſe; while thoſe from France were as liable to it as the natives of Philadelphia. This Dr. Currie aſcribes, and with ſome degree of probability, to the Weſt Indians being before accuſtomed to a warm climate, and to the effects produced by the frequent large excretions of bile,

bile, to which they are particularly ſubject, rendering the duodenum and biliary ducts inſenſible to the poiſon. It is, he obſerves, a ſingular fact, that, in the Weſt Indies, this diſeaſe ſeldom affects any but ſtangers, or new comers, from a colder or more temperate climate.

In Philadelphia, the whole inhabitants might be conſidered as on the ſame footing with ſtrangers in the Weſt Indies. For the only difference was, that, in place of being carried to the contagion, the contagion was brought to them.

We will not pretend to ſay, that Dr. Currie's explanation of this remarkable fact is ill founded. But another conjecture may perhaps be hazarded, with no leſs appearance of probability, drawn from the analogy of ſmall-pox, meaſles, and other ſimilar febrile contagions. It is well known, that in theſe diſeaſes, the being once ſubjected to the complaint, affords almoſt certain defence againſt future contagion. In this diſeaſe, in like manner, the action of a firſt contagion, though it do not altogether prevent, may yet at leaſt diminiſh the influence of future contagion.

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On the ſame principle, we may perhaps alſo account for the ſudden ceaſing of this diſeaſe in Philadelphia, about the beginning of November. This may have ariſen from all who were at that time ſuſceptible of the action of contagion, having been already acted upon by it. The change of temperature will hardly we think, account for its diſappearing ſo ſuddenly. For, from the thermometrical obſervations, publiſhed by Dr. Ruſh, it appears, that the cold was by no means great. Moſt contagions act very readily at a degree much inferior to what is there obſerved. And we know, that other contagions entering towns, as, for example, that of the influenza, often ceaſe as ſuddenly, when no explanation can be given from any change in the ſenſible qualities of the atmoſphere.

The conjecture here offered is, in ſome degree, corroborated by the obſervations of Dr. Linning, who has aſſerted, that, at Charleſtown, thoſe, who once had the diſeaſe, could not take it a ſecond time. Although this obſervation may not be ſtrictly true, and although ſome indubitable inſtances may have occurred at Philadelphia, of a ſecond attack

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in the ſame perſon, yet this is no more than has, in certain inſtances, been obſerved, both with regard to ſmall-pox, meaſles, and ſcarlet fever. Notwithſtanding ſuch exceptions, the action of contagion on the body, may have a very conſiderable effect in diminiſhing its future action. Thus, thoſe who have lived long in ſituations where it is frequent, may be preſumed to have been ſubjected to it in early life, and may, by this means, have obtained ſome defence againſt the future influence of the ſame contagion.

After a conciſe, but diſtinct, and apparently accurate, hiſtory of the diſeaſe, which he thinks, from the moſt common progreſs of the ſymptoms, may be divided into three ſtages, in the firſt of which inflammatory, in the ſecond bilious, and in the third putreſcent ſymptoms prevailed, Dr. Currie proceeds to treat of the prognoſis. He gives a very explicit view of the favourable and unfavourable ſymptoms in each ſtage.

The favourable ſigns in the firſt ſtage were hæmorrhagies from the noſe, with relief of the head during the exacerbations; a gradual reduction of the pulſe, heat and oppreſſion at the

the præcordia, a diarrhœa, or looſe ſtools mixed with bile, coming on before the third day. The unfavourable ſymptoms of the firſt ſtage were, a ſtrong, hard, and quick pulſe, with furious delirium, and pervigilium; a quick, ſmall, and irregular pulſe, with low delirium; great muſcular debility, exquiſite pain at the ſtomach, oppreſſion and ſenſe of ſtricture at the præcordia, great thirſt, conſtant nauſea, retching and reſtleſſneſs; obſtinate coſtiveneſs, and the ſtools of a whitiſh colour. A want of action in the bowels, a great inſenſibility to purges and clyſters, alſo gave room for much apprehenſion.

In the ſecond ſtage, the favourable ſigns were, an abatement of the vomiting, anxiety and oppreſſion at the præcordia, relief from the burning pain at the ſtomach; natural heat in the forehead and limbs; open bowels; natural coloured ſtools, and turbid urine. The unfavourable ſigns were, an increaſe of muſcular debility, oppreſſion, anxiety, inceſſant vomiting, a rapid increaſe of the icteritious aſpect, reſtleſſneſs, frequent ſighing, coſtiveneſs, or bloody ſtools, accompanied with a painful teneſmus, hollow eyes, ſhrunk countenance

nance, ſhrill voice, obſtinate pervigilium, but, above all, an invincible irritability of the ſtomach, which prevented it from retaining any kind of drink, aliment, or medicines, and a gradual receſſion of heat from the ſurface of the body.

In the third and laſt ſtage, the favourable ſymptoms were, a return of heat to the ſurface of the body, ceſſation of delirium, and a change of colour in the matter diſcharged by vomiting. The ſymptoms in this ſtage, which chiefly denoted a ſpeedy diſſolution, were the ſudden ceſſation of pain and fever, coldneſs of the face and limbs, black vomiting, black ſtools, conſtant ſingultus, coma, hæmorrhagy, a ſenſe of great weight and ſtricture about the epigaſtric region, deep and frequent ſighing; and a great failure of ſtrength.

In treating of the method of cure, Dr. Currie very judiciouſly obſerves, that no one mode of treatment could, with propriety, be purſued in every caſe; but that it was requiſite to vary it, particularly as the ſymptoms indicated, from the beginning, an inflammatory or putrid tendency; as well as to adjuſt it to the ſeveral ſtages of the diſeaſe. In all caſes,

caſes, when the activity of the arterial ſyſtem was evidently increaſed, and when the head and epigaſtrium were much affected, blood-letting very generally afforded relief; and this operation was found ſerviceable, when repeated every ſix or eight hours, for the firſt twenty-four or thirty-ſix hours, after the eſtabliſhment of the paroxiſm.

In conjunction with blood-letting, mercurial purges were found more certain in their effects, and more ſerviceable than any other; eſpecially when calomel was exhibited in doſes, from ſix to twelve grains, repeated every ſix or eight hours, till a copious diſcharge took place.

The difficulty of retaining ſaline purgatives, and the very great difficulty of procuring copious evacuations by ſtool, without which the topical affection obſtructing the paſſage of bile could not be removed, nor the propenſity to vomiting relieved, made calomel preferable to any other. For, notwithſtanding the inflamed and irritable ſtate of thoſe parts, it readily paſſed the pylorus, occaſioning leſs irritation, till it reached the in-

teſtines, and being leſs liable to be rejected by vomiting than any other purgative.

The moſt difficult part of the treatment in this diſeaſe, conſiſted in putting the ſtomach in a condition to retain any thing. Nothing ſo certainly produced this effect as a copious diarrhœa, when it could be procured; and, with this view, nothing ſucceeded ſo well as calomel.

When, on the firſt or ſecond day of the diſeaſe, the face was greatly flushed, the veſſels of the tunica adnata very red and turgid, and the patient affected with delirium, he generally died in a ſhort time, unleſs copiouſly blooded and purged. With theſe, it is perhaps needleſs to obſerve, were conjoined cleanlineſs, cool air, the moſt abſtemious diet, refrigerant drinks, and every other part of the antiphlogiſtic regimen.

When theſe meaſures, however, failed in alleviating the urgent ſymptoms, particularly the vomiting, bliſters applied to the ſtomach, the legs, or the inſide of the thighs, had ſometimes a good effect, eſpecially when purging clyſters were at the ſame time employed. Opium,

pium, in place of relieving the vomiting, was very generally found to aggravate it.

When, in the ſecond ſtage of this fever, the inflammatory ſtate verged towards gangrene, the weakneſs was ſuch as to render bleeding inadmiſſible, and the irritable ſtate of the ſtomach precluded all expectation from purgatives, as they were rejected, as well as every thing elſe, the inſtant they reached the ſtomach. Then the only reſources were, warm fomentations to the region of the ſtomach, the application of bliſters, the frequent exhibition of laxative clyſters, and, after free evacuation by means of theſe, the injection of Peruvian bark with laudanum.

We have thus endeavoured to give a ſhort view of the moſt important particulars in the treatment of this diſeaſe, recommended by Dr. Currie; but although he conſiders the practices now pointed out as moſt generally applicable, yet he obſerves, that when this diſeaſe began, which was ſometimes the caſe, with great proſtration of ſtrength, and other ſymptoms which denote a typhous diatheſis, wine was found not only to be ſafe, but more uſeful than any other article. And in theſe

caſes, he tells us, that the early uſe of Peruvian bark, in various forms, together with laudanum and volatile ſalts, were of ſervice. But the practice which in ſuch inſtances he found moſt beneficial, was the ſhower-bath of ſalt water, applied quite cold three times a-day; the patient ſitting in an arm-chair, in a large tub for the purpoſe, his head being previouſly ſhaved, or covered with a thin bathing cap of oiled cloth. But when black vomiting, and coldneſs of the limbs, were the moſt predominant ſymptoms, all attempts to relieve were, he obſerves, very generally ineffectual.

We have thus endeavoured to preſent to our readers a brief account of the moſt important practical obſervations, made with reſpect to this diſeaſe, by three intelligent and induſtrious practitioners; and although we muſt acknowledge, that, while to us ſome of the theoretical opinions maintained upon the ſubject appear to be very erroneous, and there are among theſe writers not a few contradictions, even with reſpect to facts, yet it can hardly be denied, that there is ſuch a general coincidence, as to eſtabliſh the utility of certain practices

practices. There cannot be a doubt, that all the various ſymptoms of this diſeaſe, too frequently terminating fatally, were effects produced by a foreign contagion introduced into the body. And it would ſeem, that one of the firſt and moſt alarming of theſe effects was the induction of a peculiar inflammation, more eſpecially in particular parts. It is well known, that other foreign contagions, inducing diſeaſe in the human body, as thoſe of ſmall-pox, meaſles, chincough, influenza, and the like, act more eſpecially, and in a very peculiar manner, on certain parts, ſome on the ſurface, others on the lungs; and, in this diſeaſe, though the appearances, which have been diſcovered by the moſt accurate diſſection, do not by any means aſcertain the cauſe of the great mortality of the diſeaſe; yet to us they ſeem to ſhew, that its peculiar contagion acts in a more eſpecial manner on the ſtomach, the lungs, and the brain. There is good reaſon to believe, that its firſt effect on theſe organs is the induction of a certain ſtate of inflammation; and it is probably by alleviating or removing theſe or other effects of the contagion, that the prac-

tices found beneficial have produced their good effects.

Although blood-letting ſeemed to be productive of bad effects in the Weſt Indies, at a time when the heat of the atmoſphere was very great, and when the tendency of the inflammation to the gangrenous or putreſcent ſtate was very ſtrong, yet, from the concurring teſtimony of different practitioners, there can be no doubt, that it was found highly uſeful in America, particularly when, during the continuance of the epidemic in Philadelphia, the weather became colder. Powerful cathartics, particularly mercurial ones, were found highly beneficial in every ſituation, both as alleviating the violence of the affection, and mitigating the moſt diſtreſſing ſymptoms. And a ſtrict obſervance of every part of the antiphlogiſtic regimen ſeemed very generally to be productive of benefit. When, however, from the induction of a ſalivation, there was certain evidence of mercury having been fully introduced into the circulating ſyſtem, and exiſting there in an active ſtate, it would appear that the diſeaſe almoſt univerſally yielded to the remedy.

This

This at leaſt ſeems to us to be confirmed by what we reckon indubitable authority. Is there not, therefore, ſome room for conjecturing, that while other practices may have been uſeful, as counteracting and diminiſhing the effects of the contagion, mercury may have contributed to the cure of the diſeaſe, by deſtroying the activity of the contagious matter? Its influence in the cure of ſyphilis gives at leaſt ſome countenance to this ſuppoſition. For although it cannot be repreſented as deſtroying the activity of every contagious matter, yet there can be no doubt that it counteracts ſome others as well as that of ſyphilis.

We do not indeed offer this opinion on any other footing than that of mere conjecture. But it is reſted at leaſt on ſuch grounds as may lead thoſe practitioners who have hereafter the misfortune to meet with this epidemic, to give a fair trial to mercury, copiouſly introduced into the ſyſtem in the moſt ſpeedy manner; and particularly under the form of extenſive friction, both of the inferior extremities, and likewiſe of other parts of the body. This, however, as well as many other particulars reſpecting this diſeaſe, can

be aſcertained by future experience and candid obſervation alone. And much yet remains to be aſcertained. For the vain idea, that a fixed principle in medicine is already diſcovered, by which we can triumph over this formidable diſeaſe, is completely refuted, with every man of common underſtanding, by the deplorable mortality of which it was lately productive at Philadelphia. This mortality clearly demonſtrated, what indeed few practitioners of candour and integrity will deny, that medicine, notwithſtanding its late boaſted improvements, is ſtill at beſt but an uncertain and a conjectural art.

X.

X.

Heinrich Matthias Marcard, Herzoglich Holl-ſtein Oldenburgiſcher Leibmedicus zu Oldenburg. der Konigl. Societat. der Wiſſenſchaften zu Gottingen, zu Copenhagen, & zu Edinburg, Mitglied, &c. Ueber die Natur, und Gebrauch der Bader. 8vo. Hanover.

THE author of this work is already well known, on account of ſeveral excellent publications in medicine. Intending to write an hiſtory of the mineral baths at Pyrmont, where he has practiſed for ſome years, he was naturally led to conſider the effects of bathing in pure water. But, upon conſulting the authors who have treated of this ſubject, he did not find, either in the works of his own countrymen, or of foreigners, any thing very ſatisfactory. Their accounts were commonly hypothetical, and the facts and obſervations of ſome were in direct oppoſition to thoſe of others.

Since

Since the ſubject, therefore, was involved in ſuch obſcurity and uncertainty, Dr. Marcard was induced to examine more minutely the effects produced on the human body by bathing in pure water. By the uſeful remarks which he derived from the works of others, and from his own obſervations and experiments, what he collected on this ſubject increaſed to ſuch a ſize, as to induce him to publiſh it ſeparately.

Of a work of this kind, the profeſſed intention of which is to give a complete and circumſtantial account of the ſubject of bathing, and which therefore muſt neceſſarily involve minute details of matters already known to moſt of our readers, it would be ſuperfluous to give a very full analyſis. We ſhall here, therefore, confine ourſelves either to what is moſt important on the ſubject, or to what is moſt peculiar in the opinions and obſervations of our author.

Dr. Marcard begins by dividing baths into four claſſes, and by aſſigning to each claſs a certain range of the thermometer. The term hot bath comprehends every degree above 96 in the ſcale of Fahrenheit. The limits of what

what he calls the warm bath he fixes from 96 to 85. Thoſe of the cool or tepid bath from 85 to 65. And all below this he calls the cold bath. admits, that a claſſification which derives its names from the ſenſations of mankind, as theſe vary in almoſt every individual, muſt naturally be ambiguous. Yet it is, he thinks, of the utmoſt conſequence, in every inveſtigation, that the ideas affixed to each word ſhould be accurately defined; and the philoſophical ſpirit which has lately been introduced into the ſcience of medicine demands this accuracy. One great ſource of the contradictory accounts of authors, reſpecting the effects of bathing, has, he thinks, ariſen from not defining, with ſufficient preciſion, the terms uſed.

Dr. Marcard begins with the hiſtory and effects of the warm bath. No opinion, he remarks, has been more commonly ſpread among the vulgar, and no one more univerſally adopted by medical writers, than that the warm bath relaxes the ſimple fibre, and debilitates the living fibre. The known effects of heat, and of heat conjoined with moiſture, the conſtringing and tonic effects of its oppoſite,

ſite, cold bathing, and the writings both of poets and hiſtorians, have contributed to confirm this opinion. Dr. Marcard, however, here ventures to call it in queſtion.

He obſerves, that the univerſal practice of uſing the warm bath among all eaſtern nations, from the earlieſt accounts we have of them (a practice which is now interwoven with their religion), would lead us to think, that warm bathing is not ſo debilitating as has been ſuppoſed. And that this was the opinion of the ancients, may be inferred from the warm baths being dedicated to Hercules, to whom, according to their mythological accounts, Pallas diſcovered them when he was tired driving the oxen of Geryon through Sicily.

Some experiments have indeed been made on dead animal fibres, in favour of the relaxing power of the warm bath. But reaſoning from theſe is, he thinks, inapplicable to the living body, from the different circumſtances in which each is placed. The living animal fibre has no empty pores, which abſorb the ſurrounding fluid. On the contrary, it contains an oleaginous fluid, which repels water.

ter. The more interior fibres are conſtantly ſurrounded with a fluid which is heated to 96 degrees. The effects of warm bathing, therefore, cannot, he obſerves, reach farther than the ſkin, or the parts immediately beneath it.

But, independent of all theoretical reaſoning, Dr. Marcard's obſervations, from actual practice, led him to think, that the effects of warm bathing on the living human body are not debilitating. At Pyrmont, during ſixteen years, he has had occaſion to ſee ſeveral thouſand ſick perſons make uſe of the warm baths. A great many of theſe were naturally of delicate and weak conſtitutions, and ſome of them were much debilitated by diſeaſe; yet, by the uſe of the warm bath, many of them were reſtored to their former ſtrength, and none of them complained of its debilitating effects. On the contrary, they felt themſelves ſtronger on the days on which they uſed it. This could not be attributed to the chemical ingredients of the Pyrmont water, ſince Dr. Marcard was in the habit of preſcribing bathing in common water, heated to the ſame temperature as that of the Pyrmont baths, and obſerved

obſerved the ſame effects from the former as from the latter. In confirmation of this, he relates the caſe of a lady, who had for three years been in a very bad ſtate of health, and at laſt became ſo weak, that ſhe was unable to turn herſelf in bed without aſſiſtance. She had taken Peruvian bark, and a variety of other tonic medicines, without receiving any benefit. As the laſt reſource, the warm bath was preſcribed. It was employed every ſecond day, and almoſt from the firſt time of uſing it ſhe felt herſelf ſtronger. In the ſpace of two months ſhe was perfectly cured.

But while Dr. Marcard thus endeavours to prove, that the common opinion, reſpecting the debilitating and relaxing powers of the warm bath, is not well founded, he does not deny that theſe effects do ſometimes happen. Caſes of this kind occur in many authors, and he has ſeen ſeveral of them himſelf. But ſuch effects cannot, he thinks, be aſcribed to the immediate action of the warm bath, but to a certain peculiar irritability of the nervous ſyſtem, or to the warmth of the bath favouring the action of a colder atmoſphere. The error of authors, in aſcribing debilitating effects

to

to the warm bath, ariſes, Dr. Marcard thinks, from their confounding it with the hot bath.

It is the opinion of moſt of the moderns, that the warm bath increaſes the temperature of the body. But the ancients did not think ſo, as it was preſcribed by Hippocrates and Galen, in inflammatory diſeaſes. Dr. Marcard aſcribes this miſtake of the moderns to their not having ſufficiently diſtinguiſhed between the hot and the warm bath. The beautiful experiments of Drs. Fordyce, Blagden, &c. in heated rooms, ſhew that the human body can ſupport an aſtoniſhing degree of heat, without its own heat being increaſed. But this, Dr. Marcard obſerves, is not the caſe when water is the medium through which heat is conveyed to the human body. By the heat of water at 112 degrees, the pulſe becomes quicker, the ſenſation of heat is great, and the actual temperature of the body is increaſed ſeveral degrees, as appears from the experiments made by Dr. Parr. But in the warm bath, the heat of which does not exceed 96 degrees, he affirms that the heat of the body is not increaſed. He has not, however,

however, related any experiments on this ſubject.

Authors have differed much in their accounts of the effects of warm bathing on the pulſe. To be able, therefore, to determine truth amidſt contradictory accounts, to remedy the want of accurate obſervation, and to ſee if the effects of the warm bath followed any determined and fixed law, Dr. Marcard was induced to make ſome experiments on this ſubject. Theſe, to the number of twenty-five, are related in this treatiſe; and they appear to have been made with great accuracy, and due attention to all the concomitant circumſtances. As they do not, however, admit of an abridgement, we ſhall here confine ourſelves to the concluſions drawn from them, which are the following.

1ſt. Every bath, the temperature of which is under 96 degrees, diminiſhes the velocity of the circulation.

2d. The more the pulſe deviates from a ſtate of health, the more it is diminiſhed in quickneſs by the warm bath.

3d. The degree of heat of the warm bath, which appears to have the greateſt effect, in diminiſhing

diminiſhing the morbid frequency of the pulſe, is between 96 and 85 degrees, which are therefore the limits which have been aſſigned to the warm bath.

4th. The longer the bath is continued, the ſlower does the pulſe become. Dr. Marcard reduced his own pulſe in an hour and a half to fifty-four beats in a minute. But what the period of time is at which the warm bath ceaſes to have this effect, has not yet been determined.

5th. Although it may be aſſumed, as a general law, that the warm bath diminiſhes the frequency of the pulſe; yet ſo far is this diminution of frequency from being in direct proportion to the diminution of heat, that it appears the ſame temperature had not at all times the ſame effect on the ſame perſon, far leſs on different perſons. In one caſe only, however, he found that the warm bath increaſed the velocity of the pulſe.

Nature, Dr. Marcard obſerves, has afforded various means of increaſing the velocity of the circulation; but ſhe has given us very few by which it can be made ſlower. He therefore very properly calls our attention to the above effect of warm bathing, in the cure of

diſeaſes, as it is a remedy which is much milder, and more eaſily managed, than any of the medicines called ſedatives. Fevers, he obſerves, naturally preſent themſelves as the firſt diſeaſe, in which we ſhould, *a priori*, conceive them to be moſt uſeful. Here, however, Dr. Marcard merely informs us of what the ancients, and ſome moderns, have written and thought on this ſubject, without pointing out from his own experience either the particular kinds of fever, to which the warm bath is beſt adapted, or the particular periods of the fever, at which the greateſt benefit may be expected from the uſe of it. A proper knowledge, therefore, of the uſe of the warm bath in fevers, ſtill remains to be inveſtigated.

Dr. Marcard next preſents us with a learned account of the uſe of the warm bath in ſmall-pox, from which he ſhews that it was frequently uſed in this diſeaſe, from its very firſt appearance in Europe. But more ſeems to have been ſaid of it from theory than from actual practice. He gives us an account, however, of a ſmall diſtrict in Hungary, ſituated among the Carpathian hills, which is an exception to this. There, as ſoon as a child falls ſick, when there is reaſon to ſuſpect that

that the ſickneſs ariſes from the infection of the ſmall-pox, it is inſtantly put into a warm bath of pure water. As ſoon as it comes out of the bath, it is wrapt in warm linen and put to bed. This practice is continued twice a-day, from half an hour to an hour at a time, even after the puſtules come out, and until their maturation. The ſame practice is afterwards ſtill continued; but inſtead of the pure water, whey is uſed, or if it cannot be procured, milk and water in equal proportion is ſubſtituted. During the diſeaſe they give no medicines; milk is the only thing preſcribed. This practice, Dr. Fiſcher of Erfurt, who gives a particular account of it, repreſents as ſo ſucceſsful, that during a very fatal epidemic ſmall-pox which happened in the year 1727-28, in many of the villages where this method was adopted, none died; while in thoſe where a different method of treatment was followed, there were numerous deaths. Dr. Fiſcher followed this practice himſelf; and he found, that by means of it the violence of the diſeaſe was diminiſhed, the headach relieved, the thirſt quenched, and the itching of the ſkin prevented. He adds, that he ne-

ver ſaw a child die of the ſmall-pox who uſed the warm bath properly.

Dr. Marcard gives a particular account of two caſes in which he directed the warm bath in ſmall-pox. In both it had conſiderable influence in diminiſhing the celerity of the pulſe and the heat of the body. In both, the puſtules appeared ſoon after the warm bath was uſed; but they were numerous, and the children were in great danger. After relating theſe hiſtories, he points out at ſome length the ſymptoms which indicate the employment of the warm bath, and the intentions with which it may be uſed in the ſmall-pox. On this ſubject he preſents us with the following obſervations.

1ſt. The warm bath may be uſed before the eruption of the ſmall-pox, with the intention of taking off the determination of the variolous matter from the face. Dr. Marcard, in his own practice, conſtantly uſes Tipot's method, who orders partial warm bathing of the feet after inoculation; and he thinks there are always more puſtules in proportion on the parts bathed, than on the reſt of the body.

2d.

2*d*. Before the eruption, the warm bath may be uſed to alleviate pain, anxiety, and reſtleſſneſs. The convulſions, which in children often precede the eruption, are very generally relieved by the warm bath, unleſs they ariſe from ſome irritation in the inteſtines.

3*d*. The warm bath has been recommended before the eruption of the ſmall-pox, with the intention of accelerating it. But it may, Dr. Marcard thinks, be a queſtion, how far this is proper, ſince it is found, that the longer the eruption is of appearing, the milder is the diſeaſe.

4*th*. After the eruption, the warm bath is uſed to diminiſh the heat and pain ariſing from the inflammation of the puſtules. Dr. Marcard has never tried the warm bath with this intention, but he thinks it deſerves a trial. Inconveniences may indeed, he obſerves, ariſe from the clothes adhering to the ſkin; but this he propoſes to prevent, by rubbing the parts on which the patient lies, with ſome oily ſubſtance.

5*th*. About the period of the evaneſcence of the puſtules, the warm bath has been ad-

viſed, to promote the falling off; and Dr. Marcard thinks that it leſſens the chance of pitting.

But although Dr. Marcard contends, that in many caſes the warm bath may be uſed in every ſtage of the ſmall-pox with advantage, yet he thinks, that it would be improper in caſes where the diſeaſe is accompanied with typhous fever and petechiæ.

Dr. Marcard next makes ſome obſervations on the uſe of warm bathing, in what he calls the nervous fever. As he employs this term in a different ſenſe from ſome other authors, he very properly gives a deſcription of it. It is attended with a quick pulſe, and this celerity is much increaſed on the ſlighteſt exertion. The patient has often an uncommon degree of vivacity and ſpirit, but is unable to ſleep. There is a very diſagreeable ſenſation of heat and burning on the ſurface of the body. This diſeaſe laſts for ſeveral months, and is frequently miſtaken for conſumption. It occurs frequently at Pyrmont. The cold bath and tonics afford no relief; but Dr. Marcard tells us, that he has found the greateſt advantage in this diſeaſe, from the uſe of the warm bath,

bath. He began firſt with the warm bath of pure water, and in general he found, that the cure proceeded ſo faſt, that in fourteen days he could order bathing in the mineral water. He concludes his remarks on this diſeaſe with relating the caſe of a man, whoſe habit was very irritable, with his pulſe above 100 in the minute. He was directed to uſe the warm bath every ſecond day. After the fifth bath, his pulſe was reduced to the natural ſtandard of 70 beats in a minute; and in a ſhort time his cure was completed.

If the body be weighed after coming out of the warm bath, it will be found to have increaſed in weight. Some of the water has therefore been abſorbed. It is evident alſo, that during the bathing the perſpiration has been increaſed, and the perſpirable matter is mixed with the water. To determine preciſely the actual quantity of the perſpirable matter, which is thrown out, and of the water which is abſorbed, is very difficult, perhaps impoſſible. In ſtatical experiments, the balance does not give the actual quantity, either of the perſpiration or of the abſorption, which has taken place in a limited time. It ſhews only

difference between the two. The difficulties increaſe when the experiments are made with the warm bath, as it is almoſt impoſſible to obſerve minutely the given quantity of water which is evaporated, or that which adheres to the ſkin, or which is otherwiſe loſt. The experiments, however, of Dr. Falconer, on this ſubject, are perhaps the moſt accurate. Dr. Marcard has not added any experiments of his own, but taking thoſe of Dr. Falconer as as a baſis on which to calculate, he thinks, that in a warm bath of one hour's duration, the quantity of perſpired matter may be one pound, and that of the water abſorbed may amount to four pounds.

Beſides the effect of the warm bath, as increaſing the quantity of the circulating fluids, it is probable, Dr. Marcard thinks, that it has alſo ſome other effects upon the fluids. The pathology of the fluids is ſtill ſo obſcure, that we hardly know the changes which take place in them in diſeaſe. But Dr. Marcard is inclined to think, that the good effects of warm bathing which he has obſerved both in ſcrophula and in various cutaneous eruptions, depend upon a diminution of the acrimony

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of the fluids, which he conſiders as the cauſe of theſe diſeaſes. To the ſame diminution of acrimony Dr. Marcard is inclined to aſcribe the powers which certain waters have, of bringing out eruptions on the ſurface of the body, as it is often the effect of waters which have no mineral impregnation.

Warm bathing has ſome effects upon the ſkin to which it is immediately applied. Beſides cleanſing and ſoftening it when hardened, it appears to promote the renewal of the ſkin, as is evident from the immenſe quantity of ſcales which fall off during the firſt baths. This effect may be of uſe in ſome affections of the ſkin itſelf, and in increaſing its ſenſibility.

After this full account of warm bathing, Dr. Marcard next makes ſome remarks on the hot and on the vapour bath. But as his opinions reſpecting theſe differ little from the ſentiments of others, we ſhall not offer any analyſis of them.

On the cold bath, Dr. Marcard is very particular. It were, however, to have been wiſhed, that he had made more experiments on the effects of cold bathing on the pulſe, as

authors

authors differ in their accounts of this. Only two experiments occur in Dr. Marcard's book. In a bath at 63 degrees, he found the pulſe reduced from 80 to 70 beats in a minute; and in one of 60 degrees, he found that the pulſe became two beats quicker after the bath than before it. Dr. Athill, whoſe experiments are quoted by our author, found that the cold bath at firſt made the pulſe quicker, but afterwards it became ſlower.

Upon the whole, this work of Dr. Marcard's is an excellent collection of all the obſervations and experiments of preceding authors; and contains alſo many good obſervations of his own. It might, however, have been improved, by more facts and caſes of diſeaſe, in which bathing has been employed with advantage. But this defect he promiſes to ſupply, in a treatiſe on the Pyrmont baths, to which the preſent work may be conſidered as an introduction.

