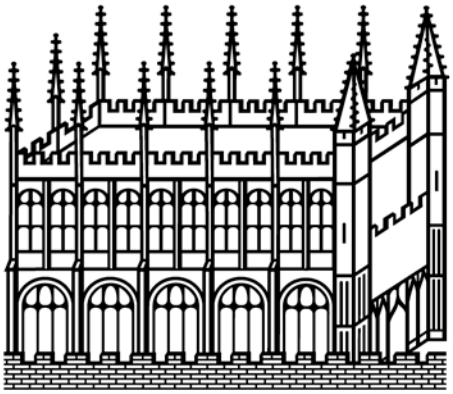


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MEDICAL COMMENTARIES,

FOR THE YEAR M,DCC,LXXXVI.

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.S. ED.
PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES FOR SCOTLAND,
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH, AND MEMBER OF THE ROYAL SOCIETIES OF MEDICINE OF PARIS, COPENHAGEN, EDINBURGH, &c.

Neglecta reduçit, ſparſa colligit, utilia ſelegit, neceſſaria oſtendit, ſic utile.
Baglivius.

DECADE SECOND.

VOL. I.

EDINBURGH:
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AND
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M,DCC,LXXXVII.


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THIS VOLUME

OF

MEDICAL COMMENTARIES

IS RESPECTFULLY INSCRIBED TO

JOHN HUNTER, Esq.

SURGEON IN LONDON;

Whoſe abilities have deſervedly raiſed him
to the firſt eminence in his profeſſion,
Whoſe diſcoveries have made conſiderable additions
to the value of this publication,
And whoſe friendſhip will ever be gratefully remembered
by his moſt obedient ſervant,

ANDREW DUNCAN.

Si ad utilitatem vitæ omnia conſilia factaque noſtra dirigenda ſunt, quid erit tutius quam eam exercere artem, qua ſemper armatus præſidium amicis, opem alienis, ſalutem periclitantibus feras? Quintilianus.

PREFACE.

FOR ſeveral different reaſons, which it is unneceſſary to mention, we have been induced to begin a new ſeries of volumes with this work. The preſent volume, therefore, which would otherwiſe have been the eleventh, is intitled the firſt of the ſecond Decade.

Where the object of a periodical publication is to collect improvements and diſcoveries, it cannot be expected that every volume will be equally intereſting. It is not at every period that improvements of equal merit are either made or communicated to the public, and the ſupply of original papers muſt be ſubjected to the ſame variety. Where, therefore, equal exertions of judgment and induſtry are employed in conducting this publication, the comparative merit of different volumes

muſt yet depend a good deal upon accident. Such accident has, in our opinion, operated very ſtrongly in favour of the preſent volume; and we flatter ourſelves with the hopes, that, to the candid and attentive reader, the peruſal of it will afford no inconſiderable degree of ſatisfaction.

It would be uncharitable to ſuppoſe that there is any one engaged in the practice of medicine, who does not entertain a wiſh to be acquainted with every new opinion and alleged diſcovery, which derives its origin, not from the ignorant and deſigning empiric, but from the unprejudiced and liberal-minded obſerver. To thoſe, therefore, who have neither ready acceſs to public libraries, nor leiſure for extenſive reading, this work muſt afford much deſirable information, which they have it not in their power to derive from the original ſource, and which they might find it very difficult to obtain by other channels: To thoſe who are in a different ſituation, and whoſe chief pleaſure conſiſts in the peruſal of ingenious and uſeful publications, an accurate abridgment even of thoſe works on which they have beſtowed the greateſt attention, will

will not be unacceptable; eſpecially as they will now find our analyſis of books interſperſed with obſervations on the degree of credit which we think they deſerve. Where, however, in the preſent volume, we have had occaſion to differ from authors of the firſt eminence, our ſentiments, though ſtated with freedom, are yet, we truſt, expreſſed with that reſpect which is due to merit, and that diffidence which the nature of the ſubject demands: And this line of conduct it is our intention ſteadily to purſue.

With the original obſervations communicated to the public through the channel of this work, we have uſed no other freedom than that of making, on ſome occaſions, ſlight alterations in the language; which, we are perſuaded, will not be found in any degree to affect the ſenſe. With this freedom none of our correſpondents will, we truſt, be diſpleaſed. For the truth or accuracy of the obſervations communicated to us, we cannot pretend to vouch; but we may venture to ſay, that ſome of them, while they differ not a little from opinions commonly received, are of ſuch importance in practice as to deſerve

the moſt ſerious attention. And thoſe who happen to be placed in ſituations enabling them to make ſimilar obſervations, cannot eaſily render a more important ſervice to the healing art, than by preſenting to the public obſervations made with candour and accuracy, which may ſerve to demonſtrate the propriety of either continuing or deſerting the practices here recommended, on the baſis of extenſive experience.

Future communications intended for this work, may either be tranſmitted to the ſhop of Mr Charles Elliot and Co. bookſellers, N° 332, oppoſite Somerſet Buildings in the Strand, London, or to Dr Duncan at Edinburgh; and where papers ſent us are not inſerted, we ſhall, as has hitherto been our practice, communicate, in a private way, our reaſons for this rejection to thoſe by whom they are tranſmitted, when we know how to addreſs letters to them. Of anonymous papers we do not reckon it neceſſary to take any notice.

Although we cannot promiſe for the exact and regular periodical publication of future volumes, yet we have now more reaſon than ever

ever to hope, that we ſhall be able to accompliſh it without interruption; and, unleſs we be retarded by unforeſeen accidents, the public may expect that our ſucceeding volumes will be had, annually, in the ſhops both of London and Edinburgh by the 1ſt of January.

EDIN. Dec. 20. 1786.

CONTENTS

OF

VOL. I.

DECADE SECOND.

Sect. I. ACCOUNT OF NEW BOOKS.

I. Senebier, Jean. *Obſervations importantes ſur l' uſage du Suc Gaſtrique dans la Chirurgie,* - - 1

II. Collin Hen. Joſ. M. D. *Lactucæ ſylveſtris contra Hydropem vires,* - 37

III. Hunter, John. *Treatiſe on the Venereal Diſeaſe,* - - 57

IV. Fowler, Thomas, M. D. *Medical reports of the effects of Arſenic in the cure of Agues, remitting Fevers, and periodic Headachs,* - - 113

V. Spallanzani, Abbé. *Diſſertations relative to the natural hiſtory of Animals and Vegetables,* - 131

VI. Bryant, W. Eſq. *Account of the Electrical Eel, or the Torpedo of Surinam,* 158

VII. Col-

VII. Collins, Flag. Hen. *Obſervations on the Numb Fiſh, or Torporific Eel,* 163
VIII. Hopkins, F. Eſq. *Account of a Worm in a Horſe's Eye,* - 166
IX. Ruſh, Benj. M. D. *An inquiry into the Cauſe of the increaſe of Bilious and Intermitting Fevers in Penſylvania, with Hints for preventing them,* - 170
X. ——————— *An account of the late Dr Hugh Martin's Cancer-powder, with brief obſervations on Cancers,* 176
XI. ——————— *Obſervations on the Cauſe and Cure of Tetanus,* - 182
XII. Wright, Wm. M. D. *The Antiſeptic virtues of Vegetable Acid and Marine Salt combined, in various Diſorders accompanied with Putridity, communicated in a letter to John Morgan,* M.D.F.R.S. 189
XIII. Campbell, D. M. D. *Obſervations on the Typhus, or low contagious Fever, and on the means of preventing the Production and Communication of the Diſeaſe,* - - 195
XIV. Wall, Martin, M. D. *Clinical obſervations on the uſe of Opium in low Fevers*

vers and in the Synochus, in a letter to John Badley, M.D. *at Chelmsford*, 216
XV. Hygarth, John, M.D. F.R.S. *An Inquiry how to prevent the Small-pox*, 233
XVI. Sandifort, Ed. *Medicinæ et Chirurgiæ in academia Batava quæ Leidæ eſt profeſſoris, Exercitationes Academicæ. Lib. Secund.* - 246
XVII. Colombier, M. *Obſervations ſur la Maladie Vénérienne, dont les Enfans nouveaux-nés ſont attaqués*, - 265
XVIII. Laſſone, M. de. *Memoire ſur quelques Moyens de remedier à des Accidens graves qui ſurviennent aſſez frequemment dans les Petites Veroles et les Rougeoles de mauvais caractére*, - 277

Sect. II. MEDICAL OBSERVATIONS.

I. *Hiſtory of a Caſe of univerſal Latent Cancer, by* Dr Richard Kentiſh *phyſician at Huntingdon*, - 295
II. *The Hiſtory of a Caſe of Hydrocephalus terminating fatally after a Salivation was excited by the uſe of Mercury.* By Dr Wil-

William Lee Perkins *Phyſician at Kingſton upon Thames,* - 298

III. *An Account of two Caſes of Inſanity, one of which was cured by the Uſe of the Fox-glove. Alſo a Caſe of Hæmoptyſis cured by the ſame Remedy. In a Letter to* Dr Withering. By Mr William Jones *ſurgeon in Birmingham,* - 302

IV. *The Hiſtory of an uncommon Tumour on the Breaſt, which was ſucceſsfully cured by means of a Seton.* By Mr James Watſon *ſurgeon to the Royal North-Britiſh Dragoons,* - 317

V. *The Hiſtory of an uncommon Mortification of the Inferior Extremities, which ſucceeded hard drinking, and which terminated fatally.* By Mr James Watſon *Surgeon to the Royal North-Britiſh Dragoons,* - 323

VI. *Account of ſingular Effects from the external Application of a ſtrong Infuſion of Tobacco, employed for the Cure of Pſora.* By Mr P. Grant *Surgeon at Stonehaven,* - 327

VII. *Remarks on the Hydrophobia, and on the Efficacy of the Ormſkirk Medicine for*

the

the Bite of a Mad Dog. Communicated to Dr Duncan, *by* Dr Houlſton *Phyſician to the Liverpool Infirmary,* - 330

VIII. *Account of an Extra-uterine Conception. Extracted from a Letter by* T. Bland, M. D. *of Blandford in Virginia, to* W. Shippen, M. D. *and Profeſſor of Anatomy in the Univerſity of Penſylvania. Communicated to* Dr Duncan *by* Mr B. Smith Barton, - 334

IX. *Hiſtory of a caſe in which an Epiſtaxis occurred vicarious to the Menſtrual Diſcharge.* By Dr Robert Hamilton *Phyſician at Ipſwich,* - 337

X. *Hiſtory of a remarkable caſe of Noſtalgia affecting a Native of Wales, and occurring in Britain.* By Dr Robert Hamilton *Phyſician at Ipſwich,* - 343

XI. *Account of a caſe in which a very large portion of the Lungs was protruded and ſtrangulated, occaſioned by a Wound in the Thorax, which was treated ſucceſsfully.* By Mr Robert Bell *ſurgeon in Cork. Communicated to* Dr Duncan *by* Sir Thomas Bell, M. D. *Dublin,* 349

XII. *Hiſtory of a ſingular Affection of the Liver,*

Liver, which prevailed epidemically in ſome parts of the Weſt Indies. By Mr C. Chiſholm *Surgeon at St George's, Grenada,* - 353

Sect. III. Medical News.