XI.

XI.

A Treatiſe on Sol-lunar influence in Fevers, &c. By Francis Balfour. Vol. I. 8vo. London.

THE learned and ingenious author of the treatiſe now before us has already favoured the public with ſeveral other publications on the ſame ſubject. Of theſe our readers will find ſome account in former volumes of this work. In the treatiſe now before us, the author endeavours to afford additional confirmation of the doctrine which he then delivered. After a reſidence of two or three years in Britain, during which time the publications formerly alluded to appeared, Dr. Balfour again returned to Bengal, where he had formerly practiſed with high reputation for a conſiderable time. The additional obſervations which he has of late had an opportunity of making, have afforded him freſh evidence of the truth of his former doctrine.

In

In the volume now before us, we are preſented with part of the reſult of thoſe obſervations; and the author promiſes a continuation of them in two future volumes. His object in the preſent volume is to eſtabliſh the reality of ſol-lunar influence, upon ſuch evidence, that it may no longer be a matter of doubt, but that future inquirers may proceed directly to inveſtigate the particular laws and reſtrictions under which it acts upon the human frame.

In the ſecond volume, the author pledges himſelf to explain the periodical attacks and remiſſions of fevers, their various types of quotidian, tertian, &c. their tranſitions from one type to another, and a variety of other curious phœnomena, which have hitherto eluded the inveſtigations of phyſicians, in a manner that ſhall carry along with it a perfect conviction of its truth to every man of candour and ſenſe, who ſhall take the trouble to examine it. An endeavour to apply the knowledge we have thus obtained, to reform the theory, practice, and language of medicine, and to ſhew in what reſpects theſe may be ſtill farther improved, by applying it to proſe-

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cute new diſcoveries, will, he tells us, furniſh matter for a third volume.

To obtain ſuch facts as might furniſh decided proof, either of the reality of ſol-lunar influence, or the contrary, Dr. Balfour wrote the following letter to many of his friends in different parts of India.

" Dear Sir,

" From ſeveral obſervations made within theſe few years, in different parts of the world, ſome attempts have been made, to revive a doctrine of very great antiquity in medicine, viz. that in fevers, and alſo in other diſeaſes, the human body is affected in a conſiderable degree, by an influence connected with the revolutions of the ſun and moon.

" Amongſt a variety of facts induced in ſupport of this doctrine, the following, being analogous to the phœnomena of the tides, appear to be the moſt ſtriking and concluſive :

" *1ſt.* That the paroxyſms of fevers ſhew themſelves in a greater degree of violence about the full and change, that is to ſay, about three days and an half before and after, including

including at each period a ſpace of about ſeven days, than during the interval between theſe periods.

" 2*d*. That the paroxyſms of fevers, occurring during the periods deſcribed, are conſtantly more violent about mid-day and midnight (that is to ſay, in the ſpace included between half after eight in the morning and half after three in the afternoon, and between half after eight in the evening and half after three in the morning, including at each a ſpace of about ſeven hours), than during the intervals between theſe ſpaces.

" 3*d*. That ſome remarkable abatement, in the violence of paroxyſms, never fails to take place upon the expiration of the full and change.

" 4*th*. That the paroxyſms of fevers, whilſt they abate in violence upon the expiration of the full and change, ſhift alſo their acceſſion or attack to a later hour.

" Various other circumſtances and arguments have been ſtated, and one gentleman ſays, that his obſervations of ſol-lunar influence have not been confined to fever, but that epilepſy, inſanity, paralytic affections, headachs,

headachs, inflammation of the eyes, aſthmas, pthiſical coughs, pains, and ſwellings of the liver and ſpleen, gouts, rheumatiſm, toothach, diarrhœas, colics, coſtiveneſs, complaints in the urinary paſſages, boils, ulcers, ſores, and eruptions of different kinds, often aſſumed an intermittent form, and returned regularly with the full and change of the moon; and diſappeared or diminiſhed during the intervals. He had alſo conceived, that the hemorrhoids, the fits of teething in children, and the delivery of women with child, are directed to happen more frequently at theſe periods than during the intervals, by the ſame law.

"To determine whether there actually exiſt in nature a general law of ſo great power, or whether it be merely the phantom of a few individuals, muſt certainly appear to every man of ſenſe and candour to be a matter of conſequence, not only to medicine, but to every branch of natural knowledge.

"From this perſuaſion, I have been induced to undertake the collection of all the information I can obtain on this ſubject; and flattering myſelf, that every lover of ſcience will be ready to aſſiſt me with his teſtimony,

as

as far as it goes on either ſide of the queſtion, I have taken the liberty of requeſting the communication of any facts that may appear to be connected with my preſent object.

" That my hiſtory of facts may be as fair and impartial as poſſible, I muſt alſo requeſt your permiſſion to publiſh whatever you communicate in your own words, and with your own name annexed.

" I hope I ſhall have the pleaſure of hearing from you ſoon, and ſhall conſider every obſervation with which you may favour me as an obligation.

I am, &c.

FRANCIS BALFOUR."

To this letter Dr. Balfour received anſwers from upwards of ſixty different perſons, among whom were many of the moſt eminent medical practitioners in Bengal, Drs. Campbell, Bruce, Fontana, Wade, Hare, Boyd, &c. tending ſtrongly to corroborate the doctrine. Of their obſervations, however, we cannot propoſe to give any particular account. And we ſhall content ourſelves with laying before

before our readers Dr. Balfour's general ſtatement of the facts.

From a review of the authorities, he concludes, that almoſt the whole of them concur in affirming the truth of the following obſervations, that the relapſes and exacerbations of remitting and intermitting fevers happened much more frequently, at the ſprings about the full and change of the moon, than in the neaps.

This obſervation, he remarks, neceſſarily implies, that thoſe who made it did obſerve the following ſeparate and diſtinct facts.

" *1ſt.* That many relapſes and exacerbations happened during the ſprings at new moon.

" *2d.* That few relapſes and exacerbations happened during the neaps following new moon.

" *3d.* That many relapſes and exacerbations happened during the ſprings at full moon.

" *4th.* That few relapſes and exacerbations happened during the neaps following full moon.

From a conſiderable number of the au-

thorities, as well as from his own experience, and the teſtimony of many with whom he has converſed, Dr. Balfour infers, that confirmation is afforded of four other facts, viz.

" *5th.* That during the ſprings, many paroxyſms come on about the middle of the day, viz. between half paſt eight a. m. and half paſt three p. m.

" *6th.* That during the ſprings, few paroxyſms come on in the evening between half paſt three p. m. and half paſt eight p. m.

" *7th.* That during the ſprings, many paroxyſms come on about the middle of the night, viz. between half paſt eight p. m. and and half paſt three a. m.

" *8th.* That during the ſprings, few paroxyſms come on in the morning between half paſt three a. m. and half paſt eight a. m."

Although the tendency of fibrile paroxyſms to poſtpone their attacks is ſupported only by a few obſervations in Dr. Balfour's collection, yet even from theſe, corroborated by the evidence which they derive from their cloſe connection with other facts, he thinks

he may with confidence add, as another concluſion,

" 9*th*. That during the ſprings and neaps, the paroxyſms of fevers have a tendency to poſtpone the hour of attack, at each ſucceeding return, in coincidence with the tides."

Dr. Balfour obſerves, that by eſtabliſhing and diſcriminating thoſe nine different facts, it will not eſcape the obſervation of thoſe who are at all acquainted with the preſent ſtate of medical ſcience, that we have acquired the knowledge of no leſs than nine different remarkable coincidences, between certain phœnomena of fevers and certain periods of time, hitherto overlooked and unknown in medicine and natural philoſophy. And, upon the whole, he concludes, that the dominion of ſol-lunar influence over fevers is now demonſtrated, and ought no longer to be conſidered as a matter of doubt; but that future inquirers ſhould directly proceed to inveſtigate the particular laws and reſtrictions, under which it acts, for the purpoſe of improving our knowledge and ſkill in uſeful arts.

From the numerous facts which Dr. Bal-

four has collected, there can now, we imagine, remain no doubt, that in the kingdom of Bengal, either a return or an increaſe of the fevers are frequently obſerved, both about the time of full and likewiſe of new moon. But that this ariſes from a general law of ſol-lunar influence, extending over the whole globes does not yet appear to us to be by any means aſcertained. If ſuch a law really exiſted, we ſhould naturally expect to find moſt of the deaths from fevers taking place, either about the full or change of the moon. This, however, was by no means the caſe during the fatal fever of Philadelphia, of which we have given an account in the preſent volume. There, during a period of three months, the number of deaths had a regular increaſe and decline, without being in any degree affected at particular periods by ſol-lunar influence. This ſubject, however, may be juſtly conſidered as well meriting the future attention of practitioners in every country. And we apprehend, that an exact regiſter of deaths from fever would aſcertain, with greater accuracy, whether ſuch an influence does or does not

exiſt,

exiſt, than the circumſtances either of the increaſed ſeverity of paroxyſms, or even of the day of the recurrence of fevers, reſpecting both which, patients themſelves, as well as practitioners, may often be deceived.

XII.

A Practical Eſſay on a certain Diſeaſe of the Bones, termed Necroſis, illuſtrated with ſix plates. *By* James Ruſſell, *F.R.S. Edin. Fellow of the Royal College of Surgeons, and one of the Surgeons of the Royal Infirmary, Edinburgh.* 8vo. Edinburgh.

THAT diſeaſe of the bones, termed Necroſis, which is the ſubject of the preſent eſſay, diſplays, in a very remarkable degree, the power of reproduction which nature poſſeſſes. In this diſeaſe new parts are formed, in a manner very curious, and with a degree of perfection altogether extraordinary. For, after the entire loſs of the original bone, the formation of a ſubſtitute one enables the patient to perform all the uſual functions of the limb, without any ſenſible inconvenience or difficulty. And it is a very remarkable circumſtance, that, in favourable inſtances of the diſeaſe, the power of motion

is

is preſerved, during all the time theſe changes are going on. In this reſpect, necroſis differs from all other caſes of renovation; and the four following circumſtances may be conſidered, Mr. Ruſſell obſerves, as fully eſtabliſhed in caſes of necroſis. "*1ſt*, That the new "bone is formed and conſolidated before the "old one ſeparates; *2dly*, That it ſurrounds "the old bone; *3dly*, That it is larger in ſize; "and, *4thly*, That it is only equal to the old "bone in length."

In this diſeaſe, the old bone ſerves as a mould for the new one; and the firſt ſtep of the proceſs is to ſurround the old bone with an effuſion which ſeems to be of a gelatinous nature. This effuſed ſtratum gradually acquires an additional degree of conſiſtence, after which oſſifick nuclei make their appearance in different places, and quite diſtant from each other. They increaſe in number and enlarge in ſize, till at laſt they come into contact and unite together, ſo that the whole of the effuſed ſtratum is converted into a maſs of bone. This new bone is completely organiſed, and has all the properties of a bone of the moſt perfect ſtructure, but is not diſpo-

ſed into the ſame regular lamellæ with the primitive bone. In the formation of this new bone, at the time of the effuſion, all the tendons, being in their natural ſituation, are ſurrounded and fixed by the gradual conſolidation and ultimate converſion of the effuſion into ſolid bone; and in this manner is the inſertion of the muſcles transferred from the old to the new bone. The dead portion of the old bones, which ſeparates from the living parts, and is ſuppled by the new bone, has been diſtinguiſhed by the name of the Sequeſtra.

After this general view of the nature of necroſis, Mr. Ruſſell proceeds to inquire into the origin of this oſſeous ſhell, and into the circumſtances which occaſion its formation. Contrary to the opinion of Mr. Du Hamel, and thoſe phyſiologiſts who have adopted his hypotheſis with regard to the formation of bones, Mr. Ruſſell thinks it proved almoſt to a demonſtration, that the original perioſtium has no ſhare whatever in the formation of the new bone. This he thinks clearly proved by caſes of compound fracture, where the cure goes on upon the principle

of

of a caſe of necroſis; by caſes where part of a bone has been replaced, after being carried away, together with the perioſtium; and finally by caſes where a new bone has been formed, notwithſtanding the total deſtruction of the original bone and its perioſtium.

From a conſideration of every circumſtance, he thinks it appears that the pulpy maſs, which extends from one portion of the bone to the other, and is itſelf at laſt converted into bone, is entirely a new creation, and has no dependence either on the original bone or its perioſtium.

Mr. Ruſſell next inquires into the cauſes which occaſion the formation of the new oſſeous ſhell. From ſome curious and intereſting experiments, inſtituted by Mr. Troja, he infers, that the death of a portion of bone, and the deſtruction of the marrow, is one never-failing cauſe of necroſis. But from different caſes, which have fallen under his own obſervation, he thinks it proved, that the ſubſtitute bone may be far advanced in its formation before the ſequeſtra dies, or the marrow be deſtroyed. He infers, therefore, that although the death of a bone, from the deſtruc-

tion

tion of the marrow, may be one cauſe producing an attack of necroſis; yet that is by no means the ſole or indiſpenſible cauſe. Inflammation, he remarks, always precedes necroſis; and many different cauſes may, he thinks, excite that kind of inflammation which terminates in necroſis. The probability, he thinks, is, that the effects of the inflammatory attack have a double operation, and are the ſource, both of the death of the old bone, and of that ſtate of action, which gives birth to the generation of the ſubſtitute. The foundation, therefore, of both proceſſes, the one terminating in death, the other in reproduction, would ſeem to be laid at the ſame time, and to depend on one common cauſe.

Mr. Ruſſell next preſents us with a particular hiſtory of the principal ſymptoms in necroſis; and he here offers many important remarks reſpecting the pain, the enlargement of bone, the ſuppuration, the ulcerations, and the diſcharge of ſpiculæ of bone, which are obſerved in this diſeaſe. The ſtate of the ſequeſtra alſo, the period of their ſeparating, their diſſolution, and the ſeparation of joint, are objects of conſideration.

In

In treating of the ſeat of necroſis, Mr. Ruſſell obſerves, that this diſeaſe does not attack all the bones of the body promiſcuouſly. It is the long bones which are chiefly liable to be attacked; and excepting the lower jaw, none, perhaps, of the irregularly ſhaped bones become the ſubject of necroſis. Of all the bones, the tibia is the moſt frequent ſubject of necroſis; and the next, perhaps, in point of frequency, are the femur and lower jaw.

With reſpect to the duration of this diſeaſe, Mr. Ruffell obſerves, that, from different circumſtances, it is very variable. A cure, he tells us, may be completed in leſs than three months from the firſt moment of the attack. But in general a much longer time is required; and caſes of necroſis of the tibia have been five or ſix years of completing their courſe. It therefore appears, ſays he, that necroſis is a tedious, though not properly a chronic diſeaſe.

Necroſis is properly a diſeaſe of the earlier periods of life. Excepting when it took place in the lower jaw, Mr. Ruffell has never known a caſe of it in which the attack began after the twentieth year; and he never heard

heard of a caſe in which it began at an earlier period than ſix years of age.

Of the cauſes of necroſis, Mr. Ruſſell obſerves, that no ſatisfactory account can be given. But, independent of its connection with age, he is inclined to believe, that it more readily attacks thoſe who have a ſcrophulous taint in their conſtitution, than others. In many caſes, necroſis is not referable to any external cauſe. The caſes of necroſis which originate from external injury, according to Mr. Ruſſell's obſervation, generally occur in the lower jaw. As taking place in that bone, it may often be traced to the effects of blows, of toothach, of ſalivation, of ſmall-pox, and the like.

Necroſis is in ſome danger of being confounded with a general enlargement of the bone, with exfoliation of an external lamella, and with what has been termed a caſe of internal exfoliation. But ſimple enlargement of the bone is not neceſſarily or conſtantly attended with pain at the commencement of the diſeaſe, and its progreſs is more ſlow and gradual; nor are there any fiſtulous ulcers to diſcharge matter. In caſes of exfoliation, beſides

ſides numerous other diſtinguiſhing ſymptoms, Mr. Ruſſell obſerves, that the attack of the diſeaſe is much more limited in its extent, and not accompanied with any general ſwelling of the limb. If the bone be at all enlarged, it is only to a ſmall diſtance above and below the ulcer; and then it is not ſurrounded by any ſwelling of the ſoft parts. With regard to internal exfoliations, though theſe frequently do affect the cranium, yet Mr. Ruſſell has never met with an inſtance of this in the long bones. Thoſe repreſented as internal exfoliations were, he thinks, decidedly caſes of necroſis; and he has therefore no heſitation in excluding this from any conſideration in the diagnoſis.

With regard to the prognoſis, Mr. Ruſſell obſerves, that necroſis, though often a painful and tedious, is yet but very rarely a fatal diſeaſe. It is only from attacks upon the inferior extremities that fatal conſequences are to be dreaded. And even under the moſt unfavourable circumſtances, the worſt alternative which can be preſented to a patient's choice, is that of ſubmitting to loſe his limb, in order to ſave his life.

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The laſt ſubject which Mr. Ruſſell conſiders in this eſſay, is the method of cure. Necroſis does not, he thinks, admit of relief from any general treatment of the conſtitution. The diſeaſe is totally local; and is, he thinks, too deeply rooted to yield to any general remedy; and he doubts much, whether any real benefit can be derived from the uſe of topical applications. The inflammation, he tells us, is always ſo deep ſeated, and often ſo ſevere, that no local treatment has power to prevent or to check it. The common practices, in caſes of local inflammation, topical blood-letting, and cooling aſtringent ſolutions, have here little effect. At the commencement of the diſeaſe, however, no other practices are applicable; and a trial of theſe is naturally ſuggeſted by the intenſity and continuance of the pain; eſpecially as this trial cannot poſſibly prove injurious. It is, however, clear, that whatever degree of efficacy theſe means poſſeſs, they can be attended with advantage only at the incipient ſtage of the diſeaſe.

But if the attack be not at once ſubdued, art can do little more than to regulate its

courſe

courſe in ſome particular circumſtances. When the ſafety of the patient's life is endangered from the extent and violence of the inflammation, before the new ſhell be formed, or the ſequeſtra looſe, and be ready to ſeparate, any premature attempt to extract the ſequeſtra by force would neceſſarily exaſperate all the ſymptoms. The palliative practice, therefore, of applying emollient poultices, or warm fomentations, is all that the caſe then admits of. And if this treatment do not ſucceed, there is no alternative but amputation.

After the firſt period of danger is paſſed, the ſole object of practice, throughout the whole courſe of the diſeaſe, conſiſts in removing the ſequeſtra at a proper time. But there are two oppoſite ſtates of the complaint, in which any interference would certainly be prejudicial: Firſt, where the ſequeſtra is diſſolving, without making its appearance externally, or giving any conſiderable diſturbance to the conſtitution; and, ſecondly, when it is eſcaping from its confinement, without violence, and without much uneaſineſs. But in the intermediate ſtate of the diſeaſe, where the preſence of the ſequeſtra is a perpetual ſource of irritation,

irritation, an operation for its removal is requiſite to bring about a happy iſſue. It is, however, Mr. Ruſſell obſerves, a point of great nicety, to determine the proper time to perform the operation; and on this ſubject he offers many judicious obſervations. He concludes, upon the whole, that whenever we are ſatisfied of the exiſtence of a caſe of necroſis, and are, from the violence of the ſymptoms, convinced that the patient muſt expect a long continuance of ſuffering, with a tedious and uncertain cure, it is clearly of advantage to operate early; as we thus not only abridge the duration of the patient's diſtreſs, but, from the ſuperior ſoftneſs of the bone, we operate with greater facility.

When the expoſure or protruſion of the ſequeſtra removes all uncertainty as to the nature of the caſe, an operation is very generally adviſeable, to accelerate its removal, and in ſome caſes to ſave the patient's life.

But although, when the exiſtence of the diſeaſe is clearly aſcertained, and the irritation produced is conſiderable, a practitioner can hardly be too early in performing the operation; yet ſometimes, either from negligence

gence or want of opportunity, the complaint may be allowed to proceed to an imprudent height. This, however, is no reaſon for with-holding the aſſiſtance of an operation; for although it may prove leſs effectual than could be wiſhed, yet it will neither accelerate the progreſs, nor aggravate the ſeverity, of the caſe.

In place of the extraction of the ſequeſtra, ſome have propoſed that it ſhould be diſſolved; and for this purpoſe the injection of the muriatic acid, in a diluted ſtate, has been ſuggeſted. Againſt this propoſal, however, Mr. Ruſſell urges many powerful and judicious objections; and he regards it as one of thoſe ſpeculative projects in ſurgery, which does not merit a trial in practice.

With reſpect to the operation to be performed in caſes of necroſis, it is neither, he obſerves, delicate nor difficult. It conſiſts in extracting the ſequeſtra, through an aperture in the new oſſeous ſhell. The firſt ſtep is to lay bare the bone; and although this may be done by the application of a cauſtic, yet Mr. Ruſſell conſiders the uſe of the ſcalpel as preferable in every inſtance. The place, direc-

tion, and extent of the external inciſion, is to be determined by the number and ſituation of the fiſtulous openings in the ſkin.

A portion of the new bone, under one of theſe openings, ſufficient to permit the ſurgeon to explore the ſtate of the parts beneath, is to be laid bare. In this ſpace an opening of the bone, which leads directly to the internal cavity, will probably be diſcovered. But if this opening be ſo narrow and irregular, that a probe cannot be made to paſs, the next ſtep is to bore a ſmall hole in the bone, by means of a perforator. A bent probe is then to be introduced, to explore the ſtate of the whole internal cavity. By proceeding in this manner, the ſurgeon has it in his power to aſcertain all the circumſtances which are requiſite to be known, previouſly to the laſt and moſt eſſential ſtep of the operation.

After the ſuperficial parts are removed as far as is neceſſary, the next ſtep is to cut out a portion of the new-formed bone. This, before its complete conſolidation, may ſometimes be done by means of a ſtrong ſharp ſcalpell. But when the bone is too hard for this, Mr. Ruſſell prefers making an opening

by means of the trepan, to any other method that has been ſuggeſted; for the gradual enlargement of the opening, leaves it in our power to ſtop whenever a ſufficient width is opened to permit the extraction of the ſequeſtra; and at the ſame time affords an opportunity of judging how far any advantage may be gained by breaking down the ſequeſtra into ſeparate pieces. If it be of a large ſize, the extraction may be very much facilitated by this means. In general, it may be divided by means of cutting pliars; but if it be too hard and ſolid to yield to them, it is always poſſible to remove a portion of it, by applying the head of a trepan.

For the ſore after the operation, the moſt ſimple dreſſings anſwer the beſt. The whole limb ſhould be covered with a large emollient poultice, which ſhould be changed three times a-day. In general, in leſs than a week the bone becomes covered with granulations, which are of a more ſolid conſiſtence than thoſe ariſing from the common ſoft parts. After a healthy ſuppuration is eſtabliſhed, a dreſſing of ſimple ointment may be ſubſtituted to the poultices; and under this in time a perfect cicatrix will be formed. In caſes of

necroſis of the tibia, the cure, from the removal of the ſequeſtra till its final completion, will require from four to ſix months; and in other bones, a longer or a ſhorter time, in proportion to their ſize, and to the age of the patient.

At the beginning of the cure, the patient muſt be confined to bed, till the granulations have grown to the level of the ſurface, and have begun to receive a covering of ſkin. After this period, he may be indulged with greater liberty; but muſt at all times be cautious of over-doing, and muſt content himſelf at firſt with walking ſhort diſtances, with his leg ſuſpended in a ſling. When the cure is finally completed, the affected limb is left larger and leſs ſhapely than the other; but in fulfilling all the uſeful purpoſes of life, its functions are not impaired.

To this valuable treatiſe, on a diſeaſe hitherto but imperfectly underſtood, Mr. Ruſſell has added ſeveral engravings, which beautifully illuſtrate the progreſſive changes taking place in the formation of the new parts. And by his ſyſtematic view of the ſubject, he has laid the foundation of a ſolid improvement in future practices.

XIII.

Experiments and Obſervations on the Anguſtura Bark. *By* Auguſtus Everard Brande, *Apothecary to the Queen.* 8vo. London.

ALTHOUGH not many years have elapſed, ſince the Anguſtura bark was firſt introduced into Europe, yet from the benefit derived from it in actual practice, it is now extenſively employed by ſeveral practitioners of the firſt eminence. The obſervations and experiments, therefore, which in the treatiſe now before us Mr. Brande has preſented to the public, will naturally claim the attention of all thoſe practitioners who wiſh to avail themſelves of every important addition to the Materia Medica.

Mr. Brande begins this treatiſe by giving ſome account of the firſt appearance and reception of the Anguſtura. In the year 1788, a conſiderable quantity of this bark was brought by different ſhips from the Weſt In-

dies to Britain. It was repreſented as having been found very ſuperior to the Peruvian bark in the cure of fevers.

It was not alledged to be the product of any Weſt India tree. It was at firſt ſuppoſed to have been carried to the Weſt Indies from Africa. But, by letters from Dr. Ewer and Dr. Williams, of the iſland of Trinidad, which were publiſhed in the London Medical Journal, the public were informed, that it was the product of South America; and that the name of Cortex Anguſturæ was given it from that of the place from whence the Spaniards bring it. Anguſtura, however, is merely a general term for a narrow paſs between mountains. Different places to which this term is applied are to be found in the maps of South America, on the river Oroonoko; but there does not ſeem to exiſt any town or diſtrict of the name. And every endeavour to aſcertain the exact place of the growth of this bark has hitherto proved unſucceſsful. Of its natural hiſtory, therefore, we ſtill continue to be completely ignorant. It has indeed by ſome been ſuppoſed to be the bark of that tree, to which the modern botaniſts have

have given the name of the Brucea antidyſenterica or ferruginea. But the remarkable difference, both in appearance and ſenſible qualities, between the Anguſtura bark and the dried bark of the Brucea, which now grows in the botanical gardens both at Edinburgh and at Kew, is an inſuperable objection to this ſuppoſition.

There is a conſiderable variety in the external appearance of the Anguſtura bark, owing probably to its being taken from trees of different ages, and from different parts of the ſame tree. But in the taſte and other properties they perfectly agree. The outer ſurface of the Anguſtura bark, according to Mr. Brande, when good, is in general more or leſs wrinkled, and covered with a coat of greyiſh white. Below this it is brown, with a yellow caſt. The inner ſurface is of a dull browniſh yellow colour. It breaks ſhort and reſinous. The ſmell is ſingular and unpleaſant, but not very powerful. The taſte intenſely bitter, and ſlightly aromatic, in ſome degree reſembling bitter almonds, but very laſting, and leaving a ſenſe of heat and pungency in the throat. When reduced to pow-

der, it is not unlike that of Indian rhubarb. It burns pretty freely, but without any peculiar ſmell. By attending to the above deſcription, adulterations of this bark, which have ſometimes been practiſed, may eaſily be detected.

Mr. Brande, in relating his experiments on this bark, begins with thoſe which tend to aſcertain its chemical properties, and afterwards gives an account of the trials made for aſcertaining its antiſeptic powers.

A cold infuſion he found to be very bitter, and to retain all the flavour of the bark. The decoction was exceedingly bitter, with a good deal of the flavour, but without the acrimony of the bark. With æther rectified, or proof ſpirit, it was found to give a ſtrong tincture, of a deep yellow colour, impregnated with the entire taſte of the bark.

No material change is produced in the colour of theſe preparations by the addition of vitriol of iron. Alkaline ſalts ſomewhat deepen the colour, and acids make it rather lighter. Both volatile and fixed alkalies, eſpecially the cauſtic, extract from the Anguſtura bark a tincture of a very dark colour, between green

and

and black. Acids acted but little on it. Of all the menſtrua which Mr. Brande tried, the dulcified ſpirit of nitre appeared to be the moſt powerful; the tincture made being very black, and apparently very ſaturated.

Eight ounces of the powder of this bark having been carefully acted upon, firſt with rectified ſpirit, and afterwards with diſtilled water, yielded 144 grains of pure reſin, 300 grains of an acrid oily matter, and 1500 grains of dry gummous extract.

By infuſion of the Anguſtura in diſtilled water, and ſucceſſive cryſtallizations, various ſaline matters were obtained from it; and Mr. Brande gives the following table as exhibiting at one view the contents of eight ounces of the Anguſtura bark.

This quantity of the bark yielded,

	Gr.
Of eſſential oil - - - -	26
Gummous extract - - -	1500
Pure reſin - - - -	144
Acrid matter - - -	300
Vitriolated tartar - - -	48
Digeſtive ſalt - - - -	24
Salited lime - - - -	80

Selenite

	Gr.
Selenite of vegetable acid and lime	180
Magneſia - - - -	36
Argillaceous earth - - -	7
Vegetable acid - - -	104
Calx of iron - - - -	6
Volatile alkali, about - -	32
Pure coal - - - -	284
Cubic inches of fixed air, about -	80

The next experiments related by Mr. Brande were made with the view of aſcertaining the comparative powers of the Anguſtura bark in reſiſting or correcting putrefaction.

In theſe experiments it was compared with Peruvian bark, Serpentaria, Camomile flower, and Columbo root. Into the particulars of theſe trials we cannot here propoſe to enter. From theſe, however, it clearly appears, that the Anguſtura bark is fully equal, and perhaps even ſuperior, in reſiſting and in correcting putrefaction, to the other very powerful antiſeptics with which it is here compared.

To aſcertain in which of the conſtituent parts this antiſeptic power reſides, Mr. Brande next relates ſome experiments which were performed at London by that ingenious

nious chemiſt, Mr. Sehmeiſſer. From theſe it appeared, that the pure reſin of the Anguſtura, not being ſoluble in water, has no antiſeptic power at all, and that the acrid matter, combined with the gummous and ſaline particles in the extract prepared with boiling water, reſiſts putrefaction the moſt; ſo that this extract muſt, Mr. Brande thinks, be conſidered as the beſt preparation for internal uſe.

The laſt part of this treatiſe conſiſts of obſervations on the effects of the Anguſtura bark in particular diſeaſes. But, before treating of theſe, Mr. Brande gives a ſhort account of the doſe and manner of exhibiting the Anguſtura. Of the powder he has given up to twenty grains every three hours, but generally leſs.

He employed this bark ſometimes under the form of an infuſion made with half an ounce of the bruiſed bark to a pint of boiling water; ſometimes of a decoction, made with the ſame quantity of the Anguſtura, added to 24 ounces of water, and boiled away to ſixteen.

The Anguſtura mixture, as he terms it, was made with ſeven ounces of the decoction

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or infuſion, with half an ounce of ſyrup of orange-peel, and two drams of compound ſpirit of lavender. The doſe of this was from an ounce to an ounce and a half. The decoction he has alſo often given, to the extent of an ounce or ten drams, with one dram of ſyrup, and as much tincture of cinnamon. He recommends the following formula as furniſhing a good compound tincture.

R Cort. Anguſtur. contus. unc. unam,
———Cinnam drachmas duas,
Croci ſcrupulum unum,
Spt. Vin. Gallic uncias octodecim ſtent ſine calore per dies ſex, vas ſubinde agitando dein fortiter exprime et filtra tincturam.

Of the aqueous extract, Mr. Brande conſiders ten grains as a full doſe; and of the reſinous, ſix.

In treating of the effects of the Anguſtura bark in particular diſeaſes, Mr. Brande begins with ſome obſervations on its uſe in dyſenteries. He has himſelf had no opportunities of employing it in the contagious dyſentery; but in the ſporadic caſes of that diſeaſe which occur in London, he has frequently ſeen it attended with great benefit. And he relates

relates ſeveral caſes in which it ſeems to have been productive of the beſt effects. He found it alſo very uſeful in caſes of habitual diarrhœa. From what Mr. Brande ſaw in practice, it appeared to him, that the decoction or infuſion anſwered rather better in bowel complaints than the powder.

As a febrifuge, the Anguſtura bark, Mr. Brande tells us, has ſhewn uncommon powers, and has been uſed in intermittents and other fevers with the greateſt ſucceſs. As agues are a diſeaſe in which the effect of a medicine are moſt clearly ſeen, Mr. Brande begins with relating ſome ſtrong caſes of theſe, which, after they had continued with obſtinacy for ſeveral months, were completely removed by a few doſes of the Anguſtura. In theſe it was in general given under the form of powder, in doſes of ten, fifteen, or twenty grains. And Mr. Brande has here added to the caſes which fell under his own obſervation, ſeveral others treated by different practitioners, in which its uſe was attended with the beſt effects.

In various other periodical complaints, Mr. Brande has frequently given the Anguſtura with advantage. He relates a remarkable caſe

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of periodical faintneſs and ſinking, which was cured by a few draughts, conſiſting of eight grains of the Anguſtura in ſome mint water, taken twice a day. Many of Mr. Brande's friends have, he tells us, experienced ſimilar good effects from it, in diſeaſes of the intermittent kind, particularly in periodical headachs.

Mr. Brande has ſo often witneſſed the good effects of the Anguſtura in irregular and low or nervous fevers, and found it ſo much leſs apt to diſagree with the ſtomach, or to run off by the bowels, than the Peruvian bark, that he now always gives it the preference. In this complaint he generally uſes the decoction, often alone, but ſometimes combined with aromatics. Mr. Brande here relates the circumſtances of a fever treated by Dr. Lettſome, attended with numerous petechiæ, vibices, and other ſymptoms of great putreſcency; in which, notwithſtanding the uſe of Peruvian bark, with vitriolic acid, opiates, and wine, a profuſe and bloody diarrhœa coming on, rendered every attempt to raiſe the ſinking patient ineffectual. Yet after her pulſe was ſcarcely perceptible, by the uſe of the

the Anguſtura decoction, to the extent of an ounce every three hours, and afterwards leſs frequently, the dyſentery was gradually leſſened, and on the fourth day ceaſed; ſoon after which ſhe got perfectly well. Mr. Brande relates alſo a ſingular caſe of a gangrenous affection of the throat, which not only affords a ſtrong proof of the antiſeptic power of the Anguſtura bark, but where this power, being obtained from a very ſmall doſe, contributed, in all probability, to ſave the life of the patient.

In ulcerated ſore throats, and in that ſpecies of angina which is accompanied with a ſcarlet eruption, this bark, Mr. Brande obſerves, has proved eminently uſeful. It has in this diſeaſe been given with advantage internally, in the form of decoction. And the ſimple mixture, with the addition of a little mineral acid, has at the ſame time been employed by way of gargle.

Mr. Brande concludes this treatiſe on the Anguſtura bark, with ſome obſervations on its uſe as a general tonic. He contends, that when it is neceſſary to ſtrengthen the ſyſtem, the Anguſtura is upon the whole preferable

to

to any other tonic hitherto known ; and many of his friends, he obſerves, who have employed it, concur with him in this opinion. On combining this bark with iron, and its preparations, he tells us, that no ſenſible change takes place ; though the aſtringent matter of moſt other corroborants forms a compound with iron, the effects of which differ conſiderably from thoſe which either of the articles, taken ſeparately, would have exerted.

In caſes of chloroſis and menſtrual obſtructions, owing to too languid circulation, Mr. Brande has found the Anguſtura more generally uſeful than any other tonic. Here both the extract and decoction have been given, combined with chalybeates, with great advantage. But occaſionally, during the uſe of this medicine, gentle aloetic laxatives, with a ſmall proportion of calomel, will be neceſſary.

By ſome practitioners, particularly by Mr. Wilkinſon, the Anguſtura has been ſucceſsfully employed in hooping-cough. From that gentleman's obſervations, communicated in a letter to Mr. Brande, it appears that when the chincough prevailed greatly, he gave it in many inſtances with great advantage.

tage. But he allows that it will anſwer only at a particular period of the diſeaſe. When he gave it in the beginning, without either premiſing emetics or laxatives, he ſoon found that it did not abate the violence of the cough, and that his patients were in other reſpects worſe. He is now convinced that its good effects depend on its tonic powers, and that, as after a certain time the diſeaſe is probably kept up by the irritable ſtate of the parts affected, this is the period when the Anguſtura will be found highly uſeful. In corroboration of theſe good effects from the Anguſtura, Mr. Brande ſubjoins the teſtimony of ſeveral other eminent practitioners, and particularly a letter from Dr. Pearſon, phyſician to St. George's Hoſpital, who has employed it with ſucceſs in many different diſeaſes; and remarks, that in various diſorders of the ſtomach he has found no vegetable bitter ſo ſerviceable as the Anguſtura.

It is by no means to be expected, that in all the diſeaſes here mentioned, the Anguſtura bark will be found uniformly ſucceſsful; but from the obſervations of Mr. Brande, confirmed by the teſtimony of many

other eminent practitioners, as well as from what we have ourſelves ſeen in actual practice, there can, we think, be no doubt, that the Anguſtura may juſtly be conſidered as an important addition to the Materia Medica.

XIV.

XIV.

Medical Reports of the Effects of Blood-letting, Sudorifics, and Bliſtering, in the Cure of Acute and Chronic Rheumatiſms. By Thomas Fowler, *M. D. of York, Member of the Royal Medical Society of Edinburgh*, &c. 8vo. London.

TO the learned and indefatigable author of the work before us, the public are already indebted for many important obſervations in the practice of medicine, particularly for his medical reports of the effects of tobacco in the cure of dropſies, and of the effects of arſenic in the cure of agues. Following the ſame plan which he formerly adopted, and which indeed had been recommended by the juſtly celebrated Bacon, for the improvement of medicine, he here preſents us with an accurate and candid account of the effects which he has obſerved to reſult from ſeveral different medicines in a very

great number of rheumatic caſes. Theſe he appears to have noted down, with minute attention, for a conſiderable number of years, particularly for the period of near ten years, during which he had been one of the phyſicians to the General Infirmary at Stafford; and as it muſt on all hands be allowed, that an experimental knowledge of the virtues of efficacious medicines muſt be of the utmoſt conſequence to the practitioner, we cannot too highly applaud the induſtrious zeal with which he has endeavoured to render hoſpital practice ſubſervient to medical improvement.

In the work before us, he has arranged under particular ſections the caſes both of acute and of chronic rheumatiſm, in which bloodletting, tincture of guaiacum, Dover's powder, bliſtering plaſters, warm bathing, or turpentine embrocations, were employed. And in order to aſcertain the operative and curative effects of theſe active articles with greater accuracy and preciſion, he not only confined himſelf very much to one form of preſcription, or compoſition of medicine, but likewiſe ſeldom adminiſtered two active medicines at the ſame time, or even ſo near together as to in-

terfere with the operations of each other. Thus he was enabled to diſcern between the operations of art and the efforts of nature, to diſtinguiſh the real effects of one remedy from thoſe of another, and finally to diſcriminate between the operative and curative effects of the ſame medicine.

For the account, however, which he has given of particular caſes, as well as for the particular obſervations which he has offered on each remedy, we muſt entirely refer our readers to the work itſelf. And we muſt here content ourſelves with giving a brief view of the general obſervations and concluſions which he has drawn from extenſive practice.

Blood-letting is certainly a very uſeful remedy in the treatment of the acute rheumatiſm; yet it appears from the facts related by Dr. Fowler to have been much more uſeful as an auxiliary, than a principal remedy. He therefore recommends that a cautious uſe of the lancet ſhould be adopted; for when the acute diſeaſe was eſtabliſhed, and was likely, from its nature and type, not to be brought to a ſpeedy criſis, the temporary and tran-

ſient mitigation of ſymptoms, which was generally obtained by diminiſhing the action of the ſyſtem from repeated loſſes of blood, by no means compenſated for the more laſting injury done to the conſtitution, and the greater hazard of a lingering criſis or a chronic rheumatiſm enſuing.

It appears from the facts in the treatment of chronic rheumatiſm, that the curative effects of blood-letting were ſtill leſs obvious than in the acute, and therefore that its debilitating effects rendered its adminiſtration ſtill more limited and exceptionable in this form of the diſeaſe.

Of all the remedies in rheumatiſm, of which Dr. Fowler has here recorded the effects, ſudorifics ſeem to be by far the moſt efficacious in producing artificial cures. Their curative effects appear to be ſtrongly connected with their operative ones; and they have likewiſe this recommendation, that they are not found to debilitate the patient ſo much, as either repeated blood-letting, or the frequent uſe of purgatives.

The tincture of guaiacum, a very powerful ſudorific, Dr. Fowler concludes to be one of

the moſt uſeful remedies which has ever been diſcovered for rheumatiſm. He infers from numerous facts, that it may be employed with advantage in every ſtage of the diſeaſe. The ammonia, or volatile alkali, which it contains, does not afford any ſolid objection to its being adminiſtered in a rheumatic fever, though it ſtimulates and heats the mouth; for it is found from experience ſeldom to ſtimulate the ſyſtem, or increaſe the pulſe, when given in moderate doſes, or even in large ones, unleſs it fail to prove ſudorific. In caſes attended with coſtiveneſs, this tincture is, Dr. Fowler thinks, decidedly preferable to Dover's powder; for, beſides operating as a ſudorific, it in general moves the inteſtines in a very gentle manner, without griping. On the other hand, in all rheumatic caſes attended with a lax or purging ſtate of the inteſtines, Dover's powder claims prior attention as a ſudorific; and in moſt caſes of this kind, unleſs where it is found to diſagree, either from idioſyncraſy, or from the ſtate of the febrile ſymptoms, it is decidedly preferable to the tincture of guaiacum.

The ſudorific operation of the warm bath

in the treatment of chronic rheumatiſm, Dr. Fowler found, had the effect of weakening the patient much more than the ſame operation, either from the tincture of guaiacum, or the Dover's powder. Warm bathing ought therefore, Dr. Fowler thinks, to be ſeldom preſcribed to rheumatic patients, who are either very delicate or much debilitated.

Bliſtering plaſters Dr. Fowler has found to be very powerful remedies for the removal of violent rheumatic pains in general. Some caution however is, he tells us, to be obſerved with reſpect to their application in the treatment of acute rheumatiſm. The pains ſhould not only be conſiderable, but ſhould not be remarkable for their tranſitions; becauſe, if a veſicatory were always to follow the ſhifting pains, the relief obtained would by no means compenſate for the trouble, pain, and ſoreneſs, occaſioned by ſuch operations when frequently repeated. On the other hand, in moſt chronic caſes, where the pain is violent and deep ſeated, as in the lumbago and ſciatica, we can ſcarcely, Dr. Fowler thinks, be ſaid to do our patients juſtice, if we omit to recommend their application.

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When reſt is much impaired from the violence of the pains in chronic rheumatiſm, a moderate doſe, either of the tincture of opium, or of the camphorated tincture of opium, may in general, Dr. Fowler obſerves, be exhibited at bed-time, for obtaining ſleep. Theſe remedies will likewiſe, in more limited doſes, be uſeful for the ſame purpoſe in the treatment of the acute rheumatiſm. But it muſt, he thinks, be acknowledged, that from the febrile ſymptoms attending the diſeaſe, they will ſometimes diſagree, and fail of procuring reſt. They muſt therefore be repeated or not according to their effects.

In the intervals between the operations of ſudorifics, in the treatment of the acute rheumatiſm, either nitrous medicines, or the common neutral mixture, prepared with the fixed vegetable alkali and lemon-juice, or diſtilled vinegar, may in general be adminiſtered three or four times a-day with advantage.

After the febrile ſymptoms are gone off, and the pains either vanquiſhed or become very trifling, if the patient be much debilitated, it will, according to Dr. Fowler's obſervations, be proper to adminiſter, two or three times

times a-day, a doſe of ſome preparation of Steel, Peruvian bark, Gentian, or other tonic medicines, in order to ſtrengthen the ſyſtem.

The regimen, in the treatment of the acute rheumatiſm, muſt, Dr. Fowler affirms, be always antiphlogiſtic. The diet ought to be of the vegetable kind, ſuch as farinaceous ſubſtances, the products of the kitchen-garden, ripe fruits, milk, tea, &c. Theſe, he thinks, are the moſt proper articles for the ſupport of the patient. He ſhould alſo, Dr. Fowler tells us, abſtain from fermented liquors altogether, except occaſionally a little wine in whey, gruel, or the like. Reſt of body, compoſure of mind, an airy room to ſleep and ſit in, with moderate covering, both of apparel and bed-clothes, are likewiſe objects deſerving attention.

As ſoon as the febrile ſymptoms and the pains are materially diminiſhed, when debility conſtitutes the chief part of the patient's complaints, and when his appetite returns, he may begin to mend his diet, by gradually reſuming the uſe of animal food, with a little ale

ale or wine at his dinner, in order to accelerate the recovery of his ſtrength.

With reſpect to regimen, in the treatment of chronic rheumatiſm, Dr. Fowler thinks it ſufficient to recommend, that the patient ſhould obſerve temperance in his diet and general mode of living.

The anomalous caſes of chronic rheumatiſm, complicated with other diſeaſes, originating from ſprains and bruiſes, which Dr. Fowler had occaſion to treat, were, for the moſt part, materially relieved, by the general anti-rheumatic treatment already mentioned. But the caſes which depended on a venereal taint, were either not at all relieved by the ſame treatment, or relieved only in the moſt tranſient manner. All of them, however, excepting one, were cured by charging the ſyſtem with a regular courſe of mercury, for ſeveral weeks together, in the ſame manner as is uſually done in more evident caſes of a confirmed venereal lues.

Upon the whole, Dr. Fowler obſerves, that, from a due conſideration of the facts which have been delivered, the following concluſions may be deduced.

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1ſt. That there are few caſes of acute rheumatiſm which will not admit of an artificial cure, eſpecially by the ſudorific plan of treatment.

2d. That there are likewiſe ſcarce any caſes of chronic rheumatiſm, which will not admit of ſome material relief, and that near one half of a given number will admit of an artificial cure, eſpecially by the ſudorific plan of treatment.

3d. That if the acute rheumatiſm be in the ſecond or third week of the diſeaſe, an artificial cure will be more frequently obtained during the firſt week of treatment, than when it comes under the care of a practitioner at any other period.

4th. That if the acute rheumatiſm be in the firſt week, an artificial cure will often be obtained during the firſt week's treatment; but it will more frequently reſiſt the curative influence of medicines until the ſecond week's treatment, and ſometimes even longer.

5th. That the moderate uſe of the lancet, eſpecially as a preliminary to the adminiſtration of ſudorifics, is a valuable auxiliary in the treatment of acute rheumatiſm.

6th.

6th. That the tincture of guaiacum is almoſt always ſudorific, and frequently laxative; and is extremely efficacious in the treatment both of the acute and chronic rheumatiſm, eſpecially the former.

7th. That Dover's powder operates, for the moſt part, as a powerful ſudorific, and alſo as an anodyne and aſtringent; and is a very efficacious remedy in the treatment both of acute and chronic rheumatiſm.

8th. That the warm bath is moſt powerfully ſudorific, and a very efficacious remedy, in the treatment of chronic rheumatiſm, but is more debilitating in its operation, than either the tincture of guaiacum or Dover's powder.

9th. That the application of leeches is extremely uſeful, as a local remedy, for the mitigation of the more urgent pains of particular parts in the treatment of acute rheumatiſm.

10th. That the application of bliſtering plaſters, which is generally productive of a veſication, a ſmarting ſoreneſs, and a copious diſcharge, is one of the moſt efficacious local remedies which experience has yet diſcover-

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ed, for the relief or removal of fixed reumatic pains, eſpecially thoſe of the ſciatica and lumbago.

11*th*. That the turpentine embrocation, which conſiſted of one part of the oleum terebinthinæ rectificatum, added to three parts of the ſpiritus vinoſus tenuior, is an uſeful palliative in the treatment of chronic rheumatiſm, for the purpoſe of relieving troubleſome pains.

SECT.

SECT. II.

MEDICAL OBSERVATIONS.

I.

History of a case of Cystirrhœa, cured by the use of Astringent Injections thrown into the Bladder. *By Mr.* Thomas Brown, *Surgeon, Musselburgh.*

ON the 22d of April 1794, I was requested to visit a Mrs. C—, aged 30, of a slender delicate habit. Her situation in life afforded her an opportunity of living generously. She had been the mother of two children.

She was confined to bed; complained of

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a moſt excruciating pain in diſcharging her urine; had a deſire to repeat it every two or three minutes, with a conſtant and ſevere ſenſe of burning heat about the urethra, which ſometimes extended over the vagina.

When in this ſituation, the urine flowed with great difficulty, generally in drops, and rarely in a ſtream. The quantity diſcharged in 24 hours was leſs than in a ſtate of health, and frequently of a particular appearance; for, upon being attacked in the manner deſcribed, it was very ſoon followed with the diſcharge of a matter of the conſiſtence of jelly, fibrous and ropy, and quite tranſparent. After expoſure to the air for an hour, it generally became fluid, and felt like oil between the fingers. Upon the evacuation of this matter, which ſometimes exceeded a table ſpoonful, the ſymptoms generally abated, and the patient had an interval of three or four days. Sometimes, however, it was much ſhorter, and frequently very incomplete.

The continuation of theſe ſymptoms, for a conſiderable time, had now produced others, which were highly alarming and unfavourable. She was reduced to the greateſt weakneſs, ſeldom

ſeldom able to leave the bed; her ſtomach rejecting all food, from exceſſive and very conſtant vomiting. She was ſubject to profuſe ſweats, with frequent hot and cold fits; her pulſe generally 120, and ſometimes 140, feeble and ſmall; belly rather coſtive, and her features put on the appearance of one in the laſt ſtage of pthiſis pulmonalis.

The commencement of this complaint was in March 1793, about a month after delivery, which was tedious and ſevere. For the three laſt months of her pregnancy, ſhe was much diſtreſſed in retaining her urine, very feeble, and moſtly confined to a chair. The ſymptoms, from their firſt appearance, gradually increaſed; and at laſt, the greatneſs of her diſtreſs overcame her delicacy, and compelled her to apply for relief.

Upon conſidering the whole ſymptoms, I was inclined directly to conclude it a diſtinctly marked caſe of cyſtirrhœa. Before, however, beginning the treatment, I wiſhed to have ſatisfied myſelf with regard to the exiſtence of a calculus. This ſatisfaction I could not obtain; and was under the neceſſity of proceeding upon my firſt concluſion.

From the length of time which the treatment continued, it would be tedious to give an exact journal. I ſhall only obſerve here, that after perſiſting from the 22d April to the 1ſt October 1794, in a variety of means, a cure was at laſt effected; and at preſent ſhe enjoys the ſame ſtate of health ſhe did before the attack.

When I began the treatment, my views were confined entirely to the employment of medicines given by the mouth, or means acting on the ſyſtem in general. Moſt of the medicines which I had recourſe to, are not entitled to any notice from their effects. Opiates were uſed every day, both by the mouth and clyſters, without even much temporary relief. Peruvian bark, in powder and extract, cicuta, uva urſi, ſteel, zinc, diluents, cold bath, &c. were tried, all in ſucceſſion or conjoined, but to no purpoſe. From the exhibition of the uva urſi, to which I gave a fair trial for five weeks, ſhe at firſt found conſiderable benefit; and, during its uſe, the patient had an interval of eaſe for 14 days. After perſevering, from the 22d of April to the 20th of June, in a conſtant and unbeneficial

ficial uſe of medicines, with every attention to regimen, I found my patient nothing relieved, and now in the higheſt pitch of agony and deſpair. Her cries were dreadful, and could be diſtinctly heard out of doors. The pain now extended along the back and belly, ſo as to produce ſpaſms of the muſcles, with little remiſſion; and ſhe was conſtantly confined to bed.

I was now at a ſtand, and for a few days gave her up entirely to the influence of opiates.

Upon again attentively conſidering the ſituation of my patient, I was ſtill of opinion that the whole ſymptoms were capable of being traced to the affection of the bladder and urethra, and that nothing exiſted but what would in all probability yield, if the idiopathic cyſtirrhœa could be ſubdued. I reſolved therefore, as the laſt reſource, to make trial of injections; and on the 20th June I began their employment, by throwing into the bladder four ounces of thin mucilage of gum arabic, with a drachm of tinct. theb. In a few days an addition of two ounces of an infuſion of bark in ſimple water was made to

the above, and in ſome days more it was changed for the ſame quantity of the infuſion in lime-water; and from July 1ſt to the 19th, it was again changed for an infuſion of bark and alum to the ſame bulk. In the whole of theſe injections the tinct. opii was never omitted. From this period to the 9th September, I made uſe of a mixture of linſeed-oil and lime-water, with a drachm of a watery ſolution of opium. Theſe were next ſucceeded by a ſolution of zinc. vitriolat. to the extent of 35 grains in four ounces of water, thickened with gum tragac. and two drachms of the watery ſolution of opium; and continued to the 1ſt October, when a cure ſeemed effected.

I ſhall now take notice of ſome particulars which deſerved attention, during the employment of the injections.

The inſtrument I employed for throwing them up was a common female catheter, mounted with a bladder, which I am convinced anſwered better than any other contrivance. I ſeldom found any difficulty in exhibiting them, except when the attack was ſevere, when the urethra was ſenſibly ſwelled, protuberant,

tuberant, and ſomewhat diſplaced, and then the increaſe of heat was very perceptible through the whole vagina. The operation was always under the clothes, and without light. The extent of the injections to the 19th of July, was four ounces; and from that period to the 1ſt of October, they never exceeded two.

During the employment of the four firſt kinds, no permanent benefit was obtained; and indeed thoſe of the alum and bark were evidently pernicious, the irritability of the bladder and the frequency of the paroxyſms being much increaſed. The next in ſucceſſion, formed of lime-water and linſeed-oil, were only employed for a few days before they produced the happieſt effects; and in about twelve days ſuch a complete remiſſion of ſymptoms was obtained, as inclined the patient to deſiſt from their uſe. This, however, continued only for three weeks, when I again began their uſe, and in a ſhort time they removed the ſymptoms. Imagining, however, that probably the ſenſibility of the diſeaſed parts was only removed by them, I had recourſe to the laſt ſpecies, with the view of giving tone, and

had the pleaſure of finding them anſwer fully the indication, by effecting a cure.

In the uſe of this great variety of injections, it was very obvious, that thoſe which poſſeſſed much tenacity always afforded moſt relief; and I was fully ſatisfied, that it was from this circumſtance that the fifth ſpecies of injections had their principal effect; for they afforded a very ample defence from the influence of the urine, and the conjunction of the watery ſolution of opium gave a full opportunity of diminiſhing the ſenſibility of the urethra. The change in the form of the opiate, I was inclined to think very material. All the kinds of injections had the influence to make the patient retain her urine for a conſiderable time, which ſeemed entirely owing to the opiate; for even during the uſe of the alum and bark this effect was produced, although ſhorter in its duration.

Upon the whole, after attentively conſidering the ſymptoms, together with the treatment and its effects, I am inclined to draw the following concluſions.

1ſt. That in this caſe not only an increaſed ſenſibility, but an abraſion and loſs of ſubſtance

ſtance exiſted in the inner coats of the bladder and urethra.

2d. That, from the nature and advanced ſtate of the diſeaſe, no benefit could ever have been derived from the uſe of internal means, or remedies operating on the ſyſtem in general.

3d. That the cure was entirely to be attributed to the injections, and chiefly to the two laſt kinds.

4th. That injections of great variety may be thrown into the bladder with great ſafety and advantage.

And, *laſtly*, That this caſe affords a ſtrong preſumption that they may be thrown into cavities, either natural or artifical, (where no internal remedies can poſſibly be of any uſe), with good effects, and that it goes far to make their uſe much more general than hitherto.

II.

A Letter from Mr. William Macbeth, *Surgeon in Demerary, to Dr.* Duncan, *giving an Account of a Singular Affection of the Urinary Organs, common among the Negroes in Demerary.*

I TAKE the liberty of ſending you an account of a troubleſome diſeaſe, which appears peculiarly to effect the negroes who inhabit the ſea-coaſt of this colony. As I do not recollect to have obſerved it taken notice of by any author who has treated on diſeaſes of tropical climates, and as it appears to me a ſingular diſeaſe which occurs frequently in this colony, I thought it might be worthy of a place in the Edinburgh Medical Commentaries.

Previous to a hiſtory of the diſeaſe, it may be thought neceſſary to give a few preliminary obſervations with reſpect to the nature and ſituation of the windward or eaſt ſea-coaſt

of

of Demerary, a country almoſt unknown in Europe, where, from every information, this diſeaſe prevails moſt. And to give ſome account of the ſtate of the weather and mode of life of the negroes in this country, which is ſomewhat different from that of thoſe in the Britiſh colonies.

The diviſion of the colony where theſe obſervations were made has only been cleared of wood within theſe few years paſt, and before cultivation was overflowed during the rainy ſeaſons, and in the dry ſeaſons was occaſionally covered with ſalt water at every ſpring-tide.

In cultivating the ſettlements, the land is drained by means of trenches and floodgates, which ſerve to evacuate the waters in the rainy ſeaſons, and whatever may accidentally ooze through the dams next the ſea during the tide of flood, or from the uncultivated lands in the very rainy ſeaſons.

The ſoil of this part of the colony conſiſts generally of a light ſpongy vegetable mould, a ſmall proportion of ſand and clay as the baſis, which becomes friable, and readily pulverizes, after being expoſed for ſome time to the action of the ſun and air.

The

The year is divided into two dry, and two rainy ſeaſons. The firſt dry ſeaſon commences in January, and continues until May; the firſt or great rainy ſeaſon, from May to Auguſt; the ſecond dry ſeaſon, from Auguſt to October; and the little rainy ſeaſon, from this month to January.

During the rainy ſeaſons, there is an immenſe body of water behind the cultivated part of the country; however, a conſiderable degree of circulation is perceived, as it communicates on the weſt ſide with the river Demerary, and on the eaſt with ſeveral ſmaller rivers, beſides a number of canals. There is therefore little or no ſtagnant water, either in the cultivated or uncultivated part of the eaſt ſea-coaſt, and on that account we ſeldom meet with diſeaſes produced by marſh effluvia.

Although the weather appears to have no influence on the diſeaſe hereafter to be mentioned, yet I apprehend a few obſervations with reſpect to it may not be unacceptable. The variation in the temperature of this coaſt during the laſt twelve months has not been great, and is cooler than might be expected from

from the latitude [6° 48′ N.] and the low ſituation of the country. In the courſe of that period, Fahrenheit's thermometer never roſe above 88° at noon in the ſhade, nor was it ever lower than 74° at night. The thermometer was ſuſpended in a large well-aired chamber, and placed in a ſituation where the ſun could not have immediate influence on it. The mean annual temperature may be about 81°.

The prevailing wind on this coaſt is the E. N. E. or trade-wind, which blows during the months of October, November, and December. From January to May it becomes more northerly, and from that month to September it returns to the E. N. E. except for a few days at the commencement of the rains, when it ſometimes blows from the S. or S. W. It is then ſultry and diſagreeable in the daytime, but during the night and morning uncommonly cool, and occaſions an unpleaſant chilly ſenſation. This is the only land-breeze we have; and it is only during its continuance that we have foggy weather or heavy dews in this part of the country.

The comparative degree of coolneſs which the

the inhabitants of this coaſt uniformly enjoy, may, I preſume, be eaſily accounted for, when we reflect, that the E. N. E. wind muſt paſs over a great part of the Atlantic Ocean, which cools and preſerves it to the temperature mentioned, until it arrives on the coaſt of Guiana. This may account for the north wind being the cooleſt, and the E. N. E. the moſt pleaſant. It is probable alſo, that the great evaporation may contribute towards cooling the air.

The employment of the negroes, and their manner of living here, is ſimilar to that of thoſe in the Britiſh colonies, except that here it is not nearly ſo laborious, from the nature of the country; and their food, which is chiefly plantains, is in greater abundance, and ſeems to agree better with them than any other ſpecies of food.

Their common beverage is what is here called buſh-water, which is highly impregnated and deeply tinged with vegetable ſubſtances; however, the taſte is not unpleaſant, although it frequently cauſes diarrhœa with ſtrangers, on their firſt arrival.