1. *Account of the American Philoſophical Society,* - - 373
2. *Letter from* Mr Jones *at Birmingham, giving ſome Account of the Uſe of the Digitalis in Inſania, Hæmoptyſis, &c.* 380
3. *Letter from* Mr Brown *late Surgeon to the Cygnet ſloop, giving ſome Account of an Acid employed in the Practice of Medicine by the Armenians on the coaſt of Malabar,* - 385
4. *Letter from* Dr Clarke, *giving an Account of Vegetables yielding valuable Spiceries being introduced into the Botanical Garden at Jamaica,* - 389
5. *Letter from* Dr Hamilton, *mentioning ſome ſingular circumſtances reſpecting the Cynanche Parotidæa, which lately appeared in Suffolk,* - 390

6. *Account of the Election of new Medical Professors at Dublin,* - 391
7. *Account of the use of Sulphur-water in Gout,* - - 392
8. *Account of Clinical Lectures on the most important Cases treated in the Surgeon's Ward in the Royal Infirmary of Edinburgh,* - - 396
9. *Account of Different Medical Prize-questions,* - 397
10. *Account of intended Publications on Medical Subjects,* - 407
11. *Account of the Death of different Eminent Practitioners,* - 424
12. *Account of Different Medical Promotions,* - - 426

Sect. IV. List of New Books, - 433

MEDI-

MEDICAL COMMENTARIES,

FOR THE YEAR 1786.

VOL. I. DECADE II.

SECT. I.

Account of New Books.

I.

Obſervations Importantes ſur l'uſage du ſuc gaſtrique dans la Chirurgie raſſembles, par Jean Senebier, *Miniſtre du Saint Evangile, & Bibliothecaire des la Republique de Geneve. Avec quelques additions, de* M. Abbé Spallanzani, *a ſes Expériences ſur la Digeſtion,* 8vo. A Geneve.

THE learned Author of the Treatiſe before us commences the preſent work, by giving a ſhort account of the uſe of the gaſtric juice for different purpoſes in ſurgery. It is

needleſs to obſerve, that much light has lately been thrown on the nature and properties of this important fluid, by the ingenious Spallanzani. Of theſe we have endeavoured to give ſome account in a former volume.

In the month of April 1783, Mr Senebier publiſhed ſome conſiderations reſpecting the experiments which the Abbé Spallanzani had made on Digeſtion. He did not, however, as he now tells us, entertain the expectation, that the views which he had there announced, concerning the uſe of the ſuccus gaſtricus, could, in ſo ſhort a time, have been productive of ſuch important effects as have already reſulted from it. The almoſt invincible averſion of many phyſicians and ſurgeons to make trial of new remedies, proceeding, perhaps, from the fear of making trials which may prove ineffectual or hurtful, and perhaps in part from that lazineſs which is natural to men much occupied, led him to imagine, that it might at leaſt be a long time before this article had a proper trial in actual practice.

Fortunately, however, he obſerves, neither averſion to novelty, fear, nor ſloth, operate with all medical practitioners. One of the firſt

to

to whom he communicated his ideas was Mr Jurine, ſurgeon in Geneva; a man no leſs diſtinguiſhed for extenſive knowledge in his profeſſion, than for the ardent deſire he has of extending the bounds of ſcience, and of increaſing the means of alleviating the miſeries of mankind. To him the ſuggeſtions of Mr Senebier appeared ſo natural, that he loſt no time in putting them to the teſt of experience. He employed the ſuccus gaſtricus in practice, and ſoon ſaw the happieſt effects reſult from its uſe.

When Mr Senebier ſaw his hopes thus realized, by the cures which Mr Jurine performed by means of the ſuccus gaſtricus, he communicated the reſult of theſe trials to Count Morozzo at Turin, who was alſo deſirous of having experiments made, to appreciate the value of this new remedy. The Count then recommended this remedy to the attention of Mr Toggia, belonging to the School of Farriery at Turin, and well known as the author of an uſeful treatiſe on the diſeaſes of Beſtial. Mr Toggia employed the ſuccus gaſtricus, firſt in the diſeaſes of domeſtic animals, and then againſt thoſe of the human body. From theſe trials he obtained as ſatisfactory ſucceſs as had at-

tended the experiments of Mr Jurine at Geneva.

After this, Mr Senebier informed Abbé Spallanzani of the happy conſequences which had reſulted from his diſcoveries, and of the advantages which they promiſed to thoſe who ſhould employ the ſuccus gaſtricus in the cure of ſores. That great naturaliſt communicated this intelligence to Mr Carminati, a celebrated Profeſſor of Medicine and Surgery at Pavia; well known by his excellent treatiſe de Animalium ex mephitibus & noxiis halitibus interitu. Mr Carminati made it the ſubject of his attention, and has found materials for an uſeful and curious treatiſe, which he propoſes ſoon to publiſh on this ſubject. But, in the preſent treatiſe, we are preſented alſo with the reſult of his trials, as well as with thoſe of Meſſrs Jurine and Toggia.

The experiments and obſervations of Mr Jurine, reſpecting the uſe of the ſuccus gaſtricus in the cure of ſores, are here related in his own words, as communicated to Mr Senebier. Before giving an account of his practical obſervations, he thinks it neceſſary to adverti ſe the reader, that he did not employ this

new

new remedy, till he was aſſured of its principal properties by his own trials, and till he had made an analyſis of it which ſatisfied his mind reſpecting the employment of it. Humanity, he obſerves, rendered theſe precautions indiſpenſably neceſſary.

He would have preferred, he tells us, the ſuccus gaſtricus of carnivorous birds, and eſpecially that of the Eagle, if it could have been eaſily procured. But this not being the caſe, he had recourſe to what was moſt eaſily obtained, the ſuccus gaſtricus of bullocks and ſheep. For procuring the ſuccus gaſtricus in greateſt purity, the animal muſt be kept faſting for the night before it is to be killed. This, however, he obſerves, is more particularly neceſſary with reſpect to ſheep than to oxen.

As ſoon as the animal is killed, the ſuccus gaſtricus is to be ſought for in the firſt ſtomach; for there it is to be found moſt in a liquid ſtate, though ſtill mixed with ſome remains of the vegetables uſed in food, and impregnated with their colouring matter. It is to be filtrated through fine linen, and kept in bottles for uſe. In employing it, the quantity

to be uſed at a time muſt be gently heated in warm water. The ulcers are then to be waſhed with it, and afterwards dreſſed with charpie, upon which more of the ſuccus gaſtricus is to be poured. This is to be covered with a compreſs moiſtened with the ſame liquor, which is alſo to be wetted with it every two hours, if poſſible. But it will be ſufficient to dreſs the ſore twice a-day.

This application, though in the end efficacious, always occaſions at firſt more acute pain than the patient felt before. And of this circumſtance it is neceſſary to forewarn him, that he may not be diſquieted by this momentary pain; for after the ſecond, or, at the utmoſt, the third dreſſing, it is no more to be felt.

The effect of this remedy is to allay, on ſome occaſions, as if it were even by enchantment, thoſe lancinating pains which patients before ſuffered; to remove all diſagreeable ſmell from fœtid ulcers; to give them a clean appearance; to change the quantity and quality of the ſuppurated matter, and to obtain a ſpeedy cicatrization.

Although the Abbé Spallanzani had made numberleſs and deciſive experiments, on the nature

nature of the ſuccus gaſtricus of different animals, and although theſe were ſufficient to leave no doubt reſpecting what he had advanced, yet Mr Jurine was deſirous, for his own ſatisfaction, of repeating ſome of them on the ſuccus gaſtricus of ruminant animals relative to meat; becauſe he was doubtful whether nature had given to this ſolvent as antiſeptic a quality as to that of carnivorous or omnivorous animals. To determine this, in the month of September 1783, when Mr Reaumur's thermometer ſtood from 16 to 19 degrees in the courſe of the day, he put a quantity of pure gaſtric juice, obtained from an ox, into four different phials. One glaſs contained pure gaſtric juice of the temperature of the atmoſphere at the time; a ſecond, containing the ſame juice, was placed in ice, and the bottle well corked; in the third, a ſmall morſel of beef, freed from fat, was added to the gaſtric juice; and to that contained in the laſt, were added a few drops of vitriolic acid. The reſult was, that the firſt glaſs remained inodorous for thirty hours; but about the end of forty-eight hours, it contracted an evident fœtid odour. The ſecond glaſs had its contents preſerved

in the ice for the ſpace of fourteen days without any alteration; and might probably have been preſerved much longer, had not this been thought a ſufficiently ſatisfactory reſult. The beef in the third glaſs, in corrupting itſelf, corrupted alſo the fluid in which it was contained, about the end of eight hours. The mixture in the fourth glaſs with vitriolic acid ſhewed no obvious fermentation. It was preſerved free from any marks of putridity for ten days, and was then thrown out.

From theſe experiments, it evidently appeared that heat is very adverſe to the preſervation of the gaſtric juice, and that its mixture with meat contributes very much to haſten its corruption. Hence it may be concluded, that to derive advantage from the gaſtric juice of ruminant animals in the cure of ulcers, it is neceſſary to renew it often, and to have freſh juice at leaſt every two days during the ſummer. It may, however, be evidently preſerved for a a long time, by keeping it in ice, or in an ice-houſe.

After theſe preliminary remarks, Mr Jurine next proceeds to relate his obſervations reſpecting the uſe of this ſuccus gaſtricus as applied to ulcers. The

The firſt caſe he mentions is that of a woman ſixty-eight years of age, who had on her left leg a foul ulcer, with varices of a conſiderable ſize. By its form, its depth, and the bad appearance of the ſurrounding fleſh, it ſeemed to be in the progreſs of extending very faſt. It was dreſſed with the gaſtric juice, and cured in fourteen days.

The ſecond caſe is that of a man about forty years of age, a maſon by profeſſion. He had been affected for two years with a very ſordid ulcer on his leg, about the ſize of half-a-crown, near the internal maleolus. He had employed many different remedies, without effect. He was radically cured, by the application of the gaſtric juice, in the ſpace of twenty-four days, during which time there took place a ſlight exfoliation of the bone.

The third caſe is that of Madam G—, who had for the ſpace of eighteen months a dreadful ulcer on the inſide of her right leg. It had become almoſt circular, and included ſeveral corroded varices at different places. The diſcharge from it was in great quantity, of an ulcerous nature, and exceſſively foetid. The patient was, beſides this, ſubjected to a ſlow fever,

ver, which had emaciated her to the utmoſt degree. It was dreſſed for ſome days with an ointment compoſed of tallow, pitch, and ſtorax. After this, the ſuccus gaſtricus was employed, which, at the end of three days, produced a good ſuppuration in ſmall quantity, and without any fœtid odour, while the fleſh below appeared very beautiful. This lady, who had before been tormented by the moſt excruciating pain, and by a conſtant want of ſleep, recovered in a ſhort time both ſleep and eaſe; her appetite was reſtored; ſhe became plump; and, in a word, there took place over her whole body a very ſurpriſing change for the better. Her ulcers were perceptibly diminiſhed, and Mr Jurine thinks, that they would have been radically cured had ſhe ſubmitted to proper regimen, and to the uſe of ſome internal remedies, for removing the cauſe of her complaint; but by an ill placed obſtinacy ſhe did not, he tells us, receive the complete good effects of the topical application, or of his care. At the time of his relating the caſe, ſhe had ſtill a ſmall ulcer, accompanied with ſome ſmall ſinuſes, which gave daily diſcharge to a part of that ſuperabundant acrimony, the diſcharge

of

of which ſeems to have become indiſpenſably neceſſary.

Altho' this lady was not completely cured, yet it is by no means, he thinks, from thence to be inferred, that the ſuccus gaſtricus was inadequate to that effect; ſince, altho' her own conduct oppoſed the cure, the ulcer was reduced to very ſmall ſpace; beſides this, we ought not, he obſerves, to view the ſuccus gaſtricus as being a topical application, capable of curing both ulcers and their cauſes, when theſe depend on a depraved ſtate of the fluids.

The fourth caſe is that of the wife of a carpenter, in her fifty-ſecond year, who had a cancer in her left breaſt, from which ſhe had been ſeveral times in danger of loſing her life, particularly from hæmorrhogies. Mr Jurine had employed againſt this dreadful diſeaſe, both at its beginning and during its progreſs, almoſt all theſe remedies which are uſed in ſimilar caſes. This complaint had extended under the axilla, and to the upper parts of the breaſt, where it formed abſceſſes of a very ſingular nature, and which clearly announced that acrimony to which they owed their origin. There ſuddenly appeared red ſpots on different

places,

places, and by the next day there had taken place a corroſion of the ſkin, the cellular membrane, and even of the muſcles. This unfortunate female ſuffered almoſt incredibly from this complication of complaints, when Mr Jurine had recourſe to the uſe of the ſuccus gaſtricus: While, however, he poured this into all the cavities, he at the ſame time made the patient take lizards internally. He had the ſatisfaction of finding, that the pains were almoſt completely removed by the ſecond day, the ſmell almoſt entirely vaniſhed, and fourteen different ulcers in her breaſt were cicatrized in ſucceſſion, and the breaſt itſelf was much better. In a word, there wanted, he obſerves, nothing to compleat the cure but to evacuate the cancerous virus diffuſed through the maſs of blood. But where, ſays he, is this ſpecific to be found? Suffering humanity poſſeſs not that good fortune, nor art that degree of perfection. He experienced then, for all his ſatisfaction, the pleaſure of ſeeing his patient await for about four months the moment which terminated all her complaints.

The fifth caſe is that of Mr P—, who had for the ſpace of two years been afflicted with a very

very painful tumour above the rotula. On the third year it came to ſuppuration; after which it underwent different variations, from better to worſe; at one period, however, for the ſpace of ſix weeks, it ſeemed to be quite heal. But altho' a great variety of remedies were employed to extirpate the cauſe of this complaint, the ulcer eluded the effects of all of them, and always commenced again from the ſame bottom. He ſaw this gentleman on the ſeventh year of his complaint; the ulcer was then about nine inches in its greateſt diameter, and it diſcharged a great quantity of very fœtid ſanies; the edges had a round and mangled appearance, and the middle was, as if divided into ſeveral iſlands by cutaneous interſtices. The bottom preſented only livid fungous fleſh.

He ſuffered a great deal both day and night; and although his conſtitution was originally good, yet worn out by a diſeaſe ſo painful and of ſuch long continuance, it was ſenſibly affected.

Being at that time unacquainted with the effects of the gaſtric juice, he began the cure by uſe of tar, without any mixture. This procured, though not without pain, the remo-

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val of all the interſtices of ſkin which ſeemed to oppoſe the cicatrization of the ulcer, and of the fungous fleſh; which however was often ſucceeded by large eſchars, leaving after their exfoliation good florid-coloured fleſh at the bottom.

After the uſe of this topical application for the ſpace of ſix months, recourſe was had to the gaſtric juice. The firſt applications were painful; but in a few days the advantage was manifeſt, both by the complete ſoftening of the edges of the ulcer, and by new ſkin making a rapid progreſs over the ulcer. Every day his general health, which began to be amended during the uſe of the tar, was more perfectly reeſtabliſhed. He ſuffered little, his nights were eaſy, his appetite good and regular, and he could walk about without much pain.

But an intermittent fever ſupervened, by which the progreſs of the cure was retarded; after that the recovery was much more flow. But at the time when Mr Jurine wrote the account of this caſe the ulcer was entirely ſuperficial, the ſurface was not above two inches in diameter; it was of a good colour; the matter diſcharged had the appearance of cream, and nothing

nothing ſeemed wanting to complete the cure but its being cicatrized. The patient, with reſpect to all his functions, was in perfect health, continuing to walk about without difficulty.

The ſixth caſe is that of E— B—, a girl in the 14th year of her age. She had been diſtreſſed for four months with a fixed ulcer at the internal maleolus of the right foot, from which ſhe ſuffered a great deal. In this ſituation ſhe was carried to the hoſpital of which Mr Jurine is ſurgeon. He began by purging her; he put her upon a proper diet, and dreſſed the ſore with dry charpie, covered with a ſlightly adheſive plaiſter. She remained perfectly at reſt; but notwithſtanding this, the ſore gradually increaſed. The fleſh ſwelled up, and became fungous, and the ulcer extended ſo far as to be about two inches and a half in diameter.

With the intention of keeping down the fungous fleſh, Mr Jurine had recourſe to ſlight eſcharotics, ſuch as burnt allum, the unguentum Ægyptiacum, &c. Theſe, however, produced no change for the better. On the contrary, this poor girl was now tormented with ſevere pains, which entirely deprived her of

of ſleep. Two months and a half were thus conſumed, in following a treatment which he conſidered as well ſuited to the caſe; but ſeeing that the girl's health was every day in greater danger, he had recourſe to the ſuccus gaſtricus, which very ſpeedily alleviated her pains, cleaned the ulcer, and produced a perfect cure of it in the ſpace of five weeks.

To theſe ſix caſes, Mr Jurine obſerves that he could have added ſeveral others, of ſimple ulcers, very ſpeedily cured by the uſe of this remedy. But his object was to give hiſtories of affections ſomewhat different from each other in their nature and appearance: and he adds, that if the ſucceſs which he has obtained can induce other ſurgeons to adopt this new remedy, they will find in its uſe a new means of allaying ſome of the calamities of mankind.

From theſe caſes, ſeveral corollaries are deduced. It is obſerved,

1. That the gaſtric juice has the property of alleviating, both certainly and ſpeedily, thoſe pains which ulcers of the worſt kind produce.

2. That it recovers the fleſh, removes what is in a bad ſtate, and ſoftens the callous edges of ulcers.

3. That

3. That it diſſipates the diſagreeable ſmell ariſing from affected parts.

4. That it diminiſhes exceſſive ſuppuration, and produces laudable pus.

5. And finally, that it accelerates cicatrization.

After theſe remarks by Mr Jurine, we are next preſented with the obſervations of Mr Toggia on the ſame ſubject. He began the uſe of the gaſtric juice, by the treatment of a horſe very much wounded in the ſhivers. He waſhed the ſore with the gaſtric juice of a ſheep, and covered it with lint moiſtened in the ſame fluid. This dreſſing was repeated daily, and he obſerved, that every day the wound became cleaner, and that its diameter diminiſhed. In fine, it was very ſoon cicatrized, without the uſe of any other remedy.