The dreſs of negro men, if it may be ſo called,

called, is only a hat, and a piece of cloth applied in the manner of a T bandage, and for women a hat and petticoat. Theſe partial coverings ſeem more conſonant to the nature of their conſtitutions than warmer clothing; and in this dreſs they do not appear to be ſo much affected by the viciſſitude of the weather.

It may not be improper to add, that the diſeaſe known by the name of the mal d'eſtomache, which is ſo frequent and ſo often fatal in the Windward Iſlands, is unknown here; and even negroes labouring under this diſeaſe, are cured after they have been ſome time in the colony, without the aid of medicine.

At the commencement of the diſeaſe which I am now to deſcribe, the patient generally complained of a ſenſe of uneaſineſs and pain in the region of the urinary bladder, which ſhooted along the urethra towards the glans penis, a frequent deſire to make water, attended with teneſmus, and a conſiderable degree of pain in the ſmall of the back. The urine was emitted with difficulty and pain, and ſometimes by drops only. At the firſt appearance

appearance of the diſeaſe, the urine in general was of the natural colour; but as it advanced, it became turbid and ropy; and after the urine was diſcharged, it was ſometimes followed by a few drops of mucus or blood, which excited a conſiderable degree of pain. In ſome caſes, urine mixed with blood was the firſt ſymptom of the diſeaſe; in others, a conſiderable quantity of mucus, of an aſh colour, was diſcharged with the urine; and in many caſes, ſmall grumous particles of blood were found at the bottom of the veſſel, after it ſtood for ſome time. In a great number of caſes, we have obſerved a diſcharge of mucus from the urethra, reſembling the matter of gonorrhœa; which appearance induced ſome practitioners to miſtake the complaint for that diſeaſe. When improperly treated by aſtringent injections, I have obſerved the diſeaſe to be rendered tedious, obſtinate, and more painful. Coſtiveneſs ſeemed always to aggravate the complaint. The pulſe was generally regular, and the ſkin of the natural heat. Upon the moſt attentive examination, we never could perceive the ſmalleſt particle of ſand depoſited in the urine of thoſe affected with

with the diſeaſe. With the dried reſiduum of the urine of ſeveral ſubjects and at different periods of the diſeaſe, we have tried the ſulphuric, muriatic, and citric acid, but they produced no effervescence.

When I firſt obſerved the diſeaſe, ſoon after my arrival in this colony, I conſidered the complaint as merely of an inflammatory nature. Venæſection, mucilaginous decoctions, nitre, and gentle purgatives, were preſcribed, without much relief. I afterwards gave diaphoretics, opium, and camphor, with as little advantage. Recollecting to have ſeen the balſam copiaba afford conſiderable relief in a complaint ſimilar to this, I gave a drachm of it mixed with two of mucilage of gum Arabic, thirty drops of ſweet ſpirit of nitre, and a little ſyrup, morning and evening. This medicine ſucceeded beyond my expectations, and never failed to cure the complaint, or to relieve the patient in a few weeks, particularly when application was made at the commencement of the diſeaſe. But if the complaint was miſtaken, a much longer time elapſed before a cure was effected. It alſo frequently yielded to the balſam copiaba alone.

During

During laſt year, we had from 150 to 200 patients labouring under this diſeaſe, and only one caſe had an unfavourable termination. A robuſt negro man, the property of Joſeph Hamer, Eſq. was attacked with the diſeaſe in November 1792, a few months after his arrival. In the beginning of February 1793, I firſt ſaw him; at which period he was conſiderably reduced, complained greatly of the pain in the region of the bladder, which was increaſed by the ſlighteſt touch. There was alſo an evident hardneſs and ſwelling of that organ. He had frequent and urgent calls to make water, which was diſcharged only by drops, and with very great pain. It was frequently mixed with blood, at other times it had the aſh-coloured appearance already mentioned. He alſo complained of his mouth, which was affected by the uſe of mercury, for the ſecond time ſince the commencement of his diſorder, which was miſtaken for lues venerea.

I directed that no more mercury ſhould be given, to ſtop making uſe of injections, and to give him a gentle purge. When the ptyaliſm ceaſed, the balſamic drops were directed to be

be given; and he was ordered to drink a quart of the decoction of the hog plumb-tree bark daily. He continued the uſe of theſe medicines for ſix or eight weeks, which at firſt gave him ſome eaſe, but at length had not even that effect, and he became weaker every day. We now changed his medicine to the balſam copiaba alone, aſſiſted by emollient fomentations to the region of the bladder, and emollient clyſters. This alſo afforded a temporary relief. I tried a preparation of the ſanguis draconis and alum, recommended by Dr. Crawford, ſurgeon to the garriſon of this place, but without any advantage. Diaphoretics, camphor, and opium afforded him a temporary eaſe. In the month of Auguſt following, he begged to be put into the hands of a black nurſe, which was complied with, at the requeſt of his maſter. Under her care he remained three months; and from what I could learn, ſhe adminiſtered the decoction of a few ſimples, of which ſhe made a myſtery. However, during that period, he became worſe, and was reduced almoſt to a ſkeleton. In the month of December, I was again requeſted to viſit him. He then had hectic fever, was ſo weak that he could not move

without aſſiſtance, ſometimes diſcharged blood, at other times the aſh-coloured mucus, and urine mixed with purulent matter, or what appeared to be ſuch. The blood diſcharged now was pure, and in larger quantities than at any other period of the diſeaſe. The hardneſs and ſwelling of the bladder were conſiderably increaſed.

With a view to afford ſome relief, but without any hope of his recovery, I directed a powder, compoſed of camphor, opium, and nitre, to be given three times in the day, aſſiſted with mucilaginous decoctions, and emollient clyſters and fomentations. On the evening of the 19th of January 1794, death relieved him from miſery, and the following morning I opened the body.

During the illneſs of this man, there were ſix others on the ſame plantation, who were ſubjected to the diſeaſe; and a cure was effected by the balſam copiaba alone. One of them had a relapſe, although not violent, and it readily yielded to the balſam.

On diſſection, the urinary bladder had the appearance of a large unequal ſcirrhous tumour, conſiderably larger than the natural

ſize when diſtended with urine, and ſtrongly adhering to the peritoneum at the fundus. The coats of the bladder were prodigiouſly thickened: upon cutting into it, we found it, in ſeveral places, nearly an inch thick, and there eſcaped a conſiderable quantity of a fœtid ſanies. The interior ſurface had a honeycomb appearance, with many inequalities. By the enlargement of the coats of the bladder, and preſſure on the orifices of the ureters, their cavities were ſo enlarged as to admit of an ordinary ſized finger. That part of the rectum contiguous to the bladder was ſomewhat diſeaſed, and the coats of that inteſtine enlarged. The kidneys were rather larger than natural, and flaccid. The reſt of the inteſtines were to all appearance perfectly ſound.

Among the number of caſes which came under our care, we had only two white people attacked with the complaint, which happened at a time when rain-water was ſcarce. The firſt was ſeized with the diſorder in March laſt. By the uſe of the balſam copiaba, his complaint was removed in a few days. This man informed me he was troubled with cal-

culus, ſome time before he left Scotland, and the ſymptoms of the preſent diſeaſe were ſimilar to what he formerly complained of. However, during the diſeaſe, no particles of ſand could be perceived depoſited in his urine. The other is the caſe of a gentleman, at preſent ill of the complaint, under our care. When firſt attacked with the diſeaſe, he made uſe of aſtringent injections, miſtaking the complaint for gonorrhœa. This practice, as I have already obſerved, tends to aggravate the diſeaſe, and render it more obſtinate. This gentleman's father and eldeſt brother were both troubled with calculus of the bladder.

I ſhall now beg leave to mention a few facts, which may throw ſome light on the cauſe and frequency of this diſeaſe among negroes, and why the whites ſhould in general be exempted from it.

A ſhort time after my arrival in this colony, obſerving the frequent occurrence of the complaint among negroes of both ſexes, and at every period of life, and alſo obſerving that white people were in general exempted from the diſeaſe, it occurred to me, after ſome reflection, that this diſtinction a-

roſe

roſe from the former being under the neceſſity of uſing the *buſh-water*, and the latter ſeldom, if ever, making uſe of any. And even in times of ſcarcity, when they are compelled to uſe it for any purpoſe, it is always filtered. For common beveridge, it is in general mixed with Madeira, claret, or ſome ſpirit, which probably may correct the tendency that this water may have to produce the diſeaſe. This idea is corroborated by obſerving that domeſtics, who live in a manner almoſt ſimilar to the whites, are alſo free from the diſorder; by obſerving that in the courſe of fifteen months, we had only one caſe of the diſeaſe on the plantation Paradiſe, where the negroes had abundance of ciſtern-water; and by remarking, that we had upon an average about four to one attacked with this diſorder during the dry ſeaſon, to what we had during the rainy months. My partner, Mr. Bartrum, who had practiſed many years a conſiderable diſtance up the river Demerary, where the water is pure and tranſparent, does not recollect to have ever ſeen a ſingle caſe of this diſorder.

Upon the whole, I conceive that the water

which the negroes here are, from neceſſity, obliged to make uſe of for the different purpoſes of life, is the primary cauſe of the diſeaſe.

1ſt. From the white inhabitants, and their domeſtics, being exempted from the diſeaſe, who ſeldom drink this water.

2d. From the diſeaſe being leſs frequent during the wet months, when there is an abundance of freſh water.

And, *3d.* From the diſeaſe being ſeldom ſeen on eſtates where there is a ſufficiency of ciſtern-water, and never upon the banks of the rivers or creeks, where the water is free from impurities.

Whether the Aborigines or Indians are troubled with the complaint or not, I cannot ſay. I apprehend they are not, as they live in the interior parts of the country, where they have the benefit of wholeſome water. However, balſam copiaba is a favourite vulnerary with them.

III.

III.

Hiſtory of a Caſe of Inverted Uterus terminating ſucceſsfully. By Mr. John White, *Surgeon, Paiſley.*

ON the 26th of June 1793, about ten o'clock at night, I was deſired to viſit a married woman, twenty-ſeven years of age, who was delivered of a fine healthy child, about five o'clock that ſame evening. The delivery took place while ſhe lay on a couch. There was nothing unuſual in the progreſs of the labour, nor was the birth of the child remarkably ſudden; but the midwife having found difficulty in extracting the placenta, had employed much time and force in pulling at the navel-ſtring, and had cauſed the woman to cough, ſneeze, and even to vomit, by tickling her throat with a finger, before ſhe was able to accompliſh her purpoſe.

The delivery of the placenta was immedi-

ately followed with an hœmorrhage from the uterus, and violent forcing down pains, ſimilar to thoſe which accompany labour. But as in all her former labours, (four in number), a flooding to a certain degree had likewiſe occurred, this circumſtance, on the preſent occaſion, gave no great alarm; and as the pains, ſhe was aſſured, were no ways uncommon, ſhe endeavoured to endure them with patience and fortitude.

She had been nearly five hours in great agony when I ſaw her. Her countenance was pale and ghaſtly; her extremities were cold; her pulſe at the wriſt was ſcarcely perceptible, quick and irregular; and her voice was ſo feeble, that it could ſcarcely be heard. She had great pain in her thighs, and the lower part of her belly; but the pain in her back and loins was, ſhe ſaid, quite unſupportable. The hœmorrhage from the uterus had, however, been pretty moderate for ſome time; but the bearing-down pains continued ſo violent, that, to uſe her own expreſſion, ſhe thought her whole bowels would be forced out.

On applying a hand to the abdomen, I

was certain ſhe had not another child to bear; and from the account I had juſt received, and nature of the preſent ſymptoms, I immediately ſuſpected there was an inverſion of the uterus.

Without delay, I therefore examined her *per vaginam*, and found the whole cavity of this organ filled with a large, round, and pretty firm fleſhy tumour, rugous on the ſurface, and having the ſhape of a printer's ball, or the bottom of a large bottle of the elaſtic reſin. This I conſidered as evidence ſufficient.

I would inſtantly have attempted the reduction of the uterus, but the poor woman was ſo very faint and weak, and all the parts concerned ſo tender and irritable, that I thought it could not be undertaken for ſome time, but with conſiderable riſk. I therefore gave her forty drops of laudanum, and the ſame number of elixir of vitriol, in a glaſs or two of wine, to recruit her ſtrength a little, and to moderate the violence of the pain and irritability.

The midwife having left her as ſoon as ſhe thought ſhe had done her duty, ſhe was again immediately

immediately brought; and having, at my deſire, made the neceſſary examination, was very ſoon convinced of what had happened.

After waiting about twenty minutes, to allow what ſhe had got to take effect, I gently inſinuated my hand through the os externum; and graſping the tumour firmly for ſome time, to diminiſh its bulk, I began then to puſh at the middle of the fundus, and, as nearly as I could, in the direction of its mouth; employing ſometimes a ſingle finger, ſometimes two or more, or the whole fingers and thumb collected into a cone-like ſhape, as I found upon trial could beſt ſuit my purpoſe. I likewiſe tried, from time to time, to dilate the os internum, by inſinuating a finger between it and the body of the uterus; but from the contracted ſtate in which it was, and the great bulk of the tumour, it could not be done but with conſiderable difficulty.

By a due perſeverance, however, in one or other of theſe methods, I at length had the good fortune to reduce it completely; and as I gradually withdrew my hand from the cavity of the uterus, into which it had at laſt

fairly

fairly paſſed, I gently irritated the os internum with a finger, to excite its contraction. And having enjoined reſt and a recumbent poſture, and ordered ſome light nouriſhment, I took my leave.

My patient continued in a weak and languid ſtate for many weeks. Her legs were œdematous for a long time after ſhe could go about; and the quantity of milk in her breaſts was ſo ſmall, that another woman was required to ſuckle her child; but by the uſe of ſuitable cordials, tonic medicines, nouriſhing diet, and moderate exerciſe, in the courſe of a few months, I had the ſatisfaction to ſee her recover completely.

Remarks.

The inverſion of the uterus is one of the moſt formidable and alarming accidents which can happen in delivery; for if not ſoon known, and ſpeedily reduced, it is apt to prove fatal in a ſhort time. It ought, therefore, to be well underſtood, and particularly guarded againſt, by every perſon practiſing midwifery.

That

That the inverſion, in the preſent caſe, was occaſioned by the very forcible and injudicious means employed to extract the placenta, there can, I think, be little doubt; particularly when it is conſidered, that the extraction was made while the woman ſtood upright; and of the numerous inſtances of the like kind on record, by far the greater part of them appear to have been the reſult of a ſimilar raſh and inconſiderate practice.

As in making the reduction in the above caſe, I experienced much inconvenience from the ſhortneſs and ſmallneſs of my fingers, I would beg leave to propoſe the trial of the following ſimple inſtrument, if the like difficulty ſhould ever happen to any other practitioner. It conſiſts of a bit of light wood, about fourteen inches long, not quite cylindrical, but ſlightly tapering from the ends to the middle, and the ends rounded, like the head of a walking cane. The diameter of the one extremity is an inch, and the other an inch and three quarters; the one or the other to be employed as the particular circumſtances of the caſe may ſeem beſt to ſuit.

ſuit. The whole of it is covered with ſmooth and ſoft leather, and the ends are thickly ſtuffed with wool or ſoft hair; ſo that they can hardly do any injury to the uterus, unleſs employed in the moſt inattentive and improper manner.

IV.

IV.

Hiſtory of a remarkable Caſe of Retroverted Uterus terminating ſucceſsfully, after various fruitleſs Attempts for Reduction. By Mr. John White, *Surgeon, Paiſley.*

THE ſubject of the following caſe was a poor woman, twenty-ſix years of age, the mother of three children. After having ſuckled the laſt child for eighteen months, her menſes appeared in ſmall quantity on the 16th of November 1787. She continued to give ſuck for nine or ten weeks longer, during which time her menſes did not return. This and ſome other circumſtances led her to think ſhe was again pregnant.

On the 21ſt of January 1788, when carrying a pailful of milk on her left haunch, ſhe felt ſomething, as ſhe expreſſes it, in that ſide give way, and fall down towards the bottom of her belly. This was immediately followed with a violent pain of her back, and a ſenſe of

of weight, or bearing down, in the lower part of the abdomen. A few days after this, her complaints were ſo much relieved, that ſhe found herſelf able to be preſent at a dance with ſome of her neighbours, and was ſo imprudent as to take a very active part in that exerciſe. Her complaints next day returned with greater violence than before: She had a ſlight diſcharge of blood from the vagina, and now dreaded an abortion.

By the advice of an able practitioner in town, who ſuſpected the caſe to be gravelliſh, ſhe was blooded, and went into a warm bath, but without any alleviation of her pains; on the contrary, they continued to increaſe daily.

I viſited her on February the 15th, and found her in great agony. She had ſlept very little, if any, ſince the return of her complaints. She was feveriſh, and had a violent bearing down, both at the vagina and rectum, but from the former of theſe there was no diſcharge. The pains were very ſimilar to thoſe which accompany labour, but with ſcarcely any intermiſſions. She had great difficulty and pain in making water, and it was made frequently,

frequently, and in ſmall quantities. She was likewiſe very coſtive, not having had a ſtool for the laſt eight days. A ſlight tenſion and ſwelling were obſervable over the abdomen, particularly in the hypogaſtric and left iliac regions; and ſhe complained of ſlight pain when theſe were preſſed upon.

On examining her, per vaginam, I was ſurpriſed to find the os tineæ turned up, and nearly in contact with the ſymphaſis pubis, and a large reſiſting tumour in the hollow of the ſacrum, lying behind the vagina. Introducing a finger into the rectum, I felt the tumour very diſtinctly preſſing upon the forepart of that viſcus, but could not paſs my finger beyond it. I immediately concluded it to be a caſe of retroverted uterus; and, after drawing off her water, and giving a laxative clyſter, I put the means uſually recommended for reduction into practice, but without effect.

Next day I renewed theſe attempts, but they were equally unſucceſsful. She fainted away during the operation, and had a ſlight convulſion fit. This obliged me to deſiſt.

For more than a week after this, ſhe was

ſo

ſo extremely ill, that I durſt not attempt any thing; nor indeed was there any probability of her ſurviving the reduction, even had it been poſſible to have accompliſhed it. Some ſlight alleviation of her pains was occaſionally obtained by anodynes; but her ſtomach was now become ſo very weak and irritable, that almoſt every thing ſhe took was rejected by vomiting.

She had had no ſtools ſince the firſt injection. I endeavoured repeatedly to procure ſtools in this way; but the paſſage was ſo completely blocked up by the tumour, that not one of the injections could be made to paſs.

A partial ſuppreſſion of urine having occurred from the beginning, I was frequently obliged to draw it off by means of the catheter. The tumour continuing to increaſe, and the os tincæ to be raiſed higher and higher, I found it impoſſible to introduce the catheter in common uſe into the bladder; I was able, however, to introduce the flexible one at all times with ſome difficulty.

The novelty of the caſe, and the dangerous ſituation in which my patient was, induced me to take the advice of ſome of my medical

acquaintance. Dr. Farquharſon was accordingly firſt called in; and, after examining the patient with great care, his opinion of the caſe was the ſame as my own.

By this time (February 24th), our patient being ſomewhat better, and having recovered a little ſtrength, it was judged proper to make a third attempt; which was accordingly made, but all to no purpoſe. The tumour was ſo firmly wedged in the pelvis, as not to yield in the leaſt degree upon preſſure, and ſo very bulky as to fill up the cavities of the vagina and rectum. Her *fæces* were voided with great pain, and in ſmall quantities, and ſeldom oftener than once in the eight days, although every mean we could think of to obtain ſtools was frequently employed.

On the 1ſt of March, ſhe was admitted a patient at the Public Diſpenſary, and I continued to viſit her, along with Mr. Thynne, then acting ſurgeon for that charity.

On the 3d of the ſame month, in preſence of Dr. Farquharſon, Dr. Jeffray, and ſome other profeſſional gentlemen, Mr. Thynne and I made another attempt to reduce the

uterus, but with the ſame bad ſucceſs as before.

I ought not to omit mentioning, that ſome time previous to this laſt attempt, the gentleman who firſt viſited her had, unknown to us, attempted the reduction by himſelf, and had employed ſome very powerful means for that purpoſe; but his endeavours were attended with no better ſucceſs than our own.

As every practitioner who ſaw her agreed in thinking it a well-marked caſe of retroverted uterus, I believe we ſhould have even made farther attempts to reduce it, had the woman permitted us; but ſhe begged we would let her alone, adding, ſhe would much rather die than ſubmit to the pain of any more trials.

At our requeſt, Mr. Hamilton, the late worthy profeſſor of anatomy and midwifery in the univerſity of Glaſgow, was ſo obliging as to make her a viſit. This was on the 16th of March. On examination, he found the os tincæ raiſed above the ſymphyſis pubis, and pointing upwards and forwards, ſo that he could only touch the lower lip of it with the point of his finger.

From the low ſtate in which he found her, and the tumour being ſo very fixed, he did not think it would be adviſable to make any farther attempts to reduce it. He propoſed, however, the introduction of a probe into the *os uteri*, to break the membranes, and to bring on an abortion. This he conſidered as the only means left for procuring the reduction of the uterus, and preſerving the woman's life.

A common probe, bent in ſuch a way as might beſt favour its introduction, was paſſed ſeveral times within the os uteri, to the length of three or four inches, but without occaſioning any perceptible diſcharge. In its courſe, it met with ſeveral ſlight interruptions, and felt as if paſſing over a rugous ſurface. I tried frequently to make it point to the bottom of the tumour; but found it impracticable, as it conſtantly took its direction obliquely upwards and backwards.

Being unable to bring about the deſired abortion, or otherwiſe diminiſh the bulk of the uterus, we now gave up all thoughts of her recovery, and expected every day would have been her laſt. Her pulſe was become very quick

quick and feeble. She often fainted on being raiſed; ſhe was frequently diſtreſſed with retchings and hiccough, and convulſive twitches agitated the different muſcles. She continued in this dangerous ſtate for nearly two weeks, during which time cordials and anodynes were occaſionally adminiſtered.

On the 7th of April, ſhe had a very copious evacuation by ſtool. Her *fæces* were mixed with ſome puriform matter, and a great quantity of black grumous blood. After the ſecond or third evacuation, her pains abated conſiderably; but ſome degree of teneſmus and diarrhœa continued for fourteen days, at which time her ſtools began to aſſume their natural conſiſtence and colour.

From the commencement of the diſcharge of this matter, ſhe began to recover daily. The tenſion and ſwelling of the abdomen went off by degrees. The tumour was found ſofter and leſs bulky on every examination, and the os tincæ gradually returned to its proper place.

By the middle of May, ſhe had ſcarcely any complaint, and had ſo far recovered her ſtrength, as to be able to do the drudgery of

her family. On the 30th of the ſame month, her menſes returned; an event I had often wiſhed for. They flowed again on the 28th of June; and I found her on the 10th July nearly as ſtout and healthy as ever.

I have lately had an opportunity of talking with the woman who is the ſubject of the foregoing caſe. She informs me, that ſhe ſtill continues to menſtruate regularly, but rather ſparingly; and that ſhe has no complaint, unleſs it be a ſlight pain which ſhe generally feels when ſhe voids her ſtools, pretty high in the rectum. And ſhe has remarked, that the figure of her ſtools is now ſomewhat ſmaller than formerly.

The moſt probable opinion which I think we can form of the more remarkable circumſtances attending this caſe, is, that an enlarged ovarium was the chief, if not the only cauſe, of the retroverſion of the uterus; that here no uterine fœtation had actually taken place; but, on the contrary, that ovarium impregnation or inflammation had occaſioned the increaſed bulk of the uterus, as an effect of that well-known ſympathy which ſubſiſts between theſe two organs.

But

But whatever may be in this, the preſent caſe affords an opportunity for curious ſpeculation and intereſting remark. It likewiſe preſents an inſtance, among many others, of the aſtoniſhing methods which nature occaſionally employs to free herſelf from diſeaſe, and that after the ordinary reſources of art have been fruitleſs and unavailing

V.

Hiſtory of a Caſe of Rabies Canina. By Mr. Alexander Johnſton, *Surgeon, Dunbar.*

THOMAS HOGG, aged 33, ſuperintendant of the farm of Helenſtead, in the pariſh of Cockburnſpath, early in the morning of Friday the 13th December 1793, having gone out to call up one of the ſervants in the next houſe, on his return heard the motion of ſomething behind him, and felt himſelf ſeized in a furious manner by a dog, which laid hold of his right leg. He inſtantly endeavoured to diſengage the animal, and with this view, laid hold of the upper and under jaw with the right and left hand; and in the ſcuffle the right hand was bitten likewiſe.

Upon calling out to his fellow-ſervants, one ſoon came to his aid, who wiſhed him to let the dog go; which he moſt poſitively refuſed to do: obſerving, that, if the animal was mad, he

he was as ill as he could be; but that, if he let it go, it might do more miſchief. And he inſiſted on retaining his hold till the dog was killed; which was done.

The Rev. Mr. Spence of Cockburnſpath, having ſtudied and practiſed phyſic, was immediately acquainted; and, upon viſiting, found him determined to ſubmit to every thing thought neceſſary for his ſafety, as if the dog had been actually mad.

Mr. Spence ſtating the accident, I took every thing neceſſary with me, and got out about nine o'clock, the diſtance eight miles.

The patient again declared his conviction, that the animal was mad, from the mode of attacking him when walking quietly along, and offering no injury. And he was fully determined that all the wounded parts ſhould be removed, that his ſafety might be inſured.

Upon inſpecting the wounds, I found two on the right leg, a little below the middle of the gaſtrocnemii muſcle. He had his ſtocking on when bitten. Theſe wounds externally appeared trivial; the upper one, like a ſcratch, in ſome parts very little deeper than the

the ſkin, about half an inch in length; the lower one apparently would not admit the head of a common-ſized pin; but, upon introducing the probe, it was found to extend on the outer part of the leg about an inch.

An inciſion was made, about three quarters of an inch from the outer extent of the upper wound, in an elliptical courſe inwards, and gently ſlanting downwards, to three quarters of an inch beyond the extent of the wound inwards. The ſame mode being followed above, and each inciſion being a quarter of an inch from the wound above and below, effectually included the injured ſkin; and the cellular ſubſtance being removed with the ſkin, the ſurface of the muſcle was expoſed to view.

The lower wound was dotted with ink on the ſkin, agreeable to the extent and direction of the probe; and an inciſion made, half an inch from the outward extremity of the dots, in a direct line over the wound, to half an inch from the wound, and the edges of the wound, made by the tuſks, removed. We then proceeded to excavate the cellular ſubſtance, about an inch above and below the

the edge of the inciſion, removing part of the muſcle likewiſe.

Intending to heal theſe wounds by the firſt intention, the edges were brought together by ligature, and dreſſed with lint, over which was a large pledget of mercurial ointment; and the action of the muſcle prevented by the application of a bandage.

The wounds in the right hand were as follow: One on the palm of the hand, extending outwardly, near half an inch in length, very little below the ſkin. This was removed by making an inciſion, about an inch in length, on each ſide of the wound, completely including it, and diſſecting carefully below, ſo that the flexor tendon of the fore-finger was laid in view. The edges of the wound were brought together by ligatures, and dreſſed as in the leg.

The ſkin appeared ruffled on the back part of the firſt phalanx of the fore-finger, on the outer ſide of the ſecond phalanx, and on the middle of the abductor pollicis muſcle. Theſe ruffled parts of the ſkin appeared ſo ſlight, that we thought it ſufficient to apply the lunar cauſtic freely; and accordingly it was kept applied to

theſe

theſe parts for ſome conſiderable time, ſo as to produce an eſcher, and a free ſuppuration; and all were dreſſed with the ſtrong mercurial ointment.

It muſt here be obſerved, that, previous to my arrival, Mr. Spence kept bathing the wounds with warm milk and water, and promoted the bleeding, by preſſing the blood towards the wounds, and had got the hand and leg involved in a poultice.

During the time of removing the wounded parts, the patient behaved with the greateſt courage and reſolution; and he appeared perfectly ſatisfied that he was ſafe, even admitting the dog to be diſeaſed. He went to bed about ten, requeſting he might be kept quiet.

As we had always underſtood, that a dog labouring under the hydrophobia would neither eat nor drink, the ſtomach was inſpected; and, to our great joy, we found the ſtomach more than half full of food, which had a moſt corrupt diſagreeable ſmell; inſomuch, that we conjectured the animal had been eating human fœces. This circumſtance proved an additional comfort and conſolation to

the

the mind of the poor man, and led Mr. Spence and me to think the animal was not diſeaſed.

Upon inſpecting the mouth, nothing uncommon appeared, except that the inner ſurface of the lips was much wounded, which had been done by the animal's own tuſks in the ſtruggle, as he was held by the upper and under jaw until he was killed.

Leſt we had drawn a wrong concluſion of the healthineſs of the animal, it was agreed that our patient ſhould be put on an antiphlogiſtic courſe, and that he ſhould take to-night and to-morrow morning three of the pil. hydrargyri of the Edinburgh Pharmacopœia, and two night and morning, for ſome time after, I having taken out a box containing forty, formed of five grains each, inſtead of being formed agreeable to the Dipenſatory.

14th December. I viſited, and found him eaſy and ſatisfied in his mind; the wounds not painful; the pills only produced one free ſtool.

16th. I viſited, and dreſſed the wounds with the ſtrong mercurial ointment; he had applied

applied a poultice over them the night before; they appeared a little ſwelled, with very little diſcharge.

18th. I viſited, and dreſſed with the mercurial ointment; a poultice having been applied the night before, a copious diſcharge of matter mixed with blood had taken place. The leg being more ſwelled, two of the ligatures were deſtroying the ſkin; theſe were divided and removed, and a poultice of bread and milk ordered to be applied over the mercurial pledget, night and morning. The mercurial pills, to the extent of two, night and morning, were continued.