The ſucceſs which he had in this cure led him to try it with a bullock, whoſe neck was covered with ſeveral ſmall ulcers; with ſcabs which particularly appeared about the mane, and firſt dorſal vertebræ. They diſcharged an ichorous and very fœtid purulent matter, which occaſioned a diſtreſſing itchy ſenſation. Mr Toggia had here in vain employed, what he

conſidered as the beſt remedies. At length he thought of trying the gaſtric juice, continuing, however, at the ſame time, the uſe of ſome internal remedies. Under the uſe of this application he ſucceeded in overcoming the acrimony of the humours, as well as the itchy ſenſation; and he obtained, at the end of a very ſhort time, a complete cicatrization of the ulcers, with the total removal of the ſmall ſcabs with which they were covered.

The ſucceſs of theſe two trials led Mr Toggia to have recourſe to the uſe of this fluid with the human body. A young man, about eighteen years of age, had a ſore upon the tibia, which had been treated for a conſiderable time by an able ſurgeon; who had employed, without effect, theſe remedies which ſeemed beſt ſuited to the ſtate of his patient. The ulcer, which was in ſome parts livid with much proud fleſh, and highly inflamed edges, had produced a ſwelling of the whole leg, and was attended with much pain, and an almoſt inſupportable itching. The effect of the application of the gaſtric juice to the ulcer in this ſtate ſeemed, for the two firſt days, to be merely that of a powerful digeſtive: but afterwards, it induced

ced a laudable ſuppuration, and the ulcer, ſoon entirely freed from all the troubleſome circumſtances which have been deſcribed, was in no long time happily cured.

To theſe remarks by Mr Toggia, are ſubjoined the obſervations and experiments made by Mr Carminati, Profeſſor of Medicine and Surgery at Pavia. His reſearches on this ſubject are, we are told, put into ſuch a ſtate, that they will ſoon be publiſhed by themſelves; and will compoſe a book, not more original for its ſubject, than intereſting from the mode of inveſtigation. But he has had the goodneſs to communicate to Mr Senebier a ſketch of his work, with which we are here preſented.

His book is divided into ſeven chapters: In the firſt of theſe, he treats of the effect of the gaſtric juice on ſores, and in caſes of gangrene. He proves, in the firſt place, that the gaſtric juice of the black and aſh-coloured crow, which may be conſidered as omnivorous animals, ſince they are equally ſupported upon fleſh and upon vegetables, produces by itſelf, on thoſe ulcers which are bathed with it by means of a feather three or four times a-day, the effects of an excellent, deterſive, antiſeptic, and cicatrizing

remedy; and that by means of it he cured an obſtinate fœtid ulcer in the leg of an old cachectic woman. He obſerves, that the effects above deſcribed were produced without the aid of any other remedy, either external or internal; and that it occaſioned no pain to the patient, excepting a ſlight and tranſitory feeling of heat, for the few firſt dreſſings.

He has found, that the ſuccus gaſtricus of carnivorous animals, and particularly of the Heron, the Kite, and Falcon, poſſeſs all theſe properties in a ſtill higher degree; and altho' for the firſt days it occaſions a greater degree of pain and heat than the gaſtric juice of the crow, yet that it cleanſes and cures ulcers more readily. This he has found on the treatment of five different old callous and fœtid ulcers, the cure of all which was rapid and complete.

In this chapter he alſo ſhews, that the ſuccus gaſtricus of omnivorous and carnivorous animals, is an excellent remedy in ſyphilitic and ſcrophulous ſores. And he tells us, that he has cured, by means of the ſuccus gaſtricus, at leaſt three different perſons, of irregular, putrid, and callous ulcers of this kind, which had re-

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fiſted every remedy he could before think of.

He has found, that the ſuccus gaſtricus is no leſs uſeful in caſes of gangrene; three inſtances of which he had cured by this article alone, although they were conſiderably advanced. The ſuccus gaſtricus of the animals above deſcribed had in theſe caſes the effects of ſtopping the progreſs of the gangrene, of ſeparating the dead parts, of correcting the fœtor, and of producing a cure of the ulcer, formed by the removal of the mortified fleſh.

And finally, he found that the ſuccus gaſtricus of carnivorous animals produced excellent effects on a cancer of the face; in cleanſing the bottom of the ulcer, in ſweetening the ichorous and corroſive fluid which it diſcharged, in removing the diſagreeable ſmell, in diminiſhing the acute pains, and in ſtopping the farther progreſs of the ſore.

In the ſecond chapter, he treats of the uſe of ſuccus gaſtricus in caſes of contuſions, tumours, and other external complaints.

Several experiments which he made ſerve to ſhew, that the ſuccus gaſtricus of herbivorous ruminant animals, particularly of bullocks,

calves, and ſheep, applied externally, has removed pains of the chronic kind, every time that the uſe of reſolvents is indicated. This appeared by the cure of two women, one of which had an obſtinate pain of the left ſhoulder, and the other a conſtant pain, more or leſs acute, in the right arm.

He has employed the ſuccus gaſtricus with great advantage; not only in contuſions of the ſkin, but in theſe alſo affecting the muſcles. This appeared from its uſe in a contuſion on the left ſide of the head, about the origin of the temporal muſcle.

The reſolvent power of the gaſtric juice has alſo been demonſtrated by the good effects which it produced on tumours of the lymphatic kind. An œdematous ſwelling of the eyelids, and likewiſe an hydrocele, were diſſipated by the mere application of the gaſtric juice of ruminant animals; and the ſame effect was obtained from this fluid when applied to inflammatory and ſcrophulous tumours. The ſuccus gaſtricus of carnivorous and omnivorous animals proved alſo an excellent reſolvent. It diſcuſſed, with facility and promptitude, venereal ſwellings and indurations of the inguinal glands;

and

and it ſoftened and removed, in a very ſhort time, calloſities on the feet and hands produced by external compreſſion, although hard, painful, and of long ſtanding.

In the third chapter he relates trials made with the ſuccus gaſtricus in diſeaſes of the ſtomach, and in fevers of the putrid and intermittent kind. He there ſhews, that the internal employment of the ſuccus gaſtricus, which is the principal agent in digeſtion, is uſeful in all thoſe affections of the ſtomach produced by faults in this fluid, and particularly by its diminution in point of quantity, and want of energy for the purpoſes of digeſtion. He has cured, by means of this remedy alone, three women affected with ſwelling of the ſtomach, a ſenſe of languor and even acute pain, during the time of digeſtion. He cured alſo, by means of it, two young men ſubjected to a diſtreſſing and painful oppreſſion at ſtomach, occaſioned by their having eat too great a quantity of meat and eggs. Its effect was very remarkable in the caſe of a woman ſubjected to a gradual emaciation for the ſpace of ſeveral months. She was affected with continual nauſea and vomiting. This vomiting was of a very bitter and

black matter, eſpecially after taking drink. Theſe complaints probably proceeded from a ſchirrous tumour, which could evidently be felt in the right hypochondrium, and which produced even ſome manifeſt external ſwelling. Every time that this woman took an ounce of the ſuccus gaſtricus of a ruminant animal, during the courſe of the day, ſhe was for the ſucceeding night entirely freed from the nauſea and vomiting. Theſe complaints, however, began again as ſoon as ſhe ſuſpended the uſe of the ſuccus gaſtricus.

In caſes of weakneſs and pain of the ſtomach, produced by an atonia of that viſcus, and by affections of the nervous and convulſive kind, the ſuccus gaſtricus was found always to be uſeleſs. In fevers depending on the ſtomach, the ſuccus gaſtricus of ſheep proved always uſeleſs, and even dangerous; although adminiſtred only after the evacuation of the primæ viæ, and when the ſtomach was ſoft. The ſuccus gaſtricus of carnivorous animals appeared to be more ſuitable in theſe fevers. It ſeemed to reſiſt the farther corruption of matter placed in the primæ viæ; but it was by no means ſufficient for correcting and evacuating them, and ſeemed

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even to be hurtful where it retarded or diminiſhed the evacuation by the inteſtines.

The ſuccus gaſtricus ſeemed to have ſome effect in removing intermittent fevers. Two autumnal tertians, which had continued till ſpring, and ſix vernal ones, were cured by the uſe of the ſuccus gaſtricus alone, taken at the utmoſt to the extent of three ounces. In the intermittents of Auguſt and September, which are the moſt difficult to cure, the ſuccus gaſtricus had ſometimes the effect of a febrifuge, when employed in large dozes. But it was by no means entitled to the name of a ſpecific, for it was not able to cure a mild quartan, and ſimple tertian, which very ſoon yielded to the Peruvian bark. Theſe fevers, however, ſeemed to be much diminiſhed by the employment of the ſuccus gaſtricus of carnivorous animals, and thus did not reſiſt even a very ſmall doze of the bark.

The ſubject of the third chapter is an examination of the ſuccus gaſtricus of carnivorous and herbivorous animals, both of the non-ruminant and ruminant kind, in the humid way. This examination proves, that theſe fluids differ conſiderably from each other.

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The ſuccus gaſtricus of carnivorous animals, particularly of Herons, Kites, Falcons, and Owls, though differing conſiderably in denſity and colour, has always a ſalt and bitter taſte, with ſome evident marks of acidity; and it contains, beſides water, a very bitter reſinous matter, of a dark colour, with a penetrating and peculiar ſmell; an animal ſubſtance of the ſame colour, a ſmall quantity of ſal ammoniac, and a larger portion of ſea ſalt.

The ſuccus gaſtricus of omnivorous animals, particularly of Cats, Dogs, and Crows, when fed both on fleſh and vegetables, he found to be a neutral; but when they were fed entirely on fleſh, their ſuccus gaſtricus was found exactly to reſemble that of carnivorous animals. As well as theſe, he found that the ſuccus gaſtricus of human ſpecies was compoſed of a large quantity of watery fluid, of a peculiar animal ſubſtance, and a ſmall proportion of marine ſalt.

The ſuccus gaſtricus of herbivorous animals, not of the ruminant kind, as of Rabbits and Hogs, appeared to be acid. Beſides water, it contained an animal ſubſtance, and a ſmall quantity of marine ſalt.