20th. I found a free diſcharge of matter from the eſchars made by the cauſtic. The wounds in the leg being ſtill ſwelled and inflamed, the ligatures were all divided; and a poultice, made of the vegeto mineral water, with the crumb of bread, was applied over the mercurial pledget, night and morning.

22d. This morning, inſtead of the pills, he took the Ormskirk powder, prepared by Mr. Hill, agreeable to the directions, his brother having got it from Mr. Baillie of Melleſtone.

ſtone. This he did merely to pleaſe and ſatisfy his friends, with the approbation of Mr. Spence.

23d. The leg was not ſo much ſwelled. It was thought yeſterday, that the mercurial ointment irritated the wounds; and we agreed to dreſs with the ceratum ſaturninum, and a poultice of the vegeto mineral water over it, night and morning. The wounds in the hand looking well, with a free diſcharge from the eſchars, we continued to dreſs them with the mercurial ointment.

27th. I found all the wounds looking well, with a free diſcharge. The ſwelling and inflammation abated in thoſe of the leg; a little luxuriance appearing in the wound; the mercur. præcip. rub. was ſprinkled over it; and he was requeſted only to keep the poultice over the leg at night, and to continue to dreſs the hand with mercurial ointment. He was perfectly well in health, and in good ſpirits. The pills being all uſed, we did not think it neceſſary to renew them. During their uſe, his bowels were eaſy, without purging; they operated by urine, and had ſlightly affected the mouth.

1ſt January 1794. The wounds in the hand were cicatriſed; thoſe in the leg incarning, and a good diſcharge. We occaſionally ſprinkled the ſurface with red precipitate, as the luxuriance appeared. To expedite the healing proceſs, the edges of the wounds were brought nearer with adheſive plaſter.

6th. I found him walking about in his uſual way, as when in perfect health; which I requeſted he would decline, until all the wounds were cicatriſed.

11th. I learned, that on Thurſday the 9th he had become a little uneaſy, but could not deſcribe what was the matter; at one time, he was apprehenſive he was going to be attacked with the ague (having once had it ſeverely before), from his having had a coldneſs and ſhivering, and he could not keep himſelf warm; was neither eaſy nor comfortable whilſt in the houſe, nor warm out of it. This was, however, ſatisfactorily accounted for by his wife, who informed us ſhe had that day waſhed his flannel veſt, and he was without a ſubſtitute.

It is here to be remarked, that it had been obſerved he never had become thirſty, or

aſked for a drink between meals, until Thurſday and Friday laſt.

This day I found a hardneſs round the wounds in the leg, and at times the hand and fore-arm were uneaſy, ſometimes with a prickling, at other times a ſleeping ſenſation. There was no additional uneaſineſs in the leg, only the hardneſs above mentioned. He was deſired to walk leſs, to apply a poultice of bread and milk over the wounds, and to anoint the hand and leg with the mercurial ointment. The edges of the cicatrice of the wound in the palm appeared a little ſwelled, without inflammation.

In the afternoon of this day he walked about, ſaw many of his acquaintance, and called upon Mr. Spence, as he expreſſed himſelf he was in duty bound, from the great experience of his friendſhip and attention. At this time, he appeared to Miſs and Mr. Spence uncommonly cheerful, diſtinct, and collected. Upon my departure from the houſe, his wife followed me, he having omitted to aſk if he might go to his father's on Monday, it being a day when the old man had all his family and friends, to congratulate

each other on the return of another year, and indulge themſelves with a cheerful glaſs. This I moſt readily complied with, provided he rode in a cart, avoided drinking, and came home early.

Sunday, 12th. Neither Mr. Spence nor I viſited him this day; but we learned from his brother-in-law, that he at times complained of the hand being uneaſy with a prickling ſtarting ſenſation, which reached to the elbow; and from the wound in the palm he preſſed out a little matter.

Monday, 13th. He viſited his father, at the diſtance of four miles, and dined with his family and friends. At dinner, we learned, he was very happy and cheerful; but at tea, expreſſed his anxiety to get home, which proceeded from the directions given him on Saturday. This he accompliſhed between ſix and ſeven in the evening, travelling in a cart.

Tueſday, 14th. All this day he was in perfect health, and free from any complaint; he walked about in various fields with his maſter, Mr. Slight, and partook of ſtrong ale with him at the toll-bar houſe, diſtant about a quarter of a mile from his own.

Wedneſday, 15th. This morning he was ſeized with a nauſea, and ſtrong deſire to vomit, and, in the forenoon, occaſionally brought up mouthfuls of what they termed yellow ſtuff, which to him had a bitter, ſour, diſagreeable taſte; and he had an oppreſſion about the region of the ſtomach, breaſt, and bowels. Mr. Spence being from home, did not ſee him until eight in the evening, when he preſcribed a ſolution of emetic tartar; which operated well, freeing him from a large quantity of bile. It is here to be obſerved, that at this time he drank freely of warm water, during the operation of the emetic, and ſhowed no averſion when it was offered him. Mr. Spence ſtaid until he was ſettled from the fatigue of the emetic, which was after ten, and left him with the aſſurance, that all the oppreſſion at the ſtomach, breaſt, and bowels, was removed. He had a deſire to ſleep; his pulſe was at this time eighty, ſmall and hard.

Thurſday, 16th. This morning, about ten, Mr. Spence viſited, and found him fretful and uneaſy, pulſe 100; upon inquiry, found he had no ſleep during the night; and, towards morning, the oppreſſion at the breaſt,

ſtomach, and bowels, returned, but not to ſo great a degree as yeſterday; and he did not like to move, for fear of fainting. Having had no ſtool in the courſe of yeſterday, or after the emetic, Mr. Spence propoſed, and ſent him a ſolution of ſalts, which he attempted to take, but could not. To uſe his own words, his heart recoiled. The idea made him ſick and faint, he therefore begged to be excuſed.

At mid-day Mr. Spence was in Dunbar, when we agreed, that ſo great an appearance of bile rendered a laxative neceſſary, to carry it downwards, and fixed on the caſtor-oil; which, to render it more pleaſant, and more eaſily taken, was made up in the following mode.

R. Pulv. Gum. Arab.

—— Sacch. Alb. ſingulorum drachmas tres ſolve in Aq. Font. unciam dimidiam, adde paulatim Ol. Ricin. unciam unam cum ſemiſſe Aq. Font. uncias duas. *M.*

Half of this was intended to be taken at once; and if it ſhould not operate in the courſe of three hours, he was then to take the other half.

In the afternoon I went out, taking the laxative with me, and got there between

three and four. I found him in a profuſe perſpiration, which had continued ſince morning, unſupported by food, or any liquid; which he ſaid he avoided taking, for fear of increaſing the uneaſineſs which he felt about the ſtomach and bowels, which, if increaſed, he would be in danger of fainting. He had nauſea, and at times attempted to vomit; the pulſe hard and firm, at ninety. I would at this time have taken eight or ten ounces of blood, had the perſpiration not been ſo profuſe. The great and firſt object appeared to be gently to open the bowels.

When I informed him of having brought the laxative, and expreſſed my deſire of his taking it, he ſaid, he would moſt willingly take any thing, but was afraid to eat or drink, for fear of adding to the oppreſſion at the ſtomach and bowels, and fainting; that he was afraid he had offended Mr. Spence in the morning, by refuſing the ſalts, which he could not avoid, but would now ſummon up all his reſolution, and take this.

I tried him firſt with a little ſmall-beer made milk warm; and as he did not wiſh to take a large draught, he took it with a table-

ſpoon. The firſt ſpoonful was with ſome degree of agitation, the following with eaſe, while he at the ſame time obſerved the firſt was the worſt. In this way he might have taken about a gill and a half.

About a quarter of an hour after, I tried him with half the quantity of the laxative julep, having, at his deſire, made it milk warm. He inſiſted on helping himſelf, and taking it with a tea-ſpoon. At firſt, upon touching his lips, he appeared a little agitated, and ſtartled, and by a forcible inſpiration got it over, and as it deſcended to the ſtomach he ſighed. Upon aſking, why he ſighed, he ſaid, he could not help it, for it was like to make him faint, and produced a deſire to vomit; and leaſt he ſhould vomit, he would not take it all at once. So that, from the time of his taking the firſt of it, till he had taken the whole, might be about three quarters of an hour. Upon my arrival, I deſired ſome beef-tea to be prepared, to ſupport the ſyſtem, and dilute the bile, during the operation of the laxative.

In about twenty minutes from his getting the laſt of the half, he had a moſt offenſive bilious

bilious ſtool; and it afterwards produced in all ſix, equally offenſive and equally bilious.

He frequently had a deſire, and did retch repeatedly during the operation of the laxative, and at firſt brought up only a few mouthfuls of bile; but what was vomited afterwards appeared only to be the mucus of the ſtomach.

As I frequently gave him of the beef-tea, during the operation, there were evident ſymptoms of the irritability of the ſyſtem being preternaturally increaſed, from the ſighing and a degree of horror on the taking of it. Sometimes this was evident at the ſight of it when preſented to him.

But this increaſed ſenſibility was not confined to fluids alone. The impreſſion of the air produced it, when any of the doors happened to be left open, or any of the women moved quickly through the houſe, ſo as to agitate the air. Upon theſe occaſions, he repeatedly declared it was killing him; at other times he ſaid it was taking away his breath, and like a knife entering his ſtomach and breaſt.

Even the ſenſe of ſmelling was preterna-

turally increaſed. Upon a friend approaching unexpectedly near him, he was ſtartled, and requeſted he would withdraw, as he had been drinking ſpirits, the ſmell of which was like to take away his breath.

I ſtaid until paſt eight, and I left him very much relieved, ſo that he took of the beef-tea freely, and did not ſigh upon the ſight or taking it, and was able to ſit erect upon the bed, without the dread of fainting.—The free perſpiration ſtill continued, and care was taken not to check it during the operation of the laxative, by keeping the blankets about him when he had occaſion to riſe.

My opinion at this time may be formed from a few lines I dropt Mr. Spence previous to my departure, which I ſhall ſubjoin.

"Dear Sir,

"Upon viſiting Thomas Hogg this afternoon, it appeared that his ſtomach and bowels were loaded with bile. In ſhort he had all the ſymptoms of thoſe who are ſeized with the yellow or bilious fever, ſuch as the loſs of ſtrength, nauſea, a load and oppreſſion about

about the præcordia, ſighing, irritability, &c.

" I found the pulſe ninety, hard and ſtrong; the whole body in a profuſe perſpiration. It was with much difficulty he was prevailed upon to take the laxative. He took half the quantity, at different times, being afraid, if he took it all at once, he would reject it.

" About twenty minutes after taking the laſt proportion of the half, it produced a very offenſive, copious, bilious ſtool. It is now paſt ſeven, and he has had three equally offenſive, copious, and bilious; the pulſe ſeventy-ſix, with a degree of ſoftneſs which I like.

" I have got beef-tea prepared for him; and if you think well of it, we will make it his common drink. After the firſt ſtool, he vomited freely of bile.

" It appears this is entirely a bilious fever, from the ſudden and great proſtration of ſtrength. At times the prickling and loſs of ſenſation in the arm, which, in thoſe caſes I have known, were general over all the extremities, and in one caſe over the whole body.

" The indication of cure appears to me, after the ſtomach and bowels have been cleared, immediately

immediately to begin the bark, in half-drachm doſes every hour, or hour and half, if the ſtomach will retain it; and to each doſe may be added, for the firſt ſix, four or five grains of rhubarb, ſo as gently to carry down what bile may yet remain in the bowels. To morrow, if nothing forbids, and you think well of it, we will follow this mode of treatment. Leſt I ſhould not be able to get out ſo early as I wiſh, you will make a beginning. Until then, I think, if he takes freely and frequently of the beef-tea, it promiſes to anſwer beſt to waſh of and dilute the bile, and at the ſame time ſupport the ſtrength without irritation.

"The ſmell of the beef-tea is now refreſhing, and I am pleaſed to ſee him take it ſo freely; for before the ſtools it was to him very nauſeous. This is no doubt a good ſign.

"At half paſt ſeven, the pulſe is ſoft, at eighty; and he appears greatly relieved. I am, Dear Sir, yours ſincerely,

"A. Johnston."

To the Rev. Mr. Spence,
Cockburnſpath.

I left him ſoon after eight, continuing eaſier

ſier, and taking freely of the tea, of which ſeveral pounds were left prepared for his uſe during the night. He was ſtill in a profuſe perſpiration, and could ſit up with freedom, which he could not do before, from fear of fainting.

Friday, 17th. Mr. Spence viſited him about eight this morning. He complained of having had a very bad night, without ſleep, and towards morning the conſtant danger of fainting came on, his pulſe being about 110.

It muſt here be obſerved, that from the time I left him laſt night (paſt eight) to eight this morning, he had taken ſix pounds of beef-tea, in which was occaſionally mouldered a little bread.

At his own deſire, about nine, a cup of bohea tea was prepared, with a piece of toaſted bread, of which he eat about an ounce; but after repeated trials, he found himſelf unable to let over a ſingle drop of the tea; as a tightneſs had now come over his throat, and the oppreſſion of the breaſt and ſtomach were greater than yeſterday.

Several attempts were made this forenoon to perſuade him to try a little of the beef-tea, and

and as he always inſiſted on helping himſelf, or taking it with his own hand, after a tremulous motion of the upper extremities, he brought the ſpoon to his lips, and frightedly put it from him, declaring, with vociferous agitation, he could not take it.

Between ten and eleven, a convulſive motion came on over the whole body, when he appeared to be in great agitation, crying out to ſet up the window for air, for he was gone.

Before twelve, I ſaw him as deſcribed above, the pulſe 90, ſmall and hard. He was perfectly ſenſible and collected; but he could not now endure the ſight, or even hear the motion or barking of his own dog, or any other. The impreſſion of the air at times diſtreſſed him much. To uſe his own expreſſion, theſe went to his heart like a knife. At other times, the air was agreeable. But, when the convulſive motion of the ſtomach and diaphragm took place, then he would call out to open the window, hold his head over the bed as if to vomit, when he would bring up a mouthful of mucus and ſaliva, which he forcibly ſpit out, it evidently appearing

pearing that the taſte or ſenſation of theſe ſecretions was at that time very offenſive, and the cauſe of much irritation to the ſyſtem.

As he perfectly reſiſted all intreaties, and our attempts to give him any thing by the mouth, and as the ſpaſmodic and convulſive affection appeared ſo great, Mr. Spence and I agreed to throw up into the rectum three drachms of laudanum, in four ounces of beef-tea every two hours, and to anoint the ſtomach, breaſt, and belly with the ſame.

I muſt here obſerve, that from my arrival the ſecretion of ſaliva rapidly increaſed, which he always forcibly ſpit out, not directly at any perſon, or any particular place or ſubſtance, but in the direction in which his head was lying. And I may further obſerve, that he became much ſtartled when any perſon touched him unawares, which induced me to deſire he would not be ſtartled when I was about to give him the injection. But upon touching the anus with my finger, as a direction for the tube, I found the buttocks and thighs convulſed; and when the liquid was thrown into the inteſtine, the agitation and convulſion became evidently increaſed.

Soon

Soon after the introduction of the laudanum, he freely made water in bed; at which he expreſſed himſelf aſhamed, as it came away involuntarily.

At the expiration of an hour, he became calm and ſettled, thanking God he was now eaſy, and prayed he might ſo continue, as he now found himſelf a different perſon.

We now requeſted he would take a little nouriſhment, which he begged we would not urge, for fear of making him worſe.

During this intermiſſion of eaſe, I went up with Mr. Spence to his houſe. But we returned in an hour, when we found the eaſe in which we left him did not continue above half an hour; and he had again become ſtrongly convulſed, and ſighed more frequently, with a greater ſecretion of ſaliva and mucus from the ſtomach, which he ſpit out in mouthfuls more forcibly than before.

We wiſhed to repeat the injection, to which he would by no means ſubmit; neither did we think it practicable to uſe force, ſo ſtrongly had he become convulſed. He deſired we would not inſiſt; ſaid that he had done with us; and that what time he had now left, would

be

be employed in making his intereſt with Chriſt.

Mr. Spence ſpoke comfortably to him, to which he liſtened with great attention, ſaying, he now hoped he had his intereſt ſecured. He called his family and friends, Mr. Spence, and myſelf, to his bed-ſide, and bid all farewell. He was ſenſible, rational, and diſtinct, when he had any reſpite from the convulſions; alternately employed in taking leave of his friends, and making peace with his Maker; perfectly reſigned to the will of Providence.

Soon after four in the afternoon, the convulſions became ſtronger, himſelf inſenſible and outrageous, ſo that two men were neceſſary to keep him down. His pulſe at the wriſt became indiſtinct, but a ſtrong pulſation of the temporal artery was evident; a larger quantity of ſaliva continued to be ſecreted from theſe glands, and mucus from the ſtomach; inſomuch that his conſtant employment was ſpitting and vomiting.

He continued in this ſituation until about half an hour paſt ſix, when he expired, to the great ſatisfaction of his friends, and every one

one concerned. I muſt obſerve, that he neither offered violence to himſelf, nor violence to his friends and neighbours; neither did he imitate the actions of a dog in any way.

I muſt here alſo obſerve, that after he became inſenſible and unmanageable, he attempted frequently to ſcratch his breaſt, as if itchy, when an effuſion of the blood immediately appeared to have taken place in the cellular membrane, by the part becoming highly inflamed; and at his death it had a livid appearance.

Nothing uncommon appeared about the wounds in the hand; thoſe parts near to the wounds in the leg, were a little hard, without inflammation.

No enlargement about the throat or ſalivary glands could be obſerved; no inflammation was evident about the mouth; nor was there any enlargement of the tongue.

We were not permitted to inſpect the ſtomach, bowels, or thorax.

VI.

VI.

Hiſtories of Caſes of Petechiæ ſine febre terminating fatally. Communicated in a Letter to Dr. Duncan, *from Dr.* William Tatterſall, *Phyſician, Liverpool.*

FROM the politeneſs and attention with which you treated me when a ſtudent, as well as from the general intereſt you take in the purſuit of truth, I am perſuaded that you will give the following account a candid peruſal; and that, if you think it worth a place in your very uſeful Commentaries, you will not with-hold it.

Accounts of caſes, when faithfully given, are often almoſt equally uſeful, whether the treatment has been ſucceſsful or not. To know what remedies will not ſucceed, eſpecially if they were probable or popular, is the road to learn what will ſucceed; and, from theſe negative accounts, there is frequently

more light thrown upon the nature of diſeaſes, than from the moſt flattering teſtimony to the efficacy of medicines.

The diſorder of which I am about to give a few caſes, having been known only of late, and treated by few writers, has not yet obtained a fixed appellation. It has been called by different names, of the reſpective propriety of which the public muſt judge. Graaf has called it Petechiæ ſine febre. You, Sir, have called it Petechianoſis, or Aimarrhœa. Dr. Adair, joining both names, has called it Hæmorrhœa petechialis. I confeſs, that at preſent I am inclined to think, that it ought to be called either petechiæ ſine febre, or petechionoſis; for I have not found the hæmorrhage either conſtant or conſiderable.

Of this diſorder I have ſeen four caſes. The firſt was a woman, of the name of Mary Ferris, aged forty-five. She was the mother of a number of children; if I recollect right, ſix or ſeven. She ſaid, that the laſt labour but one had been exceedingly long and painful; and that, ſince this time, ſhe had been much troubled both with leucorrhœa and menorrhagia. She ſeemed to be in poor circum-

ſtances, and to have lived ſparingly. She had been delivered about eight weeks before I ſaw her, without any particular circumſtances occurring; but ſhe had not recovered well; and ſhe had laboured under the complaint above mentioned for ſix days. She had no hæmorrhage; and the diſcolourations of the ſkin were rather vibices than petechiæ. The proſtration of ſtrength and appetite were conſiderable, but not great; the pulſe was ſixty-eight; and ſhe had no febrile ſymptoms. Under the direction of the apothecary of the Diſpenſary, ſhe was taking, every ſecond hour, a wine-glaſs full of a mixture which we call Miſtura Peruviana Vinoſa. This is merely equal parts of decoction of Peruvian bark, and domeſtic or raiſin wine. She was alſo taking a grain of opium every night. I changed the mixture, and ſubſtituted the decoction of bark, acidulated in the proportion of two drachms of the diluted acid of vitriol to eight ounces of the decoction, to be taken at the ſame diſtance of time, and in the ſame quantity; but directed, that in the intervals there ſhould be taken as much red Port. I directed that the opium ſhould be

continued, and ordered mild laxatives occaſionally. The diſorder had not yielded to the remedies of the apothecary; nor did it yield to mine. I next employed the Peruvian bark in ſubſtance, and in greater quantities. I alſo increaſed the doſe of the other remedies, but without any benefit. This caſe occurred during the firſt part of ſummer. The patient expreſſed a deſire to have ſalad, if I thought it proper. I neither had given, nor was able to give, any remedy that was of ſervice; and I did not think it right to refuſe her. She thought ſhe found conſiderable benefit from the ſalad, of which I underſtood ſhe took a large quantity. It did not, however, effect a cure, for ſhe died in three or four days after ſhe began to take it.

The next caſe was much more ſingular. A family in the Work-houſe, of the name of Clarke, had the itch. The mother of the children was extremely clamorous and impertinent; ſhe was continually aſking for wine, and other nouriſhment, merely becauſe the children had the itch. I underſtood that ſhe bore a very bad character in the buildings, and accordingly they diſregarded her.

In

In a few weeks after this, ſhe appeared with one of the children, a boy of about four years old, with a few diſtinct purple eruptions upon his body; he had a good appetite and good ſpirits, and played with other children in the court; his pulſe was natural. I ſuppoſed this appearance might be ſome remainder of the itch, or ſome effect of heat or dirt, and took no farther notice of it. In about a week, the mother brought him again, and he had near four times the number of eruptions; and they were of a darker colour. He was languid, but he continued to walk out, and had a tolerable appetite. I then allowed him milk diet, and a little vinum domeſticum, thinking his mother would be more likely to give this than medicine. I directed him to be kept as much as poſſible in freſh air, but not to walk much. He remained much the ſame for ſome weeks. I wiſhed to have ordered medicine, but deſpaired of the mother giving it to him. I, however, ventured to order an acidulated decoction of bark, and directed it to be made as pleaſant as poſſible with ſyrup, in hopes that he might be induced to take it. The mother ſaid that ſhe gave

it, but the clerk found a bottle full in her houſe; and it was generally ſuppoſed that ſhe did not give any of it. I then deſired the clerk to ſee an anodyne draught given at night, which I believe he did for ſeveral nights. The ſpots afterwards became extremely numerous and vivid. The ſtrength and appetite were gone, but the pulſe was not quick; and there was no preternatural heat. There was never any hæmorrhage. I now ordered bark in ſubſtance, and the pulvis ſtypticus; but I believe they were never given, unleſs when the clerk, or ſome neighbour, ſaw now and then a doſe given. I mentioned the caſe to two of our phyſicians, whom I happened to meet, and offered to ſhew it to them. They agreed to go with me next morning, which they did. But when we came, we found, to our ſurpriſe, and to ſome degree of temporary confuſion in myſelf, that fever had ſupervened. The pulſe was ſo quick, that it could not be very accurately counted; I think it was near 160. The child died in the evening.

Some months after my time of attendance at the Work-houſe had expired, Dr. M'Cartney

was

was attending; and he told me that another child of the ſame family was labouring under the ſame diſorder, and took me to ſee him. What his treatment was, I do not particularly remember; but I dare ſay it was very proper, according to what is generally ſuppoſed of this diſeaſe; but he told me that the mother did not do juſtice to the child, and that he ſuſpected the medicines were not given. This child died a few days afterwards. The parents were ſmall hardy-looking Welch people, and had no appearance of ſcrophula. They would take care that neither they nor their children were ſtarved, while they were kept by the public.

The fourth caſe was Thomas Freeman, aged ſixty-two. He had lived in part of a houſe as a lodger, and generally dreſſed his own proviſions. He appeared to have a dread of poverty, and to have lived very ſparingly. For ſome days before I ſaw him, he had laboured under conſiderable weakneſs, attended with epiſtaxis, and large diſcolourations of the ſkin, which were a kind of vibices; but amongſt them, there were many ſmall bright petechiæ; the pulſe was natural; the appe-

tite tolerable. He could walk a little out to ſee his neighbours, and was rather unwilling to be confined; but was very tractable. I ordered vitriolic acid, bark, and wine, which I believe he took very regularly, but without any benefit. I then ordered him to take as many oranges as he conveniently could, and to continue the wine. The vibices decreaſed, but the petechiæ increaſed very faſt. He ſeemed, however, to be more cheerful, but did not gain any ſtrength. In three days after, he began to live almoſt entirely upon oranges, to which he added a little gruel. He was removed to the houſe of a daughter, in a diſtant part of the town, and walked to and from the hackney-coach. After this he was unable to riſe from his bed, grew worſe very rapidly, and died in about two days.

From this account of an almoſt total want of ſucceſs, and from the other caſes which are publiſhed, I think it is evident, that we do not yet comprehend either the nature or the cure of this diſeaſe. It has certainly a conſiderable reſemblance to ſcurvy, and appears to yield the moſt to ſimilar remedies; but where ſcurvy affects the patients no more

than this diſorder does at firſt, it yields to the remedies with much greater certainty and rapidity.

In the next caſe that occurs, I will try the carbonic acid, ripe fruits, and briſk fermented malt-liquors.

VII.

VII.

Hiſtory of a Caſe of Polypus in the Vagina ſucceſsfully treated. By Dr. William Paterſon, *Phyſician, Londonderry.*

IN July 1773, being deſired by an old phyſician, who did not practiſe midwifery, to examine the ſituation of a printer's wife, aged forty-five years, I found a very large tumour, ſuſpended by two conſiderable cords, hanging entirely on the outſide of the labia pudenda. Of the patient's preceding condition, I received the following account.

For four years paſt ſhe had been ſubject to fluor albus, and uterine hæmorrhage; the latter of which, about a year and a half ago, proceeded to an alarming extent, and was attended with the expulſion of a membranous bag, ſuppoſed to be the ſubſtance of an early abortion. Soon after this event, ſhe was ſeized with a retention of urine, which produced a great diſtenſion of the bladder, and

was

was accompanied with a very painful weight in the inferior part of the pubes.

To obtain more ſatisfactory information, and thence deviſe the beſt meaſures for relief, the doctor now ordered a midwife to introduce a hand into the vagina; whereby was diſcovered an extraordinary lump, which being puſhed up, the patient had a plentiful diſcharge of urine.

The leucorrhœa and menorrhagia, in turns, continued until the day before I ſaw the poor ſufferer, when ſhe was ſeized with pains like labour pains, which in a ſhort time, but by degrees, protruded the tumour in the ſtate in which I found it. When entirely expelled, it reſembled a prodigious fleſhy maſs, in general of a red inflamed colour, except the lower end, which had a livid hue. Strong preſſure with a finger, and free inciſions with a ſcalpel, did not excite any pain in the tumour; nor was it in any ways troubleſome, unleſs by its great weight and magnitude.

Ligatures being paſſed round the two ſtems, from which the tumour hung, (and which were about one inch in diameter), it was ſevered as high up as poſſible, but not without

without the patient expreſſing pain from the firſt touch of the knife. The ſhape of the extirpated maſs reſembled that of a pear, and meaſured twelve inches in length, and fifteen inches in circumference. Upon cutting into its ſubſtance, it was found very much conſolidated; an irregular fibrous texture could be traced in many parts; and ſo ſmooth were the ſections made by the knife, that they exhibited the appearance of the internal cavity in the gizzard of a fowl; eſpecially in the centre, where ſuch a ſpace was pretty evidently formed.

That part of one of the ſtems, which was below the ligature, dropped off in the courſe of a few days; after the interval of a few more days, the other did ſo likewiſe; and both occurrences were accompanied with a general uneaſineſs, which was followed by a ſanious diſcharge from the vagina, but of no long duration, nor in any great quantity.

Light animal food, wine, and occaſional opiates, were the principal means uſed during the treatment of this caſe, until the patient was ſo far reſtored, as to be able to walk about,

about, which ſhe could do pretty well, in leſs than five months.

For ſome years afterwards ſhe was weakly, and was ſubject to uterine hœmorrhage, and partial deſcents of the vagina; but is at preſent (1795) in as good health as can be expected in a perſon of her age, and is leſs debilitated than ſhe was twenty-five years ago, when the cauſes of the polypus ſeem to have commenced their operation.

VIII.

VIII.

A Caſe of the ſucceſsful treatment of Locked Jaw, Opiſthotonos, &c. occaſioned by a wound of the fore-arm, communicated to Dr. Duncan *by Dr.* John Mackie, *Phyſician, Southampton.*

OF late the minds of medical practitioners ſeem to be divided on the ſubject of the treatment of tetanus. The uſe of opium and the warm bath, particularly in that ſpecies of the diſeaſe ariſing from wounds, has been long ago found of ſpecific efficacy by phyſicians of reputation and authority; and my own experience has more recently afforded me the moſt unequivocal proofs of the ſucceſs of the ſame remedies in this diſorder. Yet from ſome caſes lately publiſhed, I am ſorry to ſee ſomething like a want of ſufficient confidence in that practice; to ſee it too lightly relinquiſhed by men otherwiſe ingenious, but perhaps impatient; and the bark, wine, and

and the cold bath ſubſtituted with much leſs decided effect.