The ſuccus gaſtricus of herbivorous ruminant animals

animals he found to be compoſed of the ſame principles, excepting, that theſe contain a ſmall proportion of ammoniacal ſalt, and that they are always acid. He has, indeed, found the ſuccus gaſtricus of ſheep and goats, after being long taken from the animal, whether dead or alive, ſo far alkaline as evidently to effervesce with acids. But this he conſidered as being a quality entirely foreign to the gaſtric juice itſelf, and the mere effect of the putrefaction of theſe herbs, which had for a long time remained in the ſtomach of theſe animals.

The ſubject of his fifth chapter is an examination of the ſuccus gaſtricus of different animals, by the dry way.

The products of diſtillation from the gaſtric juice of carnivorous animals, he found to be a large proportion of water, or acid, and ſome drops of a thick acrid oil, adhering to the neck of the retort, with a ſaline ſubſtance, which gave out the ſmell of volatile alkali, when mixed with the vegetable alkali, or quick-lime. The caput mortuum ſubjected to filtration and evaporation, furniſhed ſome chryſtals of ſea ſalt. And when the reſiduum, after filtration, was burnt

burnt and philogiſticated, to ſee whether it contained iron, a pure calcareous earth was found.

The ſuccus gaſtricus of omnivorous animals, among which is to be reckoned that of man, on ſome occaſions yielded, on diſtillation, water with an alkaline quality. This, however, was probably the effect of an alteration in the fluid; becauſe, in all theſe caſes where he was certain that the fluid was pure and freſh, he obtained always an inſipid water. After the water came over, he obtained a ſmall quantity of black acrid oil, and the reſiduum, or caput mortuum, did not differ from that of carnivorous animals.

The products found, on the diſtillation of the ſuccus gaſtricus of herbivorous animals of the non-ruminant kind, were water at firſt a little alkaline, and then acid, and a black acrid oil. The caput mortuum furniſhed fixed alkaline ſalt in a very ſmall quantity, ſome ſea ſalt, and calcareous earth. The ſuccus gaſtricus of ruminant animals yielded, on diſtillation, a water at firſt alkaline, and then acid; although in the humid way it appeared always to be acid. On concentrating this water, Mr Carminati collected a ſmall quantity of this acid, which appeared to be an animal acid. The diſtillation farther furniſhed,

furniſhed, in ſome caſes, a ſmall quantity of ſal ammoniac, which however all the diſtillations did not yield. A ſmall quantity of empyreumatic oil was obtained, and the reſiduum reſembled that of herbivorous animals not of the ruminant kind.

Laſtly, the gaſtric juice of ruminant animals examined in its alkaline ſtate, yielded in ſome caſes, for its laſt product, a very ſmall quantity of acid, but commonly an alkaline water came over during the whole diſtillation. The oil and caput mortuum were exactly ſimilar to thoſe obtained from the ſuccus gaſtricus of non-ruminant animals, and of ruminant animals when that fluid was evidently acid.

In the ſixth chapter, he relates experiments on the antiſeptic power of the gaſtric juice of different animals.

The ſuccus gaſtricus of carnivorous animals, put into a ſmall open glaſs veſſel, and expoſed to the heat of different ſeaſons, was always preſerved ſound, and without putridity, till it was completely dried. The ſuccus gaſtricus of carnivorous animals alſo remained for a long time without any putridity. It was not even corrupted at the end of ſeveral months.

The ſuccus gaſtricus of herbivorous animals,

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of the non-ruminant kind, and that of ruminant animals when acid, enjoyed the ſame properties; but when it was alkaline, it corrupted very ſpeedily, and that in proportion to the degree of heat to which it was expoſed, and to its alkaleſſence.

The ſuccus gaſtricus of carnivorous animals mixed with the blood, and put upon meat, whether freſh or tainted, gave proofs of its antiſeptic power, both in preſerving from corruption, and in correcting a taint. And their action was always more certain and immediate, in proportion to the quantity of gaſtric juice added to theſe putreſcent matters.

The ſuccus gaſtricus of omnivorous animals, comprehending that of the human ſpecies, was found to be preſerved very well alone; and in this reſpect it differed nothing from that of carnivorous animals; but when mixed either with found or corrupted meat, and with freſh or putrid blood, it appeared to promote the ſeptic tendency as much as water.

The ſuccus gaſtricus of herbivorous animals, not of the ruminant kind, gave the ſame marks of antiſeptic power with that of herbivorous animals. And this was alſo the caſe with the

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ſame fluid, when obtained from herbivorous ruminant animals, if of an acid quality; but when alkaline, it appeared always to promote the ſeptic tendency.

This chapter is, we are told, terminated by the relation of ſome cures, both of internal diſeaſes and ulcers, performed by means of the ſuccus gaſtricus of ruminant herbivorous animals, when of an acid quality. From which it appears, that while it can be more eaſily procured, it may be ſubſtituted to that of Owls and Herons.

The laſt chapter contains experiments on the human gaſtric juice, combined with different remedies from the mineral kingdom. This fluid was found neither to diſſolve copper, cinnabar, nor ſulphur; but it diſſolved iron, antimony, flowers of zinc, and corroſive ſublimate.

To this account of the obſervations and experiments made by Meſſrs Jurine, Toggia, and Carminati, our author ſubjoins a few reflections. After the facts which have thus been verified by three different obſervers of nature, who had no concert with each other, and whoſe concluſions were uniform, there can, he thinks, be no doubt of the great utility of the gaſtric juice in the caſes mentioned, and of its being a remedy

medy free from every inconvenience. And he particularly recommends its being tried in the manner mentioned by the laſt of theſe gentlemen.

It is indeed true, he obſerves, that for this purpoſe Crows, and other birds of prey, muſt be procured. But he thinks it an object of ſuch importance, as to engage ſome perſons to feed theſe animals for the ſake of gain. Crows may be nouriſhed on almoſt any food that can be given them; and for obtaining their gaſtric juice, it is only neceſſary to make them ſwallow ſmall pieces of ſponge, with threads fixed to them. After theſe have remained in the ſtomach a ſufficient time to be impregnated, they are to be drawn back, and the fluid expreſſed from them. This operation may be repeated with each Crow ſix or eight times between every meal. He thinks that theſe, and other birds of prey, might particularly be kept in hoſpitals, where there muſt neceſſarily be many offals for their nouriſhment, and where they might be taken care of by particular patients. And as the gaſtric fluid of theſe birds can be kept for a very long time, without ſuffering any alteration, what is not neceſſary for preſent

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uſe might either be preſerved for future occaſions, or ſent to thoſe places where it could not be ſo eaſily procured.

The treatiſe before us is concluded with an account of ſome experiments made by Abbé Spallanzani on the ſubject of digeſtion, in addition to thoſe formerly publiſhed in his ingenious diſſertations, and of which we gave ſome account in the tenth volume of our firſt decade. He has found, that the muſcular ſtrength of the ſtomach in pigeons is by no means great when they are very young, and ſtill in the neſt, but that it increaſes as they advance in life. He has found, that, as well as in fowls, the digeſtion in pigeons in no degree depends on their ſwallowing ſtones.

Upon a compariſon of the antiſeptic power of infuſions of Peruvian bark, flowers of camomile, myrrh, and Virginian ſnake-root, with the gaſtric juice of a crow, he found that the latter fluid, not only preſerved a portion of veal in a perfectly ſweet ſtate for a much greater length of time, but had alſo the effect of diſſolving part of it.

When Abbé Spallanzani formerly made his experiments on fiſhes, he had an opportunity of employing only thoſe freſh water fiſhes which

were to be met with in the neighbourhood of Pavia; but he has now made many experiments on different ſea fiſh, taken both in the Adriatic and Mediterranean; and he found fleſh very readily diſſolved in tubes introduced into their ſtomachs. It appeared, however, that in ſome of them which have muſcular ſtomachs trituration is neceſſary, by way of preparation, in the ſame manner as in fowls, but that it is by no means the efficient cauſe of digeſtion.

In addition to his fourth diſſertation, on the digeſtion of Owls, Falcons, and Eagles, Mr Spallanzani has now found, that the gaſtric juice of the Owl has the greateſt energy when they have faſted for ſome time. And altho' he formerly found, that the gaſtric juice of the Falcon did not diſſolve leguminous, or ſimilar fruits; yet he has now diſcovered, that it eaſily diſſolves bread, when previouſly chewed; from which he concludes, that theſe, in place of carnivorous, may become frugivorous animals.

Dr Haller, and others, have aſſerted, that the breath of the Eagle has a very fœtid ſmell. But after a very great variety of trials, in which an opportunity was afforded of putting his noſe cloſe to the bill of the animal, neither he, nor

others,

others, were able to diſcover even the ſlighteſt putridity.

He has made ſeveral experiments, in addition to his fifth diſſertation, on digeſtion in the ſtomach after death. He killed a Rabbit, after it had faſted for eighteen hours; and immediately introduced into its ſtomach an ounce and a half of moiſtened bread. At the end of ſix hours he opened the animal. The bread in its ſtomach was by no means in its natural ſtate; it was become a viſcous maſs, and had loſt about a third of its weight. And this portion of it was found, at the upper part of the duodenum, converted into chyme.

In farther proof of the antiſeptic power of the gaſtric juice, of which he had formerly treated in his ſixth diſſertation, he has found, that this fluid, as obtained from fowls, Eagles, Falcons, Owls, and Dogs, may be preſerved in bottles for ſeveral weeks without acquiring the ſlighteſt putrid taint.

Though theſe additional experiments by Mr Spallanzani are not perhaps to be conſidered as immediately connected with the employment of the ſuccus gaſtricus for medical purpoſes, yet they ſerve at leaſt to throw ſome additional light

upon the ſubject. And if this fluid in the hands of others ſhall be productive of the ſame conſequences which have reſulted from the trials of Meſſrs Jurine, Toggia, and Carminati, it may juſtly be conſidered as a diſcovery of the higheſt importance in medicine, and for which we are principally indebted to his ingenious labours.