Idiopathic tetanus, properly ſo called, I fancy, is ſeldom to be met with in this country; at leaſt, in a long practice, I have never known an inſtance of the genuine locked jaw, opiſthotonos, and other ſymptoms ſimilar to thoſe accompanying wounds, to ariſe from any other cauſe. 'Tis true, I have occaſionally ſeen ſpaſmodic affections of the face, difficult deglutition, rigidity, torpor, and convulſions of the other muſcles of the body, without wounds, but evidently belonging to the common claſs of ſpaſmodic and convulſive diſorders; and being connected with a weak and irritable fibre, with hyſteria, paralyſis, epilepſia, &c. they may have ſometimes found a remedy in the uſe of tonics and the cold bath. But the tetanus occaſioned by wounds, punctures, or lacerations of muſcular or tendinous parts, appears to me a diſeaſe altogether *ſui generis*, being ſtrongly and diſtinctly marked by the following ſymptoms, viz. a rigid and long continued immovable ſtate of the different muſcles belonging to the jaw and neck; a retraction of the mouth or ſpaſmus cynicus;

cynicus; a ſingularly acute pain at the bottom of the ſternum; a recurvation of the ſpine; a perſevering ſtiffneſs and contraction of the dorſal, lateral, and abdominal muſcles, extending to the lower extremities, and perhaps more or leſs to every muſcle of the body; and particularly, by this ſtate of ſpaſm approaching gradually, with little or no alteration, as in other ſpaſmodic affections, remaining much longer in a fixed ſtate, and never relaxing entirely till the end of the diſorder. In the courſe of my practice, I have met with two caſes of the diſeaſe, accompanied with moſt or all of the above ſymptoms, both of which yielded to the uſe of opium and the warm bath. I tranſmit to you the moſt ſevere and moſt remarkable one; which, as it proves to my mind the complete ſucceſs of the remedies under the moſt deſperate appearances, and alſo coincides with the experience of ſome of the moſt reſpectable men in the profeſſion. I hope its publication may give courage to thoſe who meet with the diſeaſe for the firſt time, to adminiſter the opium freely, and ſatisfy the minds of others as much as I am ſatisfied myſelf, that we may

truſt

truſt as fully to opium and the warm bath in tetanus from wounds, as to mercury in lues, or to the Peruvian bark in intermittent fevers.

Edward Saunders, a boy fifteen years old, of a healthy habit of body, walking by the ſide of a plough at work in the field (March 8th), was ſuddenly thrown down, by the horſes taking fright, and dragged along with the plough upwards of a furlong before they could be ſtopped. On taking him up, the ploughſhare was found ſo cloſely wedged between the bones of his left fore-arm, that it required ſome force to ſeparate them: but, except ſome ſlight excoriations, there was no other mark of violence on any other part of his body. A handkerchief was wrapped about the wounded arm, and the boy carried home in a cart. On examining the wound, the ſurgeon found it extended about four inches in length from the lower and back part of the wriſt, where the metacarpal bones join thoſe of the carpus, to about three inches above the lower extremities of the bones of of the fore-arm. The teguments and tendons

were much lacerated, two of the carpal bones laid bare, the ulna expoſed about two inches, and fractured at the lower neck, and the membranous ligament, connecting the radius and ulna, was torn as high as the wound went. The radius continued covered with the common integuments on the inſide; the radial artery eſcaped ſafe, and there was but a moderate hœmorrhage from the wound. After cleanſing it from the dirt which had been forced in by the plough, it was properly dreſſed, and the arm laid in an eaſy twelve-tailed bandage.

9th. The patient had a reſtleſs night; his arm in pain till midnight, but ſince eaſy. It had bled a little, and there was much ſerous tranſudation. He was feveriſh, and was ordered to drink freely of ſaline mixture and barley-water.

10th. Fever abated. Had ſome ſleep in the night. The arm continues eaſy, though a good deal ſwelled above and below the bandage, which was taken off, and a poultice applied.

12th. Has had two good nights, and very little fever. The tenſion and ſwelling leſſen-

ed. On removing the dreſſings to-day, there was a large diſcharge of well-digeſted pus. The wound looked clean; the edges a little inflamed. The fractured parts of the ulna white, and in exact appoſition; fomented, and dreſſed with dry lint.

14th. Fever quite gone. Appetite returned. Tenſion about the wound inconſiderable. A copious diſcharge of good matter. Granulations appear; edges white, and diſpoſed to heal. In conſideration of the diſcharge, he now took half a drachm of the bark three times a-day.

20th. Continued well in health and ſpirits. Walked about in the day-time with his arm in a ſling. The wound had every day the wiſhed-for appearance. The bones were covered with good granulations; the diſcharge grew daily leſs and thicker; and to-day the wound was actually diminiſhed one half of its original ſize.

21ſt. This morning the ſcene was greatly changed, without being able to aſſign any other cauſe for it, than that he had an uneaſy dream in the early part of the night; in which, he thinks, he moved his arm ſuddenly; ſince which he had been reſtleſs, and

complained of frequent ſtartings in his arm; and of ſtiffneſs and pain about his throat, when he attempted to ſwallow. The appearance of the wound was much altered; the diſcharge had penetrated through the bandage; and on taking off the dreſſings, appeared thin, crude, and oily. The granulations, which before had been ſolid, bright, and pointed, were in one night become turgid, pale, and ſmooth; and the edges put on a red flaccid appearance. I was called in on the afternoon of this day, and found the ſymptoms as above repreſented. The boy looked as if he had been crying. He could not ſeparate his foreteeth wide enough to admit the end of my finger. His lower jaw was ſtiff, and drawn backwards; and the maſſeter, the maſtoid, and other muſcles of his jaw and neck, felt quite rigid and diſtinct. I did not heſitate to conſider the caſe as an approaching locked-jaw, and a proper one for the trial of the opium. I therefore preſcribed tinct. opii. Pharm. Lond. gt. xv. ex cochl. larg. ij. miſturæ camphoratæ, tertia quaque hora; and the neck and jaws to be rubbed with the following: *R.* Liniment. ammoniæ uncias duas. tinct. opii unciam unam. And as he always

ways ſeemed to receive a temporary relief from this embrocation, it was uſed night and morning through a great part of the diſeaſe. The arm was fomented in the evening.

22d. Has had a reſtleſs night, though ſince yeſterday evening, he has taken ninety drops of the tinctura opii. His jaw is ſtiffer, and more immovable. His face much wrinkled, and the muſcles of his neck as hard as ropes. Pulſe ſmall and quick. Sweated much about the face and neck; and had ſome difficulty in making water. Spaſms in the arm continue. The external appearance of the wound much as yeſterday, rather more turgid, ſpongy, and gloſſy. The fibres ſeemed drawn together at one place, where the diſcharge iſſued, which to-day was copious, thin, and fœtid; and they ſuffered that ſort of motion we may obſerve in the cellular membrane of ſome new-killed animals. On introducing the probe, after a turn or two, it paſſed down to the bone, which was felt bare and ſcabrous along the whole of the lower end of the ulna; and the hand below the wound had a cadaverous look. Amputation was now deemed neceſſary to add to the patient's chance of living, and was de-

termined on for the next day, if no amelioration of the ſymptoms appeared. In the mean time, warm fomentations were ordered to be aſſiduouſly repeated; and the doſe of tincture of opium to be increaſed to twenty-five drops, in the ſame vehicle, every three hours, through the next twenty-four.

23d. Has taken 175 drops of the tincture ſince my laſt viſit. His night but indifferent; much ſtarting, and no continued ſleep. The tightneſs and rigidity about the jaw and neck the ſame. He could with difficulty admit the ſpout of a tea-pot betwixt his teeth. Complained of ſtiffneſs about his belly and ſides, and of pain in turning himſelf. The convulſive motions of the arm continue; and the appearance of the wound is in every reſpect the ſame as yeſterday; viz. altogether the reverſe of the healing proceſs. The ſurgeon met me by appointment. Every reaſon ſeemed to preſs the amputation of the fore-arm. It was accordingly very well taken off to-day, at about four inches below the elbow; and the boy bore the operation unexpectedly well. I preſcribed the tincture to be continued in in the ſame doſe as yeſterday, and added a

pill

pill of three grains of ſolid opium at bed-time. Whilſt he could not ſwallow ſolids, or maſticate them, his diet, now and afterwards, was chiefly panada, milk-porridge, gruel, and broth; his drink, barley-water, and ſometimes wine-whey.

24th. Paſſed a tolerable night, though generally awake. Had frequent ſtartings of the ſtump-arm. The contraction of the jaw, and ſtiffneſs of the abdominal muſcles as before. Was thirſty, but not hot. Ordered a pill of one grain of opium to be taken with the twenty-five drops of tincture, every three hours, in a doſe of ſaline mixture.

25th. Had ſome ſhort ſleeps in the morning. The jaw remains in the ſame fixed ſtate. The ſpaſms of the arm continue, and alternate with a pain under the ſternum; which is ſometimes ſo acute as to make him cry out. Pulſe ſtill ſmall and quick, and the face, neck, and breaſt covered with a thick miliary eruption, and a profuſe dropping ſweat. Theſe ſymptoms continued more or leſs to the end of the diſorder. He has had no ſtool ſince the 21ſt, and made no water ſince the 22d; yet there is no fulneſs about

the region of the bladder, the abdomen being uncommonly hard and flat. Ordered a laxative clyſter to be thrown up; and the belly to be well fomented with ſtupes wrung out of hot water, and applied from the ſternum to the pubes. Increaſed his opiate to two grains of opium, and to thirty-five drops of the tincture every two hours, in a doſe of a neutral mixture made with the kali acetatum.

26th. Has doſed a good deal, yet is always ſenſible on being rouſed; and has not to-night complained of ſo much pain. The jaw is a little more open, though the rigidity of the muſcles of the neck continues the ſame. The clyſter returned by itſelf; and he made about a ſpoonful of very thick water in the night with much difficulty. The ſtump was dreſſed to-day; had a large thin diſcharge; looked foul; and was ſeveral times involuntarily drawn towards his ſide while dreſſing. I preſcribed the opiate to be continued in the ſame doſe and manner as yeſterday.

27th. Had an indifferent night. Complained at times of ſhooting pains at the bottom of the ſternum, and of more ſpaſms in the ſtump.

The jaw was more ſtiff, and cloſer. The cheeks were ſo much retracted to-day as to expoſe almoſt all his teeth; and the rigidity ſeemed every where to increaſe rather than diminiſh. Though he generally took his medicines willingly, he had ſo much difficulty in ſwallowing the little pill, and even in getting it within his teeth, that he begged to have it changed for ſome other form; and alſo that his mixture might be leſs nauſeous. I therefore ordered two grains of powdered opium, mixed in a little currant-jelly, every two hours; and a pleaſant julep, containing ſix drachms of the tincture by meaſure, to be conſumed in the next twenty-four hours.

28th. Has had a doſing night, but was always willing to be rouſed to take his opiate and thin nouriſhment; pulſe ſmall, and 110 in a minute; no great heat or thirſt; general ſymptoms the ſame as yeſterday; rigidity ſeemingly permanent, and extending to more muſcles; ordered the opiates to be perſevered in through the next twenty-four hours, as through the laſt.

29th. He has taken his medicines punctually; and the opium ſeems to have the effect of

of keeping him a-doſing, and tolerably tranquil ſtate (a happy effect enough), but nothing farther; the other ſymtoms at a ſtand; if any change, rather on the wrong ſide; the jaw as much locked as ever; the rigidity of the neck, thorax, and abdomen, undiminiſhed; and to-night ſeems inſidiouſly to have extended to the muſcles of the inferior extremities, which are ſtiff and unpliable; the ſtump has ſtill a duſky look, with a thin ichorous diſcharge; and the diſury and coſtiveneſs continue, notwithſtanding the uſe of repeated fomentations and clyſters.

My patient having, during the laſt forty-eight hours, taken forty-ſix grains of opium, and an ounce and a half of the tincture, without getting any ground, I confeſs, I began to have my doubts of the ſpecific power of my remedy. I was afraid to increaſe the doſe, and reſolved to put its utility to the teſt, by diminiſhing it exactly one half through the next twenty-four hours.

30th. I had this morning reaſon to repent of my yeſterday's determination. His attendants told me, "that he became uneaſy "in the afternoon, and in the evening had "more

" more ſpaſms in his arm, and more pain in " the epigaſtric region; that he had had a " terrible night, without any ſleep; and that " they thought he never would have ſeen the " morning; that he was almoſt conſtantly " agitated with alternate convulſions and " tremblings of his whole body; that the " firſt were often ſo violent, that he would " have been puſhed off the bed, towards the " ſide or foot, if they had not watched him, " and oppoſed his falling out; that he ge- " nerally ſcreamed out like a perſon in tor- " ture, before the ſpaſms came, and com- " plained of pain darting through his body, " and was ſcarcely ſenſible any part of the " night." His jaws were now ſo faſt clenched, that they would not admit the edge of a tea-ſpoon; and his cheeks were drawn towards his ears in ſuch a way, as to give him an ugly grin. The rigidity had now ſeized his whole body, which, from his neck to his heel, was perfectly inflexible; his head was retracted, his ſpine recurvated, or bent inwards, and his body upwards, ſo as to form an arch with the bed, in which a pillow might be placed; and, on attempting to raiſe his head,

head, his whole body lifted to his heels, as if it had been one long bone without a joint; he had ſome painful ſpaſms while I was with him, looked wild, ſeemed to lie in an odd poſture, and anſwered incoherently the queſtions I put to him; his pulſe was quick, contracted, and intermitting, and he was covered with a profuſe cold ſweat.

I now almoſt conſidered it as a loſt caſe. It appeared, if there were any hopes, they muſt reſt on the opium, which evidently influenced the diſeaſe; yet the diſeaſe ſeemed too inveterate, and the body too exhauſted, to expect much from any remedy. I determined, however, to puſh it vigorouſly, as a laſt reſource. My only fear now was, that I might not get him to ſwallow enough; for he was not able to take even liquids but in ſmall quantity, being obliged to ſuck them through his teeth, and having more than ever a difficult deglutition. I directed two tea-ſpoonfuls, holding together full 150 drops, of the tincture of opium to be given, mixed in a little wine, every two hours, till my next viſit; and adminiſtered the firſt doſe myſelf before I left him.

31ſt.

31ſt. Having given orders that the tincture ſhould be adminiſtered as punctually as poſſible, I found that during the laſt twenty-three hours he had taken two ounces and an half, all to about half a tea-ſpoonful. Had I found him after this dead, I own I ſhould have been at a loſs, whether to have attributed his death to the diſeaſe or to the remedy. I only thought myſelf juſtified by the obſervation of Celſus: "Melius eſt, anceps auxi-"lium experiri, quam nullum;" for I certainly had never ſeen ſo much opium given in the ſame ſpace of time, and to ſo young a patient, in any diſeaſe whatever.

To my no ſmall ſurpriſe, however, the anſwer to my firſt inquiry this morning was, "that they thought him better; that he had "been in a doſing ſtate all night, and been "more free from pain, ſpaſms, and trem-"blings." He was now doſing; yet on being rouſed he ſeemed in his ſenſes, though he fell aſleep while he was ſpeaking. His jaws were evidently more ſeparate; but he had ſtill much labour in ſwallowing the thinneſt liquids; the ſpine and whole body equally ſtiff and rigid as yeſterday; the diſcharge from

from the ſtump uncommonly offenſive; no ſtool or urine could be procured; a clyſter had been attempted, but the pipe was with difficulty forced into the rectum, and very little of the clyſter went up. I ordered him to be put into a long bathing-tub filled with warm water, and to remain in it for about fifteen minutes, and his body to be well rubbed while in the bath; and as the opiate at leaſt mitigated his ſufferings, I preſcribed the tincture to be continued as yeſterday in the ſame doſe.

April 1ſt. In the courſe of the laſt twenty-four hours, he has taken full two ounces and an half of the tincture; has had a quiet night, free from ſpaſms, except ſome of the ſtump-arm; no pain or convulſions; the jaw much as yeſterday; ſwallows ſomewhat eaſier, and is thirſty; the rigidity from neck to heel much the ſame, only his ſpine comes a little nearer to the bed. When he was in the bath yeſterday, he ſweated much, and complained of fatigue; I had him put in again to-day, while I was with him; it was curious to ſee how much he reſembled a ſtatue, there not being the ſmalleſt flexion at any of his joints, (that of the elbow of his right arm excepted, which

which had a little imperfect trembling motion). His belly was hard, and quite incompreſſible; nor did it appear at all to yield to the deſcent of the diaphragm in inſpiration; he expreſſed a liking to the feel of the warm water, which was about 102 of Farenheit's ſcale; and I let him remain in it about twenty-five minutes. On coming out he had a ſmall hard ſtool, the firſt ſince the amputation; and he diſcharged about three large ſpoonfuls of very thick urine.

The opium having had the decided effect of giving my patient two comparatively tranquil nights, of almoſt removing the convulſive ſpaſms, and of at leaſt arreſting the violence of the other ſymptoms, without inducing any one ſenſible inconvenience, I thought I had ſufficient encouragement to continue it in an undiminiſhed doſe; and therefore I ordered the ſame quantity of the tincture to be conſumed in the next twenty-four hours, allowing ſome latitude as to the hours of giving it.

2d. Has had another doſing night, without making any particular complaints. Has ſince yeſterday taken above two ounces of the tincture, and was always ready for his doſe;

the

the ſymptoms much as yeſterday; is able to take his panada of a better conſiſtence; the recurvation of the ſpine, I think, yields a very little; yet, on putting him into the bath to-day, he lifted all in a piece like a mummy, or a dried preparation, and had not the leaſt flexion in the water; ſpaſms are at times ſtill felt in the ſtump-arm, and the diſcharge continues thin and fœtid. Wiſhing to join the bark with the opiate, without leſſening the doſe of the latter, I preſcribed as follows:

R. Decoct. Cinchon. colat. uncias xiv. tinct. opii unc. ij. *M.* F. Miſtura; cujus coch. larg. iv. (circiter uncias ij.) 3*tia.* quaq. hora ſumend. Pergat uti balneo tepido, per tertiam partem horæ, quotidie.

3d. 4th. and 5th. The ſymptoms continued through theſe three nights and days, with very little change or abatement; he kept his ground at leaſt, if he did not get much; the rigidity every where remained nearly unchanged; he doſed and ſlept a good deal, but when awake was ſenſible and in ſpirits; he continued to perſpire profuſely, and was often hawking and ſpitting; theſe four days has had

had no ſtool, nor paſſed any water, but in drops, and with great difficulty. At firſt I was afraid this might be occaſioned by taking ſo much opium; but am ſince convinced it was wholly owing to the ſphincter muſcles of the anus and bladder, partaking of the general ſpaſmodic ſtricture. He conſumed the pint-mixture with the decoction of the bark, in the firſt twenty-four hours; but he complained of its giving him nauſea, and pain at his ſtomach. Through the next two days I ordered the ſame quantity of the tincture to be continued in wine-whey, inſtead of the decoction; and that agreed very well with him. He obſerved of himſelf, that if he happened to paſs the uſual time of taking his cordial (as he called it), he always had more ſtiffneſs and ſtartings. He was alſo gratified by the warm bath, which, though it did not ſenſibly abate the rigidity, never failed to give him ſome pleaſant ſenſations. As he could now (the morning of the 5th) ſwallow a little better, I ventured to direct that three grains of powdered opium in currant-jelly ſhould be taken with each doſe of his mixture.

6th. This was the firſt day that gave me any good hopes. He had taken his medicine well; had a good night; his jaws ſtrikingly more ſeparate, indeed enough to admit the end of the finger. I thought his neck and belly a little ſofter; and while in the bath to-day his knees bent; and he made a ſmall portion of thick urine. The ſtump looked more clean and red, and the diſcharge of a better conſiſtence; ordered the opiate to be continued as yeſterday.

7th and 8th. All the favourable appearances continue. He ſlept ſo ſound ſix or ſeven hours laſt night, that they did not diſturb him, to give him his medicine; by which he loſt two or three doſes; but he does not ſeem to have ſuffered from it, appearing in all reſpects mended this morning; could open his mouth ſtill wider; complained of being hungry, and begged ſome pancake to eat; which being indulged in, he made ſhift to chew and ſwallow pretty well. On the 7th, he had ſome flexion in his back and hip-joints, as well as hams, and made water in a full ſtream in the bath; to-day he could ſit half bent, and move his legs himſelf; the ſpine began

to reſume its ordinary curvature, the belly and other ſhrunk parts to plump a little, and the rigidity every where to give way. The force of the diſeaſe being evidently ſpent, I ventured to withdraw the opium, and ordered only an ounce and a half of the tincture during the next twenty-four hours.

9th. He did not ſleep ſo much, but was perfectly free from pain, and quite cheerful this morning; has recovered much of his natural aſpect; neck ſofter; jaw ſtill more flexible; craved for food, and could ſit up a little in bed; perſpiration much abated; and to-day, without clyſter or purge, he had a natural ſtool, and made water freely; the ſtump alſo begins to heal; preſcribed only tinct. opii unciam i. for the enſuing twenty-four hours, and that to be daily diminiſhed; ordered the warm bath to be now uſed only once in the two days.

14th. Since the 9th, he has made a very good progreſs; the jaw every day approaching nearer to its original flexibility; the rigidity of the other parts now almoſt gone, and evacuations natural: but he is ſtill ſo weak as to be unable to ſtand, or get out of bed,

without aſſiſtance; the doſe of tincture is now reduced to little more than a drachm in twenty-four hours; the warm bath is left off; ordered him eggs, broth, and wine.

24th. He has continued to mend to my wiſh; no complaints remain, but exceſſive weakneſs; no veſtige of former rigidity; and as he was generally diſpoſed to ſleep in the night-time, I diminiſhed his doſe of tincture gradually, till, on the 22d, he only took ten drops; and laſt night left it quite off. He now eats a little meat at dinner, and takes two ſcruples of the bark in powder twice a-day, in a cup of milk, without inconvenience.

In the beginning of May he began to get ſtrength apace; had good nights, good appetite, urine and ſtools natural, and was able to walk half a mile daily. About the 20th, his ſtump was cicatrized; he was in every reſpect well; and has continued in perfect health ever ſince.

It is to be remarked, that this patient, though only fifteen years of age, and uſed to no ſtrong liquors, took, while at the worſt, within forty-eight hours, five ounces of tinc-

ture of opium, prepared according to the London Diſpenſatory; which, ſo far from producing any injurious effect, as might have been feared, procured a very ſenſible alleviation of all the ſymptoms. In the ſpace of five weeks, the time the diſeaſe laſted, he took in all twenty-four ounces and a half of the ſame tincture, and near three drachms of ſolid opium; yet his head was ſo far from being affected by it, as we might have expected, that he had little or no delirium, but on the night when the doſe was diminiſhed. Moderate doſes of the opiate ſeemed only to mitigate the ſymptoms, and keep them at a ſtand; and even ceaſed to have this good effect, if they were not increaſed daily. The total reduction of the diſeaſe was obviouſly owing to the doſe being augmented very largely, and then continued for ſeveral days together, without intermiſſion or abatement, together with the uſe of the warm bath, which evidently contributed to the cure. It is alſo remarkable, that notwithſtanding the uſe of ſo much opium, and the long continuance of ſo violent and terrible a diſorder, the boy's conſtitution is no ways impaired or

enervated, being in all reſpects as ſtrong and healthy as before the accident.

The other caſe which fell under my cognizance was that of a young woman, who had nearly the ſame train of ſymptoms, from a wound made by a nail paſſing through the whole ſubſtance of her right foot. The diſeaſe had the ſame ſort of progreſs and termination; but never ariſing to the ſame height, her foot was ſaved; leſs opium was required; and the whole period of the diſorder was concluded in three weeks; yet the decided efficacy of the opium and warm bath was ſcarcely leſs conſpicuous in this caſe, than in that which I have recorded.

IX.

IX.

Account of the good Effects obtained from waſhing the Body with cold Water and Vinegar, in Caſes of Typhus Fever attended with Petechiæ. By Dr. Robert Halls, *Phyſician, Colcheſter.*

DURING my reſidence as a ſtudent at Edinburgh, I had an opportunity of ſeeing ſeveral caſes of petechial typhus treated under the direction of Dr. Gregory by the external application of cold water. The ſucceſs attending the practice made me reſolve at that time to adopt it whenever I ſhould have an opportunity. For ſuch an opportunity I am obliged to Mr. Hutcheſon, ſurgeon to the Surry Fencibles, who permitted me to attend his hoſpital in Colcheſter, in which a very malignant fever prevailed for two or three months during the ſpring of the preſent year. For ſome time previous to the appearance of the fever, the ſmall-pox had been very com-

mon, and proved more fatal than I had ever known it; a few ſoldiers had died of it in the hoſpital, owing principally, I believe, to the obſtinacy with which they perſiſted in the uſe of ſtrong liquors, and to the heat of the atmoſphere, in which, notwithſtanding every effort of the ſurgeon, they were kept. It is probable that theſe deaths, by diſpiriting ſuch patients as were ſeized with typhus, rendered the effects of the fever more violent.

It would be needleſs for me to recount the ſymptoms of typhus. The caſes which I ſaw were not in any reſpect ſingular; except that, like thoſe of Edinburgh, in the year 1793, they began with catarrhal ſymptoms, accompanied with acute pain in the ſide, occaſionally ſo violent as to call for repeated bliſters; which generally afforded relief, and promoted the expectoration in almoſt every caſe extremely copious. Petechiæ were obſerved very early in the diſeaſe; numerous, of a dark colour, and extended over the whole body. Several of the patients aſſured me, and I certainly did not attempt to undeceive them, that "it was nothing but the itch." The pulſe, in two or three inſtances, where the pneumonic

pneumonic ſymptoms were moſt violent, was, during the firſt three or four days, ſtrong and bounding, notwithſtanding the petechiæ were at the ſame time very copious. It generally, however, ſank quickly.

There were ſome trifling varieties in different caſes, but I do not think it important to notice them.

In *all*, I preſcribed the waſhing of the whole body with cold vinegar and water twice a-day; and never without marked advantage; in ſome inſtances *more*, in others *leſs* permanent. At firſt, where the pain in the ſide and other catarrhal ſymptoms were urgent, I directed, with heſitation, the uſe of the cold water. As the fever, however, on the whole, appeared, the diſeaſe from which moſt was to be apprehended, I thought myſelf authoriſed in making the experiment; and I had very ſoon the moſt complete conviction, that I had nothing to fear. The pain in the ſide, cough, &c. far from being aggravated, were in every caſe relieved.

The effects which I more particularly obſerved, as enſuing from this application, were the following.

The number and livid appearance of the petechiæ

petechiæ were univerſally leſſened. The pulſe, when weak and frequent, became ſlower and ſtronger; the ſkin moiſt and ſoft. The head was more free from delirium. Sleep was procured. The appetite often returned; and, in ſome caſes, thirſt was produced. It may appear ſingular, that I ſhould mention the production of thirſt, as among the favourable effects of this remedy. I conceive it to have ariſen from the diminution of the delirium, which rendered the patients ſenſible of thirſt; to which previouſly, notwithſtanding the very hard and parched ſtate of the tongue, they had been altogether inſenſible.

Of all the caſes treated in the above manner (not leſs, I believe, than twenty), I did not loſe one; nor do I recollect any inſtance of a relapſe. The termination of the fever was marked by no evident criſis. No medicines were given, except an occaſional opiate with æther, or a laxative injection, as circumſtances appeared to point out the uſe of the one or other.

The catarrhal affection I found aggravated by the bark, in the firſt caſe in which I ordered

dered it. I had therefore afterwards no recourſe to it. Wine, however, was taken with great apparent advantage, and the liberality of Mr. Hutcheſon ſupplied it to the utmoſt extent of my wiſhes.

Permit me, Sir, before I cloſe this letter, to enter ſomewhat more at large into the hiſtory of one of the above caſes, attended with two or three peculiarities that diſtinguiſhed it from the reſt.

The ſubject of it, a man about forty, had for ſeveral months been ſo deaf, that the moſt violent ſounds made no impreſſion on his auditory nerves. I was unable to learn the cauſe of this complaint. In other reſpects he was in good health. At the firſt attack of his fever, the catarrhal ſymptoms were unuſually violent. When I ſaw him, about the fifth day, his expectoration, which had been in large quantity, was ſuppreſſed; his body covered with numerous petechiæ of a dark colour; he lay entirely naked, rolling from one ſide of his bed to the other without ceaſing. His delirium appeared from circumſtances of the moſt furious kind. He was unable either to ſpeak or ſwallow, from a

ſpaſtic

ſpaſtic contraction of the muſcles of the jaw, and neighbouring parts. His arms were violently convulſed; and his eyes of the brighteſt red. He did not appear to ſuffer inconvenience from the light of the ſun; which ſhone full upon him; but it was evident that the leaſt noiſe was painful to him. The pulſe was weak, frequent, and irregular.

I ordered the immediate application of the cold vinegar and water; and promiſed to call again in the evening. It was now noon. At my return, I found him in the ſame ſtate of furious delirium; but I learned, that, during the application of the vinegar and water, the ſpaſm of the jaw had yielded, and that he had ſpoken to the perſon who was waſhing him. The pulſe was much more calm, and the ſkin moiſt. I directed the repetition of the lavatio frigida.

Early in the morning, when I called, my patient was perfectly compoſed. His pulſe was regular and much ſtronger. He converſed with eaſe; heard diſtinctly, and without pain; and expreſſed a wiſh for ſomething to eat. A bliſter, I was informed, had the preceding evening been applied to the head,

head, by direction of the ſurgeon; and I was at a loſs to determine, whether I ought to attribute the amendment to this, or to the cold waſhing. On examining the head, however, all doubt was removed; as I found that the bliſter, by the negligence of the attendant, had been applied, without the head having been previouſly ſhaved.

The event of this caſe I was prevented from learning; but I have every reaſon to believe, that the man recovered perfectly. I think it proper to add, that the bright redneſs of the eyes was not, as I at firſt ſuppoſed it, connected with the fever.

X.

X.