II.

II.

Henrici Joſephi Collin, *Scar. Cæſareo-Reg. Apoſtol. Majeſt. Regimin. Infer. Auſtr. Conſiliarii et Noſocom. Pazmanniani Phyſici Ordinarii. Hollandicæ Scientiarum Academiæ, quæ Harlemi eſt, Membri.* LACTUCÆ SYLVESTRIS CONTRA HYDROPEM VIRES. 8vo. Viennæ.

NO one converſant in the practice of medicine can have any doubt that dropſical affections ariſe from very different cauſes, and that many caſes of this diſeaſe are incurable by any remedy that can be employed. It is alſo well known, that after remedies eſteemed the moſt powerful have failed others have ſucceeded. This is, in an eſpecial manner, the caſe with reſpect to diuretics. All of them ſeem by no means to be equally accommodated to every patient; nor in every inſtance to produce the deſired effects. It will not therefore be denied, that Dr Collin has done a very acceptable ſervice, both

to practitioners, and to hydropic patients, in his attempt to inveſtigate and demonſtrate the diuretic powers of the Lactuca Sylveſtris. And if this remedy, given in the manner which he directs, ſhall be productive of ſimilar ſucceſs in the hands of other practitioners, it may juſtly be conſidered as a very valuable addition to the Materia Medica.

This ſpecies of the lactuca indeed had been in uſe at a very early period of medicine; and is recommended even by Dioſcorides, not only as a remedy for evacuating the water in dropſy, but alſo for reſtoring the menſtrual diſcharge, and for the cure of ſeveral other affections. But of late it has been ſo little employed, as not even to have retained a place in any of the beſt modern pharmacopœias. In this, however, it has ſuffered only the ſame fate with many other active and uſeful medicines, which from different accidents have fallen into undeſerved neglect.

Dr Collin ſets out, by giving a deſcription of the plant, and mentioning the ſynomina employed for diſtinguiſhing it by different authors. It is, he obſerves, the Θριδαξ αγρια of Dioſcorides, the Lactuca Atra of Pliny, the Lactuca

Lactuca Sylveſtris of Mathiolus and Fuſchius, and the Lactuca Scariola of Linnæus.

He gives the following deſcription of the different parts of this plant.

Radix albida digiti minoris ferme craſſitie ex capite nodoſo ramoſe divaricata fibroſa annua.

Caulem promit bi-aut tricubitalem rectum ſimplicem, rariſſime niſi interdum in locis cultis, ramoſum inferne rubellum, cœterum ex albido virentem, glabrum, & ab infra ad unam fere tertiam aculeis tenellis obſitum. Hic.

Foliis veſtitir alternatim poſitis caulem amplexicantibus, inferioribus (una alterove) oblongis integris ex anguſtia ſeſe dilatantibus, denticulatis, in planta adulta facile macreſcentibus & deciduis; reliqua folia caulem ornantia ſunt ſinuato laciniata, venoſo-reticulata, coloris glaucini, glabra, coſta vero dorſali aculeata, margine ſpinuloſa, omnia in caule plus minus ita torta ut margo alter cœlum alter terram quodamodo ſpectet; in ſuprema parte caulis dividitur in paniculam.

Floribus plurimis flavis breviſſime pedunculatis ſuperbientem, quarum.

Calyx communis ſubcylindricus ex ſquamu-

lis plurimis imbricatim poſitis conflatur, cui inſidet.

COROLLA uniformis, ex corollulis monopetalis ligulatis hermaphroditis æqualibus compoſita, harum quælibet.

STAMINA continet quinque filamentis conſtantia, breviſſimis capillaribus, liberis; antheris vero in tubulum cylindraceum connatis, per quem.

STYLUS tranſit filiformis eminentibus duobus ſtigmatibus reflexis, ſingulorum horum.

GERMINA ſubovata abeunt in.

SEMINA ſolitaria compreſſa, rugoſo ſtriata, obſcuro cinerei coloris, nigroque maculata.

PAPPO ſimplici piloſo, ſtipitato coronata, quibus delapſis.

Receptaculum remanet nudum.

We have reckoned it the rather neceſſary to preſent our readers with the full deſcription given by the author, as it is doubtful whether the plant which he has employed be not rather the lactuca viroſa of Linnæus than the lactuca ſcariola. He obſerves, that, when wounded, it pours out a large quantity of acrid, bitter, milky juice, having a very ſtrong ſmell, even of opium itſelf. And he adds, that the ſpecific character of the two ſpecies is ſo uncertain, that they have been con-

conſidered by Haller, Gerard, and others, as being merely varieties of the ſame ſpecies; while this plant, on account of the narcotic odour, which it gives out, may be, he thinks, juſtly diſtinguiſhed by the epithet of viroſa.

It grows, he tells us, abundantly about the neighbourhood of Vienna, both in cultivated and uncultivated ſituations, by the ſides of highways, of meadows, and in many other ſituations. It flowers in Auguſt; and with thoſe who collect it, care need only be taken that it be not confounded with the ſonchus oleraceus, to which it has a conſiderable reſemblance.

He gives the following directions for preparing the extract of this plant. Let the juice expreſſed from the recent plant be kept for twenty-four hours in a low cellar, or ſome ſimilar cold ſituation, that it may not run into a ſtate of fermentation. Let it then be poured off from the ſediment, boiled for a few minutes, and afterwards ſtrained. Let a quantity of the whites of eggs be added to the ſtrained liquor; after which it is to be gently boiled again, and ſtrained a ſecond time. Let it then be evaporated to one half over a gentle fire. Upon being removed from the fire and cooled, a ſecond portion

of

of the white of eggs is to be added to it; and after boiling for a ſhort time, it is to be again ſtrained thro' linen; after which the clarified liquor is to be ſlowly evaporated over the fire to the conſiſtence of an extract. In this manner we are told that the beſt extract is obtained, and that it will often ſhine with ſaline ſpiculæ.

Unleſs the ſeaſon happens to be very wet at the time of collection, it paſſes very difficultly thro' linen when filtrated. But, by the proceſs above deſcribed, a ſufficient depuration is, we are told, obtained. If, for the ſake of gain, the Apothecary ſhall neglect the due depuration, he will indeed obtain a greater quantity of extract, but in a leſs active ſtate. To obtain the ſame effect, it will requira to be exhibited to two or three times the quantity of the pure extract. Beſides which, it is much more apt to excite ſickneſs at ſtomach. For the ſaline principle upon which the virtue of this plant depends, is intimately united with many inert earthly parts, from which it can only be freed by careful depuration. Altho' both the young and old plant, provided it be not deprived of juice, are by no means void of active powers; yet

yet the beſt time for collecting it, with a view to the preparation of the extract, is juſt before it begins to flower; for then it may be conſidered as being in its moſt active ſtate.

After theſe directions reſpecting the preparation of this medicine, Dr Collin relates the hiſtory and progreſs of twenty-four caſes in which he employed it. Without pretending to give an account of all theſe, we ſhall ſelect a few of the moſt remarkable.

The firſt caſe related is that of a labourer in the thirtieth year of his age, who, till that period, had enjoyed almoſt uninterrupted good health. But he was detained in priſon for about half a year. From the commencement of his impriſonment, he was almoſt entirely deprived of appetite and ſleep. He quickly loſt his ſtrength, and in the beginning of July 1771 he was ſeized with a diarrhœa.

With theſe complaints, and an œdematous ſwelling of his inferior extremities and face, he was brought to Dr Collin, at the hoſpital, on the 29th of July. He endeavoured, by means of rhubarb, myrabolanes, and even the root of the arnica, to reſtrain the diarrhœa; by which the ſtrength of the patient was gradually

dually waſted. But, under theſe remedies, a general anaſarca affected his whole body. Water began to be collected in the cavity of his abdomen; and, excepting ſquills, which his ſtomach would not bear in any form, every other diuretic renewed and increaſed the looſeneſs, which threatned to prove fatal to him.

Notwithſtanding the diligent uſe of almoſt all theſe remedies, which ſeemed moſt likely to be ſerviceable to him, his belly, by the beginning of September, was ſwelled to an enormous ſize, and his ſcrotum was as large as the head of a man. His anaſarca was very much increaſed, his thirſt inſatiable, and he took no food, unleſs in conſequence of the moſt earneſt intreaties. His reſpiration was much affected, and for ten days together he lay in a ſupine poſture, diſcharging every thing in bed, and expecting death with indifference.

On the 7th of September, laying aſide the uſe of all other remedies, Dr Collin preſcribed for him a pill, containing two grains of the extract of the lactuca viroſa, to be taken four times in the day. On the morning of the 8th of September he found him leſs anxious; and upon viſiting him again the ſame evening, he learnt

learnt that he had twice called for the pot to diſcharge water, and had been affected with no looſeneſs during the courſe of the day. His urine, which was kept in two ſeparate glaſſes, amounted to about twelve ounces, and was of an opaque dark colour, after having depoſited a conſiderable quantity of blackiſh ſediment. Before midnight, he again diſcharged upwards of two pounds of the ſame urine.

He now began to take double his former doſe of the extract of lactuca, and by eight o'clock next morning he had diſcharged ſix pounds of yellow coloured urine, containing only a cloud, which ſunk to the bottom. His reſpiration was much relieved, and his ſtupor conſiderably diminiſhed. During the courſe of the day, he had one ſtool in bed, but of a leſs thin conſiſtence; and by nine in the morning on the 10th of September, he had diſcharged fourteen pounds of urine, of a light yellow colour, and containing only very little cloud.

The ſwellings over his body were evidently more ſoft; he anſwered much more readily the queſtions put to him; he rejoiced at the diminution of his thirſt, and expreſſed a deſire for food.

food. He had a ſmall ſtool, in which the excrement had a formed appearance, and was of a dark colour. He had now refreſhing ſleeps, and expreſſed ſome ſolicitude for his recovery. A ſmall quantity of wine was given to him at his own requeſt; and his medicine was increaſed to the extent of twenty grains in the courſe of the day.