A Caſe of Congenite Hernia, for which the Operation was performed above the Pubes, with ſucceſs. By Mr. Thomas Wilſon, *Surgeon at Louth in Lincolnſhire.*

I WAS called, on the 14th of July 1792, to Mr. Thomas Hudſon of Louth, a young man aged 18. He was at that time ten miles from home. Being myſelf engaged, I ſent my aſſiſtant, who found him complaining of great pain in his body, with vomiting and conſtipation. Suppoſing his diſorder to be the colic, he took away ſome blood, applied warm fomentations to the abdomen, and endeavoured, by clyſters and opening medicines, to procure an evacuation from the bowels. I ſaw him on the 15th, at Mr. Hudſon's of Kenwicke Thorpe, about two miles from Louth, to which place he had been removed. His complaints were not relieved by the meaſures which had been uſed. He had

had a conſtant pain in the abdomen, chiefly about the umbilicus, with frequent vomiting; and no ſtools had been procured. On inquiry, if he had ever had an hernia, he ſaid he had not. But, on examining his body, I perceived a tumour of the ſize of a pigeon's egg, about an inch and a half or two inches above the ring where the ſpermatic veſſels paſs from the cavity of the abdomen. I likewiſe obſerved, that there was only one teſticle in the ſcrotum. I had no doubt that the tumour was a ventral hernia; and I ſuppoſed a portion of the intangled inteſtine to be the cauſe of all his complaints. The more particular account he gave of himſelf was, that he had never obſerved more than one teſticle in the ſcrotum, the right one lying and being always felt above the pubes. He firſt perceived a ſwelling on the right ſide of his body, about 18 months previous to the attack. At firſt, it pained him now and then, for half an hour perhaps at a time, and the tumour diſappeared when he became eaſy. He was ſubject to attacks of pain, like that of colic, once in three or four months; but was always able to go about his buſineſs, which

which was that of a butcher. In this occupation he had frequent occaſions to carry large loads of meat on horſeback. About nine months ago, as he was carrying a load of meat, it broke looſe, and threw him upon the pommel of the ſaddle, which gave him great pain in the right teſticle for an hour or two; and ſince that time, the tumour increaſed faſter in ſize, and his returns of pain were more frequent, and more laſting.

I uſed every endeavour in the uſual way to reduce the hernia, but without effect; I afterwards took away more blood; ordered a ſtimulating clyſter, and directed thick cloths, wet with a ſolution of ſal amoniac, in vinegar and water, to be applied cold, and to be kept conſtantly on the part.

On the 16th, Mr. Pettener, an eminent ſurgeon at Louth, on whoſe experience and judgment I could ſafely rely, was deſired to attend along with me. We concurred unanimouſly in the meaſures to be purſued; we took away blood, as the ſymptoms, which were in general rather moderate than violent, ſeemed to require; we gave various opening medicines, and threw up repeatedly both acrid

acrid clyſters and the infuſion of tobacco. The cold ſolution was conſtantly applied to the part; and, as we judged it expedient, we attempted now and then cautiouſly to return the protruded part.

On the 18th, when every mean had been tried to no purpoſe, the warm bath having been alſo made uſe of, we thought it not ſafe any longer to defer the operation; I therefore made an inciſion, about four inches long, in the courſe of the tumour, endeavouring as much as poſſible to avoid the larger branches of the epigaſtric artery. It was found neceſſary to continue the inciſion to within half an inch of the os pubis. When the common integuments were cut through, we diſcovered the ſac protruding through the ſeparated fibres of the abdominal muſcles; and on diſſecting away the adjoining parts, and laying the whole ſac bare, it appeared to be about the ſize of a turky's egg, and had a livid appearance. On opening the ſac, a ſpoonful or two of diſcoloured fluid was diſcharged; and we then obſerved a ſmall portion of inteſtine, about the ſize of a walnut, entangled, and firmly embraced by the parts through which it had

paſſed. We alſo found the right teſticle contained in the ſac. Having agreed with Mr. Pettener upon the meaſures to be purſued, I carefully removed the ſtricture with a blunt-pointed biſtoury, introduced on the point of my finger, and returned the inteſtine. The teſticle was paſſed through the ſame opening; and the wound being dreſſed in the uſual way, the external parts were united by the interrupted ſuture, and the whole ſecured with a proper bandage. In about two hours after the operation, he began to have copious evacuations by ſtool, which gave him great relief. Every ſymptom was favourable; and he continued for about a week to recover to our wiſhes; but at this time he complained of a tightneſs and foreneſs of his body, with a pain of the parts near the inciſion; he was reſtleſs, hot, and feveriſh. On removing the dreſſings, and examining the ſtate of the wound and neighbouring parts, with great care and attention, I diſcovered that an adheſion of parts near to one of the ſutures had confined ſome pus, which had formed near it; and, on ſeparating this adheſion, the purulent matter was diſcharged, and he was inſtantly

relieved. From this time he recovered without one unfavourable ſymptom; and has ever ſince remained perfectly well, and free from any inconvenience from the operation. The wound healed with a very firm cicatrix; he wore a defenſive bandage for ſome time after the operation, but has long ſince diſcontinued its uſe; and ſtill follows his uſual occupation, in which he has frequent occaſion to uſe great muſcular exertion.

XI.

Two Caſes of obſtinate Conſtipation of the Bowels, ariſing from an accumulation of Fæces in the Rectum, attended with Colic Pains, cured chiefly by Manual Operation. By Mr. Robert Biſhoprick, *Surgeon, York.*

ABOUT the year 1775, Mrs. H——, a tradeſman's wife of this city, aged forty-five, in a very infirm ſtate of health, and of a delicate and coſtive habit of body, was ſeized with a moſt obſtinate conſtipation of the bowels, which after ſome days was attended with colic pains, which, gradually increaſing, continued until ſhe had been eighteen days without a ſtool. During this period ſhe was attended by a very eminent phyſician, who had preſcribed a variety of opening medicines and clyſters, without effect. She had taken very little food all the time, and became ſo much exhauſted, that the phyſician at laſt gave up his attendance, conſidering her as

as a loſt caſe; and her huſband had for ſeveral nights together taken his leave of her, not expecting to find her alive in the morning.

It was at this period that I was called in by the friends of the patient, from its having been ſuggeſted to them, that the obſtruction of the bowels might poſſibly be owing to inward piles; a circumſtance they wiſhed to have aſcertained by an examination. On viſiting the patient, I found her in the ſtate already deſcribed, nearly exhauſted, with a ſmall quick pulſe, and her voice ſo weak and depreſſed, that ſhe could ſcarcely be heard to ſpeak in a whiſper. In anſwer to the few queſtions I put to her, ſhe gave me to underſtand, that, independent of the colic-pains, which were better and worſe by paroxyſms, ſhe had a conſtant ſenſation of a fullneſs and a weight at the lower part of her body, extending towards the fundament. Agreeable to the purpoſe of my viſit, I ſlowly and gently examined the rectum with my forefinger, and found no hæmorrhoidal tumours; but, at the diſtance of between two and three three inches up the gut, I felt a large ball, or maſs of hardened fœces; I therefore reſolved

to try how far I could break and divide this maſs; and if I could bring part of it away with my finger, I flattered myſelf that the remainder might be ſo far broken and looſened by the operation, as to be eaſily diſcharged by the aſſiſtance of an injection. Accordingly, in the ſpace of about an hour and a half, at three operations of about five or ſix minutes each, for the patient's extreme debility would not permit the operation to be done all at once, I brought away a conſiderable number of ſcybala, or knotted fæces, of various ſizes. In the intervals of the operation, I endeavoured to ſupport my patient, by giving her now and then a little mulled wine. Having thus prepared her for the admiſſion of an opening clyſter, I ordered one, to be compoſed of two tea-ſpoonfuls of common ſalt and two table-ſpoonfuls of coarſe ſugar, diſſolved in half a pint of milk, and four table-ſpoonfuls of oil of olives. This being injected, ſoon brought away the remainder of the maſs, which altogether, I believe, would have weighed about half a pound. The ſubſequent ſtools came away without any further medical aſſiſtance; and the patient from this time,

time, by the aid of good nurſing, and nouriſhing diet alone, gradually and progreſſively recovered, and lived about ten years after.

About the ſame time that the caſe of Mrs. H—— occurred, I attended another tradeſman's wife of this city, a Mrs. O——, aged twenty-eight, during her lying-in. Her labour was natural; and the only circumſtance deſerving notice, was that of her being very coſtive. Soon after her delivery ſhe was ſeized with colic-pains, for which I preſcribed aperient medicines and clyſters in the uſual manner, but totally without effect, no ſtool being procured. At the end of ſix days from the delivery, the caſe becoming very ſeriouſly alarming, from the obſtinate continuance of the obſtruction, and increaſe of colic-pains, I was induced to examine the rectum with my finger, in order to aſcertain whether the lower part of the gut might not be the ſeat of the diſorder. Upon examination, I found the cauſe of obſtruction to be perfectly the ſame as in the caſe of Mrs. H——. Accordingly I immediately ſet about uſing the ſame means; and by manual operation, and the injection of an aperient clyſter perfectly ſimilar to that already deſcribed, the

hardened fæces obſtructing the gut were entirely evacuated; and from that time, by the aſſiſtance of good nurſing alone, ſhe ſpeedily and progreſſively recovered from her lying-in.

OBSERVATIONS.

As the colic is one of the moſt painful diſeaſes with which mankind are afflicted, I beg leave to ſuggeſt a few practical remarks upon the preceding caſes.

The complaint of Mrs. H—— was remarkable for its long continuance, and that ſo forlorn a caſe ſhould be ſo ſpeedily cured. The long continuance of it may be accounted for, from the conſtipation having exiſted for ſeveral days before the colic-pains came on; and from the pains being leſs violent than uſual, which probably aroſe from a flatulent diſtention, rather than from acrimony. The ſpeedy cure was evidently the effect of the ſucceſsful manual operations, although the vital powers were ſo much exhauſted.

In the caſe of Mrs. O——, the colic-ſymptoms were more acute, as might reaſonably

be expected from the greater irritability of the ſyſtem, in a lying-in woman. It is true ſhe was not ſo much exhauſted as Mrs. H——, yet from the more rapid progreſs of the ſymptoms, had the manual operation been delayed any longer, there was the greateſt reaſon to believe ſhe would ſoon have expired.

From a due conſideration, therefore, of theſe caſes, and others which I have met with in the courſe of my long practice, I cannot forbear ſtrongly recommending it to the Faculty, in all caſes of colic in which the uſual means of aperient medicines and clyſters have had a reaſonable trial, and have failed, to have the rectum examined by the finger, in order to aſcertain whether an accumulation of hardened fæces in the gut may not be the immediate cauſe of the malady. No reaſonable objection can poſſibly be made to this meaſure, becauſe the operation may be ſo eaſily performed by every practitioner, and with ſo little trouble to the patient; and if but one life in ten or twenty ſhould be ſaved by this precaution, it is certainly worthy of attention.

The propriety of the examination here recommended,

commended, I apprehend, will be ſtill further confirmed by the following obſervations. It is well known, that child-bearing women are extremely liable to a very troubleſome degree of coſtiveneſs, from the bulk of the fætus, deranging and compreſſing the inteſtines during the latter months of pregnancy, by which a morbid dilatation of the rectum occaſionally takes place, which is obvious from ſuch patients ſometimes parting with coſtive ſtools of an extraordinary ſize and diameter. It has been obſerved likewiſe, from anatomical examinations, that the rectum of ſome ſubjects a little above the anus has been found enlarged in an extraordinary manner, into a kind of pouch, as if intended by Nature for a temporary receptacle of fæces.

Now, ſuch an enlargement as is here mentioned evidently took place in the caſe of Mrs. H——, becauſe the ball of fæcal matter amounted to about half a pound weight; and I believe in her it was chiefly by a natural enlargement, for ſhe was not a child-bearing woman. But the dilatation of the gut, in the caſe of Mrs. O——, I am more inclined to conſider as a morbid enlargement of its capacity

city, from great occaſional coſtiveneſs brought on by frequent pregnancy, for ſhe was the mother of many children. But whether the enlargement or dilatation which has been deſcribed be natural or artificial, it will always operate as a prediſpoſing cauſe to a dangerous accumulation of hardened fæces in the rectum; and therefore, wherever ſuch a cauſe is known to exiſt, it ought more particularly to attract the attention of the practitioner, in the treatment of the colic. At the ſame time as a morbid accumulation of the fæces is known to take place, without any obvious prediſpoſing cauſe, the poſſibility of ſuch an accumulation being preſent in the rectum in every caſe of real colic, attended with a coſtive ſtate of the body, ought never to be loſt ſight of in the hiſtory and treatment of ſo painful and dangerous a diſeaſe.

SECT.

SECT. III.

MEDICAL NEWS.

THE peſtilential fever which raged with ſo great fatality, at Grenada and Philadelphia, has alſo produced many deaths in other Weſt India iſlands, particularly in Jamaica, where it has been the ſubject of very keen newſpaper-controverſies among the medical practitioners. The following article of intelligence reſpecting it has been communicated to Dr. Duncan by an ingenious correſpondent in that iſland.

" Much, I doubt not, will have come to your hands, reſpecting our yellow fever, and its

its treatment by calomel. There is no doubt that the uſe of this medicine has been ſucceſsful, when every thing elſe has been abandoned. But we ſtill lament the numerous fatal caſes, in which it manifeſts no influence whatever; and what may appear peculiar is, that although the alimentary canal be capable of being affected by purgatives, through every ſtage of the diſeaſe, and even in the moſt hopeleſs caſes, yet two, three, or even four hundred grains of calomel, taken in doſes of five grains every hour, have produced no apparent effect; and when given in a looſe ſtate, with honey, it has been returned, after many hours continuance in the ſtomach, to every obſervation unchanged.

In caſes where the black vomit has been of ſome continuance, and where the diſcharge is a coagulated matter exactly reſembling the grounds of coffee, the gall bladder, and biliary ducts, have on diſſection been found loaded with the ſame ſubſtance. In all caſes where mercury has made its effect permanent on the mouth and ſalivary glands, the cure has been certain. And ſo much have our habits of practice leaned to ſuſpicion, ſince the diſeaſe

diſeaſe made its appearance among us, that it is common, where the remittent degenerates into the continued fever, to give calomel with good effect. In no one inſtance, within my knowledge, has any old inhabitant been attacked with the prevailing epidemic.

As the calomel has ſo little influence on the ſtomach and inteſtines, I have lately tried both frictions with ſtrong mercurial ointment and a ſolution of corroſive ſublimate in the way of clyſter; but I am yet unable to ſay any thing decided reſpecting theſe practices."

Another correſpondent from Montego bay, in Jamaica, writes as follows.

" This bay is reckoned remarkably healthy, and it is ſuppoſed, that the malignant fever was not ſo fatal here as in other parts of the iſland. The bay contains from five to ſix hundred white inhabitants, and as many people of colour, not one of whom died of the fever. It was almoſt entirely confined to ſailors, and to new comers. Of the new comers, who arrived here, twelve or fourteen died. The number of ſailors who died could not be rightly aſcertained, as there was no regular

gular record kept of their deaths. Neither could we aſcertain the number of new comers who died on different neighbouring eſtates. It is ſuppoſed the fever proved more fatal in Trelawny, the neighbouring pariſh; on one eſtate, in particular, ſix whites died in the courſe of one week. Among the ſhipping alſo, a greater number died than in our harbour. Even among us, however, we felt too much of its fatality.

"The chief and only characteriſtic ſymptoms diſtinguiſhing this fever from our bilious remittent, were the immediate and ſudden determination to the head, inflamed eyes, fluſhed countenance, a full, quick, and hard pulſe, oppreſſion about the præcordia, vaſt anxiety, attended with great irritability of the ſtomach, frequent vomitings of a bilious matter, and towards the end, of a dark, porraceous matter, reſembling the grounds of coffee. The patient was generally ſeized with delirium, ſingultus, and all the other ſymptoms attendant on a putrid diſeaſe; ſome became comatoſe, which frequently ended the ſcene in leſs than forty-eight hours.

"Practitioners differed much with reſpect

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to the treatment of this diſeaſe, which produced much diſſention among the medical gentlemen in Kingſton, and was the cauſe of a newſpaper-diſpute, from which very little knowledge was derived, for the benefit of ſociety, or the good of the poor ſufferers. Some contended that there were two kinds of fever prevalent in the iſland, the one highly inflammatory, the other highly putrid. This, however, ſeemed to be merely hypothetical. From what we ſaw, the inflammatory frequently degenerated into the putrid, and all the caſes nearly correſponded in their ſymptoms. Some practitioners ſucceeded in the cure by the uſe of the lancet, while others again denied its uſe altogether, and placed their whole hopes of cure on calomel. How this mode of treatment really ſucceeded, I cannot pretend to ſay, as it was but litttle followed in this part of the iſland. But I can truly aſſert, that blood-letting, on the firſt appearance of the ſymptoms, certainly did good, and relieved the patient, eſpecially if followed immediately by other proper evacuants. The early adminiſtration of the Peruvian bark, after the

the patient had been properly evacuated, was alſo of great ſervice. When the ſtomach became ſo irritable as not to retain the Peruvian bark, it was generally found beneficial when given by way of injection. Where bleeding was delayed for any time after the firſt appearance, it frequently did more harm than good. But ſuch was the prejudice in favour of blood-letting, that the practitioner was often blamed, if he did not act according to the rules of faſhion. This was the mode of practice followed by moſt of the medical practitioners here; and I flatter myſelf frequently with great benefit; although it muſt be allowed, that many caſes baffled every effort of the practitioner."

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Dr. Duncan has been favoured by a third correſpondent, in Jamaica, with a remarkable hiſtory of a particular caſe of this fever, which will probably be publiſhed in the next volume of Commentaries. In that caſe, the patient, within the ſpace of a few days, had taken 270 grains of calomel, and had rubbed in twenty

drachms of the ſtrongeſt mercurial ointment, from which the happieſt effects were produced.

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An ingenious gentleman, Mr. Smith, who was engaged laſt winter in the ſtudy of medicine at London, made, we are informed, ſeveral curious experiments, tending to prove, that different ſubſtances, introduced into the cavity of the abdomen, are diſſolved there as well as in the ſtomach.

According to the account ſent to us, this ſubject ſuggeſted itſelf to Mr. Smith, when making experiments on extra-uterine geſtation. He had introduced three ova and two fœtuſes of mice into the abdomen of a cat, to ſee whether they would adhere and live; but the animal died in ſixteen hours, and, on examination, only about the ſize of a pin's head of one of the thigh-bones could be found. He then introduced pieces of fleſh, liver, &c. into the abdomen of different cats, and found them conſtantly abſorbed, excepting ſmall parts of the bones, which were always much corroded.

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To prove that previous to abſorption they had been diſſolved by a fluid, he incloſed the limbs of a frog in a linen bag, and in ſixty hours, on the bag being opened, it was found to contain only a very ſmall portion of bone. When pieces of beef, and the limbs of frogs, were introduced under the ſkin in contact with the muſcles, they were diſſolved, and formed a tumour filled with healthy-like pus.

From theſe circumſtances, he is led to draw the concluſion, that the abdomen and the muſcles, when irritated and expoſed, have the power of ſecreting a fluid capable of diſſolving animal ſubſtances; but with this difference, that the natural cavities have the power of abſorption ſuperadded.

We would fain hope, that the ſingular phenomena, which have been exhibited in Mr. Smith's inveſtigations, will lead him to proſecute the ſubject; and that he will preſent to the public a full detail of his obſervations, as well as of the concluſions which he is diſpoſed to draw from them.

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Dr. Stevenson phyſician in Arbroath, in a letter to Sir Alexander Douglas phyſician in Dundee, which has been communicated to Dr. Duncan, gives the following account of ſingular benefit obtained from Digitalis purpurea, in a caſe of dropſy.

"Perhaps I ſhould have acquainted you before this, of the ſtate of our patient Captain B—'s health; but as matters remained with little alteration for ſome time after you left this, and as afterwards the event became every day more and more doubtful, I determined to poſtpone troubling you till I could write ſomewhat deciſively.

"In no caſe whatever, which has fallen under my obſervation, have the diuretic powers of the Digitalis purpurea appeared more remarkable than in this.

You will probably recollect, that we determined to begin with ſmall doſes of the powdered leaves. Accordingly I tried one grain at bed-time every other night; but this produced

duced tormina and vertigo to ſuch a degree, that I deſiſted from any farther attempts for three or four days. I then ventured to give him, every night at bed-time, half a grain of the Digitalis, together with a grain of opium, an article to which he had been accuſtomed. This was found to ſit eaſy upon the ſtomach, and, in ſome degree, to obviate the almoſt intolerable dyſpnœa and anxiety, to which he was at that time ſubjected.

By gradually increaſing the doſe, I was able in a fortnight to give him two grains daily, one at night, and another in the morning. A ſaturated ſolution of cream of tartar was taken as common drink. About this time, however, his leg began to be anarſarcous; and ſoon after the ſwelling extended, conſiderably above the knee. The ſkin was ſo much ſtretched, that nothing deterred me from puncturing them, but a degree of extravaſation which had taken place in the form of purple ſpots, and made me dread a conſequent ſphacelus. Giving the Digitalis a farther trial, ſeemed to be the laſt reſource. In a few days, therefore, I brought the doſe to two grains in the morning, and two at night,

laying aſide every other medicine. His urine, you know, was at firſt very ſcanty, and depoſited a copious lateritious ſediment. His pulſe was from 110 to 120 in the minute, with ſome creeping interrupted irregularity, and was at the ſame time very compreſſible.

It did not appear to me, that any conſiderable mitigation of his very diſtreſſing and unfavourable ſymptoms took place till the Digitalis was given to the quantity of four grains daily. Then, however, the urine began to flow moſt copiouſly, and to put on the natural appearance; the pulſe to loſe much of its quickneſs, and ſomewhat of its irregularity; the anaſarca, the dyſpnœa, and every appearance of hydrothorax, gradually to diminiſh. According to the ſtricteſt obſervation, the quantity of urine, for the ſpace of ſome weeks, exceeded that of every deſcription of fluid ſwallowed in the proportion of about three to one.

When the Digitalis was puſhed beyond four grains, it always produced ſomething diſagreeable about the head, ſuch as vertigo tumitus aurium. I have now the ſatisfaction to inform you, that he is riding out every day

day on horſeback, his appetite good, his ſtrength rapidly increaſing, and the oppreſſion of his lungs completely removed.

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MR. BISHOPRICK of York, in a letter to Dr. Duncan, gives the following account of a medicine which he has found highly efficacious in caſes of uterine hæmorrhagy.

I have had conſiderable experience and ſucceſs in the practice of midwifery in this city and its neighbourhood for more than forty years; and having in that time met with many very troubleſome, and ſome very dangerous, caſes of uterine hæmorrhagy, I beg leave, through your uſeful repoſitory, to communicate to the public, for the benefit of mankind, a medicine which I have found of great efficacy in relieving ſuch caſes. This conſideration, I flatter myſelf, will render it not unworthy of attention, eſpecially as the health of that claſs of patients, who are the ſubject of this complaint, is of the utmoſt

conſequence to the happineſs and welfare of both themſelves and families.

COMPOUND VITRIOLIC TINCTURE.

Take of burnt vitriolated copper, commonly called blue vitriol, eight ounces, of dragon's blood two ounces, of rectified ſpirit of wine two pints.

Let the ingredients, reduced to powder, and put into a matraſs containing the ſpirit, be digeſted in a ſand-heat for four days, ſhaking up the veſſel three or four times a-day, and then let the tincture be decanted off clear for uſe.

The burnt vitriolated copper is prepared in the ſame manner as the burnt alum, according to the directions of the College of Edinburgh, in their Pharmacopœia, by the putting the ingredients into a crucible, and ſuffering it to remain upon the fire until it ceaſes to bubble.

This preparation firſt came into my hands as a noſtrum; and finding it upon trial to afford relief beyond my expectation, I have never ventured to make any alteration on it,

otherwiſe I am of opinion, that the proportion of blue vitriol is much larger than neceſſary; but as I apprehend that the menſtruum can only diſſolve a certain portion of the ingredients in order to be fully ſaturated, I believe, provided the ſpirit of wine be of the proper ſtrength, that the medicine will always be uniformly the ſame; and therefore, any trifling waſte of ingredients can be of no conſequence. With reſpect, however, to the dragon's blood, if the gum kino were ſubſtituted in its ſtead, it would be an improvement ſimilar to that which was made by the Edinburgh College, when they reformed the preſcription for the ſtyptic powder, now called the Compound Powder of Alum.

My uſual mode of adminiſtering the tincture was by giving from forty to ſixty drops in an ounce of red-port wine mixed with an ounce of water three or four times a-day. The doſes have ſometimes been enlarged, although not often, but generally without any inconvenience. The tincture, in ſome caſes, may likewiſe be given with propriety, in draughts coinciding with the general intention. In theſe, the principal ingredient may be

be either nitre, neutraliſed ſalt of wormwood, or the Peruvian bark, at the diſcretion of the practitioner.

Patients with delicate ſtomachs will ſometimes, though rarely, be affected with a ſlight degree of nauſea from the uſe of the tincture. In ſuch caſes, it will be adviſable to omit five or ten drops, more or leſs, of the former doſe, until the medicine ſhall ſit eaſily upon the ſtomach. I know of no other operative effect, except that it ſometimes proves rather aſtringent.

In caſes of conſiderable uterine diſcharges continuing after natural labours or miſcarriages, likewiſe in caſes of menorrhagia, or the overflowing of the menſes in non-pregnant women, I have experienced the moſt extraordinary good effects from the adminiſtration of this medicine. Some good effects have generally been perceptible in the courſe of a few days; and I have met with very few caſes which were not materially relieved by it, of which a conſiderable number have been perfectly cured. Indeed, my reliance on the efficacy of the medicine has been ſuch, that for more than thirty years paſt I have very

ſeldom

ſeldom given it in any other vehicle than a little red port and water, or with any other medicine, coinciding with the ſame intention during its uſe.

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Dr. Paterson, phyſician at Londonderry, has circulated among his friends the following account of an undertaking of his reſpecting meteorological obſervations.

Meteorology.

Different opinions have long been entertained, and are ſtill held, reſpecting the influence of the air upon the human body, as well in producing as in promoting health and diſeaſe. That a material connection exiſts between theſe ſtates of our frame and the element in which we live, move, and have our being, is incontrovertibly proved by obſervation and experience. Could we trace this connection, and obtain even a tolerable notion of its laws, what a delightful proſpect would it open to our view, and how valuable an acquiſition would it be for medicine and for mankind!

If

If ever there was a time to attempt ſuch a reſearch, this is the conjuncture: Now, when chemiſtry has unfolded the nature of aerial fluids; when theſe fluids are already applied to medical purpoſes; when the conſtitution of the atmoſphere is diligently explored; when the arts teem with ſuitable inſtruments; and when a more pure and rational philoſophy is known in the world.

Encouraged by theſe favourable circumſtances, Dr. Paterſon has ventured to undertake, and has at preſent in conſiderable forwardneſs, a work which he intends to publiſh, under the title of Specimens of Philoſophical, Mechanical, and Medical Inquiry, deſigned for the purpoſe of tracing the relation of meteorology to medicine.

This work, which comprehends ſeveral correlative topics, muſt conſequently embrace a variety of matter; and therefore the exertions of an individual, be they ever ſo ſtrenuous, cannot render it as uſeful, and deſerving public notice, as they might do by the help of enlarged correſpondence. Not only the philoſopher, the phyſician, and the artiſt, but the private gentleman and the farmer, nay,

nay, even the plaineſt obſerver, may contribute uſeful information on the ſubject.

The principal points demanding attention are, the topography of the place where the obſervations are made, the direction and force of the winds, the quantity of rain, and number of rainy days, the degree and frequency of hail, ſnow, froſt, aurora borealis and auſtralis, lunar halo, and thunder and lightning, the appearance of clouds, the eudiometrical condition of the air, and the ranges of the barometer, thermometer, and hygrometer. Theſe are the general objects. The particular ones are, in the province of the phyſician, the ſtate of diſeaſes, eſpecially epidemics; and in that of the farmer, the progreſs of vegetation. In the courſe of obſervation in ſo extenſive a field, other things may occur, which might likewiſe be turned to advantage; and which, with intelligence on the above heads, or on as many of them as can be noted, will be thankfully received.

Communications may be ſent, directed to Mr. J. Johnſon, bookſeller, St. Paul's Churchyard, London; to Meſſ. Bell and Bradfute, bookſellers, Edinburgh; to Mr. W. Gilbert, bookſeller,

bookſeller, Dublin; to Mr. W. Chamberlaine, ſurgeon, Ayleſbury-ſtreet, London; or to the author, at Londonderry.

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In our laſt volume we gave ſome account of a propoſal for eſtabliſhing an inſtitution for aſcertaining the effects of elaſtic fluids in various diſeaſes, and for diſcovering the beſt method of procuring and applying them. We are happy to ſay, that the deſign, though but lately propoſed, has found many reſpectable ſupporters, both among the moſt diſtinguiſhed of the nobility, and the moſt eminent of the medical practitioners.

The following advertiſement, which has lately appeared, will convey to our readers ſome farther idea of the nature of this inſtitution, than the article contained in our laſt volume.

Medical Pneumatic Institution.

From various trials of the inhalation and external application of factitious airs in the Bath and Mancheſter Hoſpitals, as well as in private

private practice, there is good reaſon to believe, that they will prove efficacious in many diſorders which have hitherto appeared irremediable, particularly in cancer and other malignant ulcers, in palſy, and in conſumption. In order to diſcover the beſt mode of application of theſe ſubſtances, many eminent phyſicians and philoſophers have approved of the formation of a temporary inſtitution, where rooms may be filled with air properly modified; which will probably be neceſſary to a complete trial of this practice in ſome diſeaſes, where experiments may be commodiouſly made on the diſeaſes of animals, and where long continued proceſſes of inveſtigation can be carried on for the purpoſe of uſeful diſcoveries.

This treatment has been imperfectly applied to many patients; and, according to the teſtimonies of Dr. Beddoes, Dr. Ewart, Dr. Thornton, the Rev. Joſeph Townſhend, the Mancheſter practitioners, and others, with unexpected ſucceſs, ſo much has been clearly evinced, that it is perfectly ſafe, where the caution at all times neceſſary in the practice of phyſic is employed. It is moreover

capable of almoſt infinite variation and improvement. And when men of ſcience are aſſured their ſuggeſtion will be carried into effect, as in the eſtabliſhment propoſed, they will be likely to exert their inventive powers in behalf of humanity. The inſtitution will be conducted in the moſt open manner poſſible, and accounts of its progreſs regularly publiſhed.