On the morning of the 11th of September Dr Collin found that he had diſcharged twelve pounds of urine during the courſe of the preceding night; that his appetite was much increaſed; that he was entirely free from thirſt; that he entertained great expectations of recovery; that his abdomen was much ſofter, and the ſwellings in other parts of his body much fallen.

After this, under the doſe of the medicine already mentioned, he continued to diſcharge daily, fourteen, fifteen, or ſixteen pounds of urine; and, under this diſcharge, all his ſymptoms were much alleviated; ſo that by the 20th of September he was entirely free from all dropſy. On this account, he took only twelve grains of his extract, and was ordered to take

half

half a dram of the Extract, Mart. Pomat. And by the 29th of September he gave up his hydropic extract altogether, continuing only his other medicine. From the beginning of his recovery, he was furniſhed with nutritious food, and ſome wine; under which he regained his ſtrength, fleſh, and colour ſo faſt, that by the 8th of October he was diſmiſſed from the hoſpital. And long after this, Dr Collin had the ſatisfaction of ſeeing him in the ſtreet in perfect health.

In the ſecond caſe we have an account of the employment of this remedy in a dropſy of long ſtanding, which had reſiſted a variety of different modes of cure. In this caſe, the ſwelling, which was very conſiderable, and extended over the whole body, was remarkably hard, and ſcarcely bore the impreſſion of the finger. The patient, in other reſpects, was in the moſt diſtreſsful circumſtances imaginable, and in the moſt imminent danger, when recourſe was had to the extract of the lactuca. For the firſt four days, he took it only to the quantity of ten grains, but without any effect. The doſe was then increaſed to twenty grains daily, when it had very conſiderable influence in augmenting

the quantity of his urine. Gradually additions, however, were ſtill made, till he took one dram and a half every day; and in no long time afterwards he was diſmiſſed entirely free from all his complaints. In this caſe, towards the latter part of the treatment, beſides the increaſed diſcharge by urine, the patient had alſo a copious ſweat extended over his whole body, and a very free expectoration of a large quantity of viſcid mucus.

The third caſe deſcribed is an inſtance of dropſy ſucceeding an intermittent. In this caſe the diſeaſe was accompanied with jaundice, and with a very conſiderable painful ſwelling in the left hypochondrium, which was ſuppoſed to depend on an enlargement of the ſpleen. Here the extract, taken to the extent of a dram and a half in the day, had the effect of producing a diſcharge of nine or ten pounds of urine every twenty-four hours, and in about three weeks the patient was completely cured.

In the fifth caſe, recourſe was had to the lactuca in an obſtinate dropſy, after the trial of colchicum, and a variety of other remedies to no purpoſe. When this was given to the extent of four ſcruples in the day, he diſcharged from ten

ten to eleven pounds of urine; and conſiderable anaſarcous ſwellings, with which he had been affected, were entirely removed. But the ſwelling of his abdomen, with great difficulty of breathing, were in no degree diminiſhed; and he died, after he had uſed the remedy for ſome weeks.

Upon opening the body, both ſides of the thorax were found filled with water. In the left lobe of the lungs were many hard tubercles, almoſt of a cartilaginous conſiſtence, three of which were each of them as large as a walnut. The liver was of an aſh colour, and very much hardened. The gall bladder was empty. The ſpleen was triple its natural ſize, and ſeemed to be diſtended with black blood. The whole pancreas was in a ſchirrous ſtate. The colon was very much diſtended, and the kidneys remarkably ſoft.

The ninth caſe is that of an unmarried woman in the 36th year of her age, who was brought to the hoſpital labouring under univerſal anaſarca, with a large collection of water fluctuating in the abdomen She had never enjoyed good health from infancy, and particularly after the ſmall pox and meaſles. She had

been frequently affected with cutaneous eruptions, and had always a cachectic appearance.

Her menſes appeared in her ſixteenth year, but were very irregular, and of a ſanious matter. Theſe were ſucceeded by fluor albus, continuing till ſhe was twenty years of age. Then her menſes returned; but they were neither more regular, nor of a better appearance than before. Three months after the cure of the fluor albus, a tumour appeared on her right foot, which terminated in ſuppuration, and was not healed till it had continued for about nine weeks. This was ſucceeded by ſeveral others of the ſame kind, in different parts of her body. At length ſhe became affected with a very great ſenſe of weight in the epigaſtric region; which altogether prevented her from being able to lie horizontally, produced a ſenſe of dilaceration, and rendered deglutition very difficult. In this condition, and affected with the dropſical ſymptoms, ſhe was brought to the hoſpital. She had then a moſt diſtreſſing thirſt, and very ſcanty diſcharges both by ſtool and urine.

On the firſt of January, after a trial of ſaline purgatives without any benefit, ſhe began the extractum

extractum lactucæ, and by next morning ſhe had diſcharged about two pounds of urine. The extract was gradually augmented, and her urine increaſed; ſo that by the 8th it amounted to twenty-ſix pounds in the day. Her anaſarca had now entirely diſappeared, and the aſcites was almoſt removed. Her liver was now found to be ſo much ſwelled as to fill the whole epigaſtric region, and ſtill prevented her from lying on her ſides. But under the continued uſe of the medicine, which ſtill ſupported a copious diſcharge of urine, though not to the ſame extent, conjoined with dry friction twice a-day, the ſize of this tumour was gradually diminiſhed; in ſo much, that by the 27th of February neither Dr Collin, nor five other phyſicians who examined it in conjunction with him, could diſcover any thing preternatural. She could now with eaſe bear every poſture, her appetite became remarkably keen, and by the end of March ſhe left the hoſpital in perfect health.

The other caſes which are recorded in this treatiſe, although affording very remarkable examples of the removal of obſtinate dropſies, yet do not exhibit any thing ſo far different from theſe which have already been mentioned,

as to require particular notice. And the author obſerves, that beſides the twenty-four caſes related in this treatiſe, he has cured thrice that number by means of this remedy. But truſting that the caſes related are ſufficient to ſhew the powers of this remedy, he has with-held the others, that he might not ſwell the volume to too great a length. And he concludes it with ſome general corolaries drawn from his practice with regard to its uſe.

The extractum lactucæ ſylveſtris is, he obſerves, a very mild remedy, and friendly to the ſtomach. When exhibited even in large dozes, it creates no uneaſineſs to the patient; it even renews an impaired appetite; and by diſſolving, as he alledges, the tenacity of the lymph, gives it a free paſſage through the ſmall veſſels, and thus quenches and diminiſhes thirſt in many hydropic caſes.

Though it for the moſt part keeps the belly gently open, yet it does not excite diarrhœa. And from its employment beſides diureſis, a diaphoreſis is alſo produced; which in ſome particular caſes is very copious, and gives great relief.

It diſſolves glutinous matter obſtructing the viſcera,

viſcera, and renders them fit to be diſcharged by the urinary paſſages, by the ſkin or if they have been ſituated in the lungs, by expectoration. It ſucceſsfully removes jaundice ariſing from ſuch a cauſe with hydropic patients, and ſupplies the place of bile. And when dropſy ariſes from this diſpoſition of the fluids, it happily cures it without any inconvenience to the patient.

When dropſy ariſes from laxity of the ſolids, and diſſolution of the fluids, it is not, he tells us, ſo certainly, eaſily, or expeditiouſly cured by any other remedy.

But when an inflammatory ſpiſſitude of the humours, in which antiphilogiſtic remedies have been too long neglected, has produced obſtruction of the viſcera, attended with dropſy, it is not of ſervice. Nay, from ſome obſervations, he was inclined to think, that its long continued uſe has proved hurtful. For it is, he obſerves, a remedy gently corroborant, irritating, and antiſceptic; and hence he thinks ill fitted for an inflammatory diſpoſition of the fluids.

When Dr Collin firſt began this remedy, on the removal of the dropſy, he exhibited other tonics; but theſe he afterwards found to be rare-

ly neceſſary. For, by a proper diet, and the continuance of the remedy for ſome time, his patients were with greater ſafety reſtored to ſtrength, than by the employment of aſtringents; from which he often ſaw obſtructions of the viſcera rather increaſed, if theſe were given before their complete removal. He does not however deny, that ſome caſes occurred to him which required corroborants of different kinds, to ſtrengthen the body.

The doſe of the extract of the lactuca ſylveſtris muſt be varied in different patients. In dropſies, attended with a diſſolution of the fluids, and laxity of the ſolids, it is required in the leaſt doſes. And theſe cauſes, he tells us, will in general be ſucceſsfully cured by employing it to the quantity of a ſcruple, or half a dram in the day. If, however, there be long-continued obſtructions of the viſcera, even in theſe caſes larger dozes are required.

In dropſy ariſing from a cold lentor of the humours, it requires to be exhibited in dozes from one to three drams. But if this quantity of good and properly-prepared extract does not ſucceed, the cure of the patient is not, he tells us, to be expected by this remedy. At the

ſame

ſame time, if the extract be given even to the quantity of an ounce, although it excite nauſea, yet it will not, he affirms, be productive of any other inconvenience to the patient. Its uſe, however, in ſuch caſes, is not to be perſiſted in, to the neglect of other remedies better accommodated to the cure.

To hydropic patients affected with thirſt, Dr Collin, when uſing any diuretic medicine, always directs the exhibition of a ſufficient quantity of drink; taking care, however, that they do not overload the ſtomach by uſing too great a quantity at once. For the water effuſed into cavities, though bland, does not dilute the maſs of fluids from which it is already ſeparated. It cannot here be abſorbed in ſufficient quantity; for in this diſeaſe the abſorbents are languid in their action, which indeed is to be conſidered as the chief cauſe of the collection of water in the cavities. But if, on the other hand, the effuſed waters have contracted n acrimony, their abſorption augments thirſt, excites fever, and induces many other inconveniences. And unleſs theſe are counteracted by the free uſe of diluent and demulcent fluids,

inflammations of the worſt kind, gangrene, and even death itſelf, are to be apprehended.

The advantages of the free uſe of liquids in many dropſical caſes, is already confirmed by teſtimony of different practitioners. But how far the lactuca is really entitled to the character which Dr Collin gives it, muſt be determined by future experience.

III.

III.

A Treatiſe on the Venereal Diſeaſe, by John Hunter. 4to. London.

IN this work are contained many opinions which have a juſt claim to attention; not merely from novelty, but alſo from importance and ingenuity. When however it is conſidered, that theſe occupy a quarto volume of conſiderable ſize, it is not to be expected, that within the narrow limits, which we muſt here preſcribe to ourſelves, a full or particular account can be given of all of them. Referring thoſe, therefore, who want a farther gratification of their curioſity, to the work itſelf, we ſhall here content ourſelves with preſenting to our readers a ſhort view of the moſt intereſting particulars, and eſpecially thoſe which reſpect the novelties or improvements which the author has introduced into practice.

To this work is prefixed an introduction, in which

which the author gives an explanation of ſome terms which he has afterwards frequent occaſion to employ. He divides ſympathy into univerſal, and partial; and the latter again is ſubdivided into remote, continuous, and contiguous. He ſtrenuouſly contends, that diſeaſed actions are incompatible with each other. It appears, he thinks, beyond a doubt, that no two actions can take place in the ſame conſtitution, nor in the ſame parts at one and the ſame time. He therefore affirms, that the idea of itch, of ſcurvy, and the venereal diſeaſe being combined, is founded in ignorance. He infers, that the power of reſiſting many infections, ariſes from a perſon having at the ſame time ſome other diſeaſe, and therefore being incapable of a new action; and that the cure or ſuſpenſion of one diſeaſe by another, depends on the ſame principle.

This is unqueſtionably an important doctrine in practice; and that it is true to a certain extent, is highly probable. But what happens with regard to proper fever, or febrile contagions, is by no means applicable to all other diſeaſes. It cannot be denied, that a perſon labouring under ſcrophula to a high degreee, is ſtill readily ſuſceptible of the contagion of ſyphilis.

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And that he who is ſubjected to the latter diſeaſe, is ſtill no leſs liable to be acted upon by the contagion of pſora, than if he was in a ſtate of perfect health; while at the ſame time the ſupervening diſeaſe has no influence, either in ſuſpending or removing the preceding one. On the contrary, in many inſtances where ſuch complications occur, the removal of either is rendered more difficult. This is particularly exemplified in thoſe cauſes where ſcrophulous patients allow ſyphilis to run on for any length of time, of which Mr Hunter himſelf is fully aware, as appears from many parts of his work. Although therefore the term *pocky itch* may often be very abſurdly employed, yet we cannot help thinking, that Mr Hunter has gone too far in aſſerting that the idea is entirely founded on ignorance. The general principle here laid down may, we think, lead to many erroneous concluſions.

Mr Hunter, after ſtating his ſentiments reſpecting diſeaſed actions being incompatible with each other, endeavours to ſhow, that parts affected take on action more readily, and go on with it more rapidly, when near the ſource of circulation, than when far from it. He contends, that there are ſome parts more ſuſceptible

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of ſpecific diſeaſes than others. And he obſerves, that the ſkin, throat, and noſe, are more readily affected, by lues venerea, than the bones and perioſteum; which, on the other hand, ſuffer ſooner than many other parts; particularly the vital parts, which he thinks are not ſuſceptibl of the diſeaſe.

He next offers ſome remarks on inflammation, pointing out three different ſpecies of it. That which unites parts he ſtiles the adheſive inflammation; that which forms pus, the ſuppurative; and that which removes parts, the ulcerative inflammation. Mortifications he conſiders as of two kinds; the one preceded by inflammation, the other not. But, as far as that ſtate occurs in this diſeaſe, it is entirely of the former kind. He conſiders inflammation as an increaſed action of that power of which a part is naturally in poſſeſſion. This increaſed action, in healthy inflammations at leaſt, he thinks, is probably attended with an increaſe of power; but in inflammations which terminate in mortification, there is no increaſe of power. On the contrary, there is, he thinks, a diminution of power, which, joined to an increaſed action, becomes the cauſe of mortification,

tion, by deſtroying the balance which ought to ſubſiſt between the power and action of every part. Upon theſe principles the Peruvian bark is, he thinks, the only medicine that can be depended upon; as it increaſes the powers, and leſſens the action. But, upon many occaſions, opium, he thinks, may be of ſingular ſervice; by leſſening the action, although it does not give real ſtrength. And he has ſeen good effects from it, both when taken internally in large dozes, and when applied to the part.

After this introduction, Mr Hunter next treats of the venereal poiſon, and of its firſt origin. He ſeems rather inclined to adopt the opinion of thoſe who ſuppoſe that the diſeaſe was not brought from the Weſt-Indies. Man, he obſerves, is ſuſceptible of more impreſſions, that become the immediate cauſe of diſeaſe, than any other animal; and is, beſides, the only animal which can be ſaid to form artificial impreſſions on himſelf. Hence he thinks, that he is ſubject to the greateſt variety of diſeaſes. In one of theſe ſelf-formed ſituations, he ſuppoſes that the impreſſion was probably given which produced the venereal diſeaſe.

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To us, this opinion ſeems not only to be very doubtful, but to be liable to many objections. Into theſe, however, we cannot propoſe to enter; and, with reſpect to the place from whence it was derived, we would only obſerve, that there can be no doubt of its being altogether unknown in Europe till about the time when their intercourſe began with America. While it is equally certain, that when Europeans firſt viſited America, they found that the diſeaſe was not only very common in that country, but that it had exiſted there from time immemorial. This, we are inclined to think, gives a degree of probability of its being derived from America, which any deſcription of ſimilar appearances, at beſt but vague and uncertain, and as to their dates even doubtful, will never be ſufficient to invalidate. And if, in a ſelf-formed ſituation, the impreſſion was given which produced the diſeaſes; it may juſtly ſeem wonderful, why it was not produced in Otaheite as well as in America or Europe. We are, however, certain, that the inhabitants of that, and ſeveral other iſlands lately diſcovered, were entire ſtrangers to it, till it was imported to them from Europe.

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Mr Hunter obſerves, that we know no other animal, capable of being affected with this poiſon. Hence he infers, that it certainly began in the human race; and, he thinks, that the parts of generation were probably firſt affected. We know nothing, he obſerves, of the poiſon itſelf; but that the venereal diſeaſe is propagated only by matter, is daily proved by numerous inſtances. It muſt either, he obſerves, be applied in a fluid ſtate, or rendered fluid by the juices of that part to which it is applied; and he affirms, that there is no inſtance where it has given infection in the form of vapour.

With reſpect to differences in the acrimony of the poiſon, he allows, that it may be ſo far diluted, as not to have the power of irritation. But, he contends, that if it can irritate to action the part to which it is applied, the action will be the ſame, whether from a large or ſmall quantity, from a ſtrong or weak ſolution. This he thinks, is fully confirmed by the analogy of the ſmall pox. He conſiders it as an erroneous opinion, that gonorrhœa and ſyphilis ariſe from two diſtinct poiſons; and, in illuſtrating this point, he endeavours to ſhew, that the venereal diſeaſe was carried to Otaheite, not by the

the Engliſh circumnavigators, but by the French. He rejects the idea of any multiplication of the venereal vines, by fermentation in the body; and he conſiders it as a poiſon, which, by irritating the living parts in a manner peculiar to itſelf, produces an inflammation peculiar to that irritation, from which, a matter is produced peculiar to that inflammation. Theſe opinions he ſupports by reaſoning which, it will readily be allowed, is highly ingenious. But we muſt acknowledge, that with us it has by no means removed every doubt.

The venereal poiſon may, he obſerves, affect the human body, either locally, in conſequence of its immediate action; or conſtitutionally, from its being abſorbed, and afterwards affecting parts when diffuſed in the circulation. When it is conſtitutional, there are produced from irritation many local diſeaſes; as blotches on the ſkin, ulcers in the tonſils, thickening of the perioſteum and bones. When it is originally local, there is either a formation of matter without a breach of ſolids, called gonorhœa; or there is a breach of ſolids, called a chancre. In all theſe forms of the diſeaſe, great

great varieties occur in different conſtitutions: in ſome it is extremely mild, in others extremely violent; in ſome its progreſs is very rapid, in others very ſlow.

The venereal diſeaſe, according to Mr Hunter, often becomes the immediate cauſe of other diſorders, by calling forth latent tendencies to action. In particular countries, and in young people, the tendency to ſcrophula will be predominant; therefore buboes in them will more readily become ſcrophulous. In old people, they may form cancers; and when they happen in parts of the body which have a greater tendency to cancer, that diſeaſe will more readily take place. When the venereal diſeaſe attacks the urethra, it often becomes the pre-diſpoſing cauſe of abſceſſes. When it attacks the outſide of the penis, chancers often ulcerate ſo deep, as to communicate with the urethra, producing fiſtulas in the urethra, and often continued phymoſes. In this manner then, lues venerea is, he thinks, the cauſe of other diſeaſes.

After the obſervations on the venereal poiſon contained in the firſt part of this work, Mr Hunter proceeds in the ſecond part to treat of Gonorrhœa. He tells us, that till about the

year 1753, it was generally ſuppoſed, that the matter from the urethra in gonorrhœa aroſe from an ulcer, or ulcers in that paſſage; but from obſervation, it was then proved that this was not the caſe. And he ſubjoins a ſhort hiſtory of the hypotheſis of the matter being formed by inflammation without ulceration. In this hiſtory, however, he ſeems to have overlooked the obſervations made at a much earlier period, by Morgagni; who, to uſe his own words on the diſſection of patients dying while they laboured under gonorrhœa, found nothing morbid. Niſi quod urethræ interior facies aliquanto humidior apparuit, et rubicundior, quam ſoleat