Subſcriptions for this inſtitution are received by eminent bankers and bookſellers in different large towns, particularly by Mr. Thomas Coutts and Co. bankers in the Strand, London, and by Meſſ. Bell and Bradfute, bookſellers, Edinburgh.

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DR. THOMAS GARNET, lately phyſician at Harrogate, already well known to the medical world by ſeveral ingenious publications, has communicated, in a letter to Dr. Duncan, the following account of good effects obtained from the ſulphurated vegetable alkali, or liver of ſulphur, as it has commonly been called, and powder of charcoal.

I intended to have ſent you by Mr. Birkbeck a few caſes of florid conſumption, in which I have ſucceeded by the kali ſulphuratum and powder of charcoal. But I am under the neceſſity of delaying it till ſome future opportunity. In the mean time, I ſhall give you a ſhort account of this practice.

Abouthalf a dra chm of each of the articles I have mentioned, mixed together, is taken four or five times a-day, in a little warm water. Though the expectoration be thick and dry, and the breathing difficult, in a few days the expectoration becomes more free, the breathing much better, and the florid colour ſoon leaves the face.

I imagine that the kali ſulphuratum, on its ſolution in water, generates a very large quantity of ſulphurated hydrogen gas; much of which is diſſolved by the chyle, and carried into the blood, where the hydrogen unites with the oxygen, and forms water. Thus it diminiſhes the quantity of oxygen in the blood, perhaps more powerfully than the inhalation of airs, as propoſed by Dr. Beddoes. It is certainly a much more convenient mode of obtaining this effect. If a piece of paper

on which characters have been written with a ſolution of the ceruſſa acetata, be dipt in the urine of patients who have taken the kali ſulphuratum for a day or two, the characters are turned nearly as black as when ſuch a paper has been immerſed in the ſulphur-water of Harrogate. This is almoſt a certain proof that the ſulphurated hydrogen is taken into the blood. I do not know that the powder of charcoal adds much to the efficacy of this medicine, as I apprehend that it cannot be taken into the blood; but I imagine that it may diminiſh the quantity of oxygen, which the vegetables, and other food which we take into the ſtomach, contain; and thus not only diminiſh the quantity of that principle taken into the ſyſtem, but aſſiſt alſo the ſulphurated hydrogen. I am of opinion, from what I have ſeen, that this remedy, if taken in conſiderable quantity, would ſo far diminiſh the proportion of oxygen in the blood, as to produce real ſea-ſcurvy.

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Mr. P. Nursey, at preſent engaged in the ſtudy

ſtudy of medicine at Edinburgh, has communicated to Dr. Duncan the following extract of a letter from a friend of his, a ſurgeon in the county of Suffolk, giving an account of an ingenious contrivance for fractures.

"You may recollect my mentioning to you an ingenious fracture-box. It has now received a full trial. By this ſuperlative effort of genius, a perſon with a fractured leg is enabled, the day after the accident, to riſe from his bed, and ſit at table with his family at dinner. His leg is bound up with the greateſt expedition and eaſe; and thoſe who have ſuffered pain even to delirium with bad fractures, have found very conſiderable relief ſoon after the application of the apparatus.

"When it is properly fixed on the leg, the patient may turn himſelf in bed, from one ſide to the other, in any poſition, without the leaſt inconvenience or diſturbance to the diſeaſed part; and he is even able to get out of bed with the aſſiſtance of one perſon. I wiſh it were in my power to give you an idea of its mechaniſm; but deſcription lags behind, even in its utility, much more in its exten-

ſive motion, adapting itſelf to every poſſible poſition of the body. Its conſtruction, notwithſtanding this, is truly ſimple. It is made by Jacob Stanton of Weybread in Suffolk. It needs only to be known, to be univerſally adopted; and what I have ſaid is only from a ſtrong conviction of its utility."

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IN our volume of Commentaries for 1793, we inſerted an advertiſement from the Royal Medical Society of Edinburgh, reſpecting a prize-queſtion on the ſubject of animal electricity. In conſequence of that advertiſement, an eſſay was tranſmitted to their ſecretary, which, in the opinion of the committee appointed to decide on the merits of the reſpective diſſertations, diſplayed great ingenuity; but they did not conſider it as entitled to the prize, as the author attempted to anſwer the firſt only of the queries propoſed. The Society have therefore renewed their offer of a prize of twenty-five guineas for the beſt experimental eſſay on the ſame four queries which were inſerted in our former volume;

lume; and the ſame committee, whoſe names we formerly mentioned, Drs. Adair, Black, &c. are appointed to examine the eſſays, and to adjudge the prize to that which they ſhall deem moſt deſerving. Other eſſays, on application being made to the ſecretary, will be returned as directed, with the letters accompanying them unopened.

Eſſays may be written in Engliſh, French, or Latin, and muſt be tranſmitted to the ſecretary of the ſociety before the 1ſt of September 1796. Each eſſay muſt be accompanied by a ſealed letter, containing the motto prefixed to the eſſay, and the name and abode of the author.

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We have frequently had occaſion to mention the plan adopted by the Harveian Society of Edinburgh, for encouraging experimental inquiry among the ſtudents of medicine, by propoſing prize-queſtions. For ſome years paſt, in conſequence of particular circumſtances, this plan has been interrupted. The ſociety, however, have again reſolved to

reſume it, by propoſing the five following queſtions for five ſucceſſive years.

For 1796, an experimental inquiry, demonſtrating the effects produced on the human body, in a ſtate of health, by the cold bath, where the heat of the water is below ſeventy degrees; the diſeaſes in which it may be employed with advantage; and the bad conſequences which are to be dreaded from it in certain affections.

For 1797, an experimental inquiry, demonſtrating the effects produced in the human body, in a ſtate of health, by the tepid bath, where the heat of the water is from ſeventy to ninety degrees in Farenheit's thermometer; the diſeaſes in which it may be employed with advantage; and the bad conſequences which are to be dreaded from it in certain ſtates of the ſyſtem.

For 1798, an experimental inquiry, demonſtrating the effects produced on the human body, in a ſtate of health, by the hot bath, where the heat of the water is above ninety-ſix degrees in Farenheit's thermometer; the diſeaſes in which it may be employed with advantage; and the bad conſequences which

are to be dreaded from it in certain ſtates of the ſyſtem.

For 1799, an experimental inquiry, demonſtrating the effects produced on the human body, in a ſtate of health, by the vapour bath, and its influence in removing or increaſing diſeaſes.

For 1800, an experimental inquiry, demonſtrating the effects produced on the human body, in a ſtate of health, by the medicated vapour bath, and its influence in removing or increaſing diſeaſes.

Diſſertations on theſe ſubjects muſt be tranſmitted to Dr. Duncan, phyſician, or to Mr. John Bell, ſurgeon in Edinburgh, ſecretaries to the ſociety, on or before the 31ſt day of December of the year for which the queſtion is propoſed. Each diſſertation muſt be accompanied with a ſealed letter, containing the name and addreſs of the author, and marked on the back with any particular motto, which muſt alſo be prefixed to the diſſertations to which it belongs.

The only prize to be given by the ſociety to the ſucceſsful candidate, is a copy of the quarto edition of Dr. Harvey's Works, pub-

liſhed by the College of Phyſicians of London. But he is left at full liberty to employ his diſſertation afterward in any way he may think proper. And accordingly different diſſertations preſented to the Harveian Society have, in conſequence of publication, been productive both of conſiderable honour and emolument to the authors.

On the firſt ſubject propoſed, the effects of cold bathing, the ſociety expect that candidates ſhould endeavour to aſcertain the influence of partial as well as of general cold bathing; the differences in the effects from bathing in freſh water and in ſea-water, if any ſuch differences really do exiſt; the varieties in the effects produced from different modes of cold bathing, as the ſhower bath, ſudden and total immerſion, mere waſhing of the body, and the like; and the varieties in the effects produced from the length of time, for which cold bathing under any form is continued. They will alſo, with pleaſure, attend to any collateral inquiries which the experiments performed by candidates may ſuggeſt to them in the courſe of their inveſtigations.

ACCOUNT

Some encouragement may perhaps be afforded to future competitors, from the following account of the ſubjects formerly propoſed by the Harveian Society, with a liſt of the ſucceſsful candidates. Thoſe to which the letter P. is ſubjoined have been publiſhed ſince the prize was adjudged to them.

An experimental eſſay on the beſt criterion for diſtinguiſhing matter from mucus.

Mr. Charles Darwin, from Litchfield. P.

An experimental inquiry into the cauſe of the red colour of the blood.

Dr. Edward Stevens, from St. Croix.

An experimental inquiry concerning the nature and properties of the coagulable lymph, or gluten of the blood.

Dr. Edward Broughton, from Briſtol.

An experimental inquiry concerning the nature and properties of the bile.

Mr. Jonathan Stokes, from Worceſter.

An inquiry concerning the nature and properties of milk.

Mr. Richard Kentiſh, from Yorkſhire.

Mr. Samuel Ferris, from Wiltſhire. P.

An

An inquiry into the nature and properties of the Peruvian bark.

Mr. Ralph Irving, from Selkirkſhire. P.

Mr. Thomas Skeete, from Barbadoes. P.

1784. An experimental inquiry concerning the nature and properties of Ipecacuanha.

Mr. Ralph Irving, from Selkirkſhire.

1785. An inquiry concerning the nature and properties of Opium.

Mr. John Leigh, from Virginia.

An experimental inquiry into the nature and properties of the Hyoſciamus niger of Linnæus.

Mr. Benjamin Smith Barton, from Philadelphia.

An inquiry concerning the chemical and medical properties of thoſe ſubſtances called Lithontriptics, and particularly their effects on human calculus.

Mr. Joſeph Pinto Azeredo, from Brazil.

* * * *

AT the annual meeting of the Harveian Society, on the 11th of April 1795, Dr. William

liam Brown, Fellow of the College of Surgeons of Edinburgh, read to the Society an account of the life, writings, and character of the late John Hunter, Eſq. ſurgeon of London. Dr. Brown, in this eulogium on Mr. Hunter, did much credit to himſelf, both by the elegance of the compoſition, and by the medical erudition which it demonſtrated. Without being either an enthuſiaſtic admirer of all that Mr. Hunter has written, or anxious only to detect faults, he eſtimated the merit of his different publications with a high degree of diſcernment. He at the ſame time paſſed a juſt cenſure on thoſe who have written lives of Mr. Hunter, apparently with no other intention but that of detracting from merit, which they are incapable either of equalling, or even of imitating.

When ſpeaking of theſe malevolent defamers, among other particulars, he made the following obſervation.

" His ardour of diſpoſition, and deſire of excellence, led him into ſeveral diſputes with his cotemporaries. The public were made arbiters of the ſeveral claims, and it is with them to award deciſion. His generous opponents

ponents have paid, and will pay, due tribute to his abilities, while they correct his errors. Honeſt minds can diſcriminate between error and unworthineſs.

To recount his weakneſſes affords no ſatisfaction; they are not objects for our imitation; but they loſe half their deformity, when exhibited by the polluted hand of Detraction."

As ſeveral different lives of Mr. Hunter have already appeared, much new information cannot be expected. We would, however, fain hope that Dr. Brown may yet preſent his diſcourſe at full length to the public. The picture which he draws of Mr. Hunter may animate the exertions of future inquirers into the philoſophy of nature.

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PROFESSOR REIL of Halle in Saxony has tranſmitted to us an advertiſement of his, reſpecting an intended new periodical publication, of which the following is a tranſlation from the German language.

ADVER-

Advertisement.

I intend to publiſh, from the Curtiſchen bookſellery at Halle, an archive of phyſiology. In this publication are meant to be collected wrecks of literature which might otherwiſe be loſt; and whatever in general may contribute to the improvement and perfection of phyſiology, which is the only ſure foundation of rational practice in medicine.

Treatiſes on the following ſubjects will be received into this work.

1*ſt*. Chemical diſquiſitions concerning the component parts and mixture of organic bodies.

If the appearances of animal bodies, as is highly probable, depend upon the matter of which they are compoſed; and if their reſpective phenomena be the reſult of a peculiar mixture of parts, chemiſtry, which makes us acquainted with theſe materials, muſt chiefly pave the way for a rational natural philoſophy of the animal body.

2*d*. Treatiſes on the pure or general phyſiology of animated nature, applied to animal

bodies;

bodies; juſt expoſitions of coheſions, gravity, expanſibility, and the various modifications of theſe in animal bodies.

This ſpecies of pure phyſiology ſhould afford us a ſatisfactory explanation of the efficient cauſes of the phenomena of animal bodies, from the common properties of animal matter; and from the powers and laws according to which it produces its effects, it ought to point out to us, how they act, either by themſelves, or in combination with the power of life; and in what manner the general powers and properties of the animal kingdom are changed and modified by the vital principle in animal bodies.

3*d*. Eſſays on the ſtructure and form of animal bodies explained upon the mechanical and mathematical principles, by which the powers of animal matter are directed, and its operations determined to the moſt proper ends.

4*th*. Eſſays on the anatomy of plants and animals, as far as it ſerves to illuſtrate the phyſiology of the animal machine.

5*th*. Eſſays on the phyſiology of plants, and of irrational animals, which by analogy can lead

lead us to a knowledge of the phyſiology of the human body.

6th. Diſquiſitions on the power of life, its cauſes, determinations, modifications, and the laws by which it operates.

7th. Pſychological conſiderations, affording a more accurate expoſition of the laws by which matter is changed in conſequence of the operations of the mind.

8th. Extracts, proſpectuſes, and reviews of phyſiological works, publiſhed in Germany, and elſewhere.

In this archive, I will thankfully receive, not only eſſays and extracts from printed books, particularly from foreign publications and periodical magazines, but alſo original eſſays contributed by my cotemporaries. But with reſpect to the latter, I muſt preſcribe the following conditions.

1ſt. They muſt be tranſmitted to me in every inſtance without the name of the author. I can thus ſubject them to the ſtricteſt examination, whether they be conformable to the intention of my publication, without ſuſpicion of partiality. The authors however may, if they pleaſe, after the publication of their eſſays,

eſſays, inform me of their names, which ſhall in that caſe be publiſhed in the enſuing number.

2d. I will upon no account receive groundleſs hypotheſis, and vain diſputes of phyſicians, upon ſubjects which cannot be inveſtigated, either in our preſent ſtate, or at any future period, and which are not the objects of experiment. I wiſh to record only matters of fact, and reſults which can be deduced from accurate experiments. I particularly wiſh, that my archives may ſerve to promote a more full inveſtigation, and more accurate conception, of thoſe laws by which animal bodies act. Solitary experiments, which have no tendency to lead us to underſtand the nature of animal bodies, are of no utility. We muſt ſearch for the cauſes of their phenomena, till we trace the ſeries to an origin which cannot be farther the object of our ſenſes. Few philoſophers have in a ſhort ſpace of time, by obſervation and reaſoning, ſo accurately determined the rules of agency of inanimate bodies, that they can deduce conſequences which on application ſtand the proof. But what have numberleſs phyſicians done

cians done in ſo long a ſpace of time in the phyſics of animal bodies? In reality, very little. And yet the operations of animal bodies follow as certain and unalterable laws; and their phenomena in ſimilar circumſtances are analogous to thoſe occurring in inanimate nature. It is however true, that the powers of animal bodies continually undergo peculiar changes, partly by means of their inherent nature, and partly by their peculiar functions. Hence the ſtudy of the phenomena belonging to them becomes more difficult, but at the ſame time more intereſting, and more important, to the eye of the natural philoſopher.

The ſcience of medicine is at preſent little more than crude empiriciſm, and its received theoretical, as well as practical principles, are ſubverted by every ſucceſſive attack. We ſhall never eſtabliſh a firm foundation for medicine, if we do not adopt this method of inveſtigation, and try to find out the laws which direct the agency of animal bodies in health, as well as in diſeaſe. In this way only ſhall we acquire a general view of the phenomena of animal bodies, introduce ſimplicity into

phyſiology, and be enabled to predict phenomena in certain circumſtances.

3*d*. I cannot give any gratuity for the articles ſent me, partly becauſe I cannot eſtimate the profits which may ariſe from the work, and partly becauſe I muſt be at a great expence in procuring books, and other articles of intelligence, from foreign countries. I have no views to gain by the undertaking, but ſhall ſell the publication at a reaſonable price; and the ſurplus, after deducing expences, ſhall be applied to ſome benevolent purpoſe. I hope that every phyſician who loves his art, and knows its defects, will, from motives of philanthropy and patriotiſm, without intereſted conſiderations, ſtrive to exert himſelf for the benefit of his cotemporaries and of poſterity.

REIL.
Profeſſor at Halle.

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AN Experimental Eſſay on Opium, by an ingenious young phyſician, Dr. Alexander Philip Willon, already favourably known to the

the public by his Inquiry into the Remote Cauſes of Urinary Gravel, publiſhed at Edinburgh in the year 1792, is at preſent in the preſs, and will very ſoon be publiſhed. To the trials made with opium, are ſubjoined ſome Experiments on Tobacco. Although both theſe articles have frequently been the ſubject of inveſtigation with ingenious men, yet our knowledge of their action ſtill continues in many reſpects very imperfect; and we would fain hope that what Dr. Wilſon has done will tend in ſome degree to elucidate this ſubject, and to reconcile phenomena apparently contradictory.

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A SHORT but uſeful work on natural hiſtory, a French tranſlation from the German of M. Raff, was publiſhed about two years ago, at Amſterdam, under the title of Abrégé d'Hiſtoire Naturelle pour l'inſtruction de la jeuneſſe. Par. M. Perrault. An Engliſh tranſlation of this work has been for ſome time in the preſs, at Edinburgh, and probably will ſoon be publiſhed. It will, we hope, tend not

a little to facilitate the ſtudy of a ſcience with which no one, particularly no medical practitioner, ſhould be unacquainted.

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MR. G. SCHMEISSER, of the Royal Societies of London and Edinburgh, well known by ſeveral valuable chemical publications during the courſe of laſt winter, which he paſſed in Edinburgh, tranſlated from the German language a work intitled Chemico-Phyſiological Obſervations on Plants. By M. Von Uſlar. This tranſlation has been for ſome time in the preſs, at Edinburgh, and will ſoon be publiſhed. To the ingenious obſervations contained in the original, Mr. Schmeiſſer has made ſeveral intereſting additions. We have therefore no doubt that the philoſophical reader will receive much gratification from a careful peruſal of this treatiſe in its Engliſh dreſs.

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SOME time ago, Dr. Roxburgh, botaniſt to the Eaſt India Company, on the Madras eſtabliſhment,

bliſhment, publiſhed, under the patronage of the Company, the firſt number of an elegant and uſeful work, the Coromandel Plants. A ſecond number of that work, under the ſame patronage, and under the direction of Sir Joſeph Banks, will, we are told, be ſpeedily publiſhed.

Another work is alſo in preparation, under the patronage of the preſent directors of the Eaſt India Company, by Dr. P. Ruſſel, who was Dr. Roxburgh's predeceſſor at Madras, treating of the ſerpents of India, and ſhewing, both by experiment and anatomy, thoſe which are poiſonous, and thoſe which are not.

Mr. Von Humboldt is preparing for the preſs, at Gottingen, a work containing phyſiological experiments on ſtimulated nerves and muſcular fibres. He has now been engaged in it for the ſpace of three years, and hopes to complete his manuſcript this autumn. Mr. Von Humboldt flatters himſelf, we are told, that his experiments on animal electricity, as it is called, have led him to valuable hints reſpecting the vital powers, and the functions of the nervous ſyſtem, as well as the vita pro-

pria of particular organs, and even the determination of the limits of animality.

THE inſecurity of navigation, in conſequence of the war, has induced Dr. Bloch of Berlin to cloſe his Natural Hiſtory of Foreign Fiſhes with the ninth part, which contains thirty-ſix coloured plates, and a triple index. He gives hopes, however, that he may reſume his labours on the return of peace.

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THE following deaths of diſtinguiſhed medical practitioners have lately taken place.

Dr. Thomas Clarke, one of the phyſicians to the army.

Dr. Hugh Alexander Kennedy, phyſician to the Prince of Wales, and director-general of the Britiſh hoſpitals on the Continent.

Dr. John Craigie, Fellow of the Royal College of Phyſicians of Edinburgh.

Dr. John Lorimer, phyſician to the army and to the Eaſt India Company, Fellow of the Royal College of Phyſicians of Edinburgh,

and author of an ingenious eſſay on magnetiſm.

Dr. Adair Crawford, member of the Royal College of Phyſicians of London, and well known to the philoſophical world by his ingenious eſſay on animal heat, and the inflammation of combuſtible bodies.

Dr. Jo. Schmukius, profeſſor in the academy at Heidelburg, a young man of whom the higheſt expectations were entertained.

Dr. Nat. Jo. de Necker, a celebrated botaniſt at Manheim, and author of ſeveral ingenious works on botany.

Dr. Cor. Juſt. Lud. Crell, ſon to the juſtly celebrated Profeſſor Crell of Helmſtadt, and a very ingenious young man, cut off in the twenty-ſecond year of his age.

Dr. G. Ludov. Rouſſeau, profeſſor of natural hiſtory, Materia Medica, and chemiſtry, at Ingolſtadt.

Dr. Jo. Fr. de Paula Baader, firſt phyſician to the Elector of Bavaria.

Dr. Fr. Jo. Hoffer, profeſſor of anatomy and ſurgery in the academy at Dillengen.

Dr. Pet. Lud. Spangenberg, phyſician to

the Duke of Mecklenburg-Schwerin, and profeſſor of medicine at Roſtock.

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THE Preſident and Council of the Royal Society of London adjudged, for the year 1794, the medal on Sir Godfrey Copley's Donation to Sig. Aleſſandro Volta, profeſſor of experimental philoſophy in the Univerſity of Pavia, for his ſeveral communications explanatory of certain experiments publiſhed by Profeſſor Galvani.

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DR. JOSEPH BLACK, whoſe eminent abilities as a profeſſor, and an improver of the ſcience of chemiſtry, are too well known to the learned world, to receive celebrity from any encomium of ours; finding that, with advancing years, the ſtate of his health did not admit of that regular diſcharge of the duties of office which he reckoned neceſſary, intimated to the Patrons of the Univerſity of Edinburgh his intention of reſigning the pro-

feſſorſhip of chemiſtry. He at the ſame time recommended, as his ſucceſſor, Dr. Thomas Charles Hope, profeſſor of medicine at the Univerſity of Glaſgow, who for ſeveral years taught chemiſtry with great reputation at Glaſgow. In conſequence of this recommendation, the Lord Provoſt, Magiſtrates, and Town Council of Edinburgh, who could not be directed by better advice than that of Dr. Black, unanimouſly re-elected Dr. Black to the chemical-chair, in conjunction with Dr. Hope as his aſſiſtant and ſucceſſor. This election took place on the 21ſt of October. Dr. Black began his uſual courſe of lectures on the 28th, and intimated to the ſtudents the new arrangement which had taken place in the Univerſity. And although the well-known abilities of his colleague give every reaſon to believe that the chemical-chair will continue to be ably filled, yet we truſt that Dr. Black himſelf will yet, for many years to come, be able to undertake no inconſiderable part of the duties of his office.

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Since the publication of our laſt volume, Dr.

Dr. Philip Alexander Wilſon and Dr. James Buchan have been admitted Fellows of the Royal College of Phyſicians of Edinburgh; Dr. James Gaſking and Dr. Thomas Charles Hope have been admitted Licentiates.

Gaſpar Voght, Eſq. of Hamburgh; John Godfrey Schmeiſſer, Eſq. of Hamburgh; Francis Humberſtone Mackenzie, Eſq. of Seaforth; William Garthſhore, Eſq. of London; and John Gilles, Eſq. LL. D. hiſtoriographer to his Majeſty for Scotland; have been admitted Non-reſident Members of the Royal Society of Edinburgh, ſince the publication of our laſt volume; Robert Hamilton, Eſq. advocate, and Dr. Alexander Philip Wilſon, phyſician, have been admitted Reſident Members.

State

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State of the Thermometer, Barometer, and Rain, during the year 1794, according to Obſervations made about a mile from the City of Edinburgh.

MONTH.	THERMOMETER.			BAROMETER.			RAIN.
	High. Deg.	Low. Deg.	Mid. Deg.	Higheſt. Inches.	Loweſt. Inches.	Medium Inches.	Inches & Decimals.
Jan.	51	13	42	30.23	28.60	29.76	1.40
Feb.	52	32	47	29.85	28.95	29.23	2.14
Mar.	58	31	49	30.18	28.75	29.54	0.99
Apr.	68	42	56	30.07	28.87	29.79	2.15
May	60	45	57	30.36	29.04	29.53	1.90
June	72	55	64	30.10	29.50	29.91	1.07
July	76	52	66	30.08	29.40	29.80	2.12
Aug.	68	51	61	29.95	29.10	29.62	3.84
Sept.	62	41	53	30.20	28.67	29.55	3.14
Oct.	59	45	50	30.10	28.90	29.68	3.53
Nov.	57	37	44	29.90	28.70	29.47	4.51
Dec.	52	30	41	30.13	29.02	29.52	3.92
Whole Year.	76	13	52	30.36	28.60	29.61	30.71

State

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State of the Thermometer, Barometer, and Rain, during the year 1794, according to Obſervations made at the Apartments of the Royal Society of London.

Month.	Thermometer.			Barometer.			Rain.
	High. Deg.	Low. Deg.	Med. Deg.	Higheſt. Inches.	Loweſt. Inches.	Medium Inches.	Inches & Decimals.
Jan.	50	22	35	30.56	28.75	30.03	0.403
Feb.	56	36	47	30.29	29.40	29.85	0.655
Mar.	56	36	46	30.46	29,50	29.98	1.077
Apr.	71	38	52	30.44	28.98	29.90	1.396
May	71	43	54	30.58	29 43	29.96	2.215
June	79	48	61	30.34	29.70	30.03	0.385
July	84	57	69	30.37	29.47	29.99	0.515
Aug.	77	52	63	30.28	29.51	29.91	1.605
Sept.	67	39	56	30.36	29.24	29.85	3.012
Oct.	63	36	50	30.34	29.34	29.81	2.842
Nov.	56	31	45	30.19	29.11	29.73	3.340
Dec.	51	27	38	30.44	29.49	29.94	1.021
Whole Year.	84	22	51	30.58	28.75	29.91	18.466

SECT.

SECT. IV.

LIST OF NEW BOOKS.

PHILOSOPHICAL Tranſactions of the Royal Society of London for 1794. 4to, London.

An Anatomical Deſcription of the Human Gravid Uterus, and its Contents. By the late William Hunter, M. D. phyſician extraordinary to the Queen, profeſſor of anatomy in the Royal Academy, and Fellow of the Royal and Antiquarian Societies, London. 4to, London.

Tranſactions of the Royal Humane Society, from 1774 to 1794. By William Hawes, M. D. 8vo, London.

Tranſactions

Tranſactions of the American Philoſophical Society at Philadelphia. Vol. III. 4to, Philadelphia.

Tranſactions of the Linnæan Society. Vol. II. 4to, London.

Memoirs of Science and the Arts, ſelected from the tranſactions of various ſocieties. Vol. II. 4to, London.

Obſervations on the Seats and Cauſes of Diſeaſes, illuſtrated by the diſſections of the late Profeſſor Morgagni of Padua. By James Hamilton jun. M. D. Fellow of the Royal College of Phyſicians of Edinburgh. Vol. I. 8vo, Edinburgh.

Select Caſes in Midwifery, extracted from the records of the Edinburgh General Lying-in Hoſpital, with remarks by James Hamilton jun. M. D. aſſiſtant phyſician to the Hoſpital, and Fellow of the Royal College of Phyſicians of Edinburgh. 8vo, Edinburgh.

An Inquiry into the Hiſtory, Nature, Cauſes, and different Modes of Treatment hitherto purſued in the cure of Scrophula and Cancer. By William Niſbet, M. D. Fellow of the Royal College of Surgeons, Edinburgh. 8vo, Edinburgh.

An

An Eſſay on the Cauſes and Phenomena of Animal Life. By John Herdman, Member of the Medical Society Edinburgh, and Surgeon Leith. 8vo, Edinburgh.

Engravings explaining the Anatomy of the Bones, Muſcles, and Joints. By J. Bell, Surgeon. 4to. Edinburgh.

A Treatiſe on Sol-lunar Influence in Fevers, &c. By Francis Balfour. The ſecond edition, corrected and enlarged. Vol. I. 8vo, London.

A Practical Eſſay on a certain Diſeaſe of the Bones, termed Necroſis, illuſtrated with ſix plates. By James Ruſſell, F. R. S. Edin. Fellow of the Royal College of Surgeons, and one of the ſurgeons to the Royal Infirmary of Edinburgh. 8vo, Edinburgh.

An Eſſay on the Malignant Peſtilential Fever, introduced into the Weſt Indian iſlands from Boullam on the coaſt of Guinea, as it appeared in the years 1793 and 1794. By C. Chiſholm, M. D. ſurgeon to his Majeſty's ordnance in Grenada. 8vo, London.

Obſervations Anatomical, Phyſiological, and Pathological, on the Pulmonary Syſtem, with Remarks on ſome of the Diſeaſes of the Lungs.

Lungs. By William Davidſon. 8vo, London.

Medical Extracts, being a concentrated View of ſome of the late Diſcoveries in Chemiſtry, and the new Theory and Practice of Phyſic thereby introduced. By a Friend to Improvements. 8vo, London.

A Deſcription of the Jail-Diſtemper, as it appeared among the Spaniſh priſoners at Wincheſter in the year 1780, with an Account of the Means employed for curing that Fever, and for deſtroying the contagion which gave riſe to it. By James Carmichael Smyth, M. D. F. R. S. Fellow of the Royal College of Phyſicians, and phyſician extraordinary to his Majeſty. 8vo, London.

A ſecond Diſſertation on Fever, containing the Hiſtory and Method of Treatment of a Regular Tertian Intermittent. By George Fordyce, M. D. F. R. S. ſenior phyſician to St. Thomas's Hoſpital, and reader on the practice of phyſic in London. 8vo, London.

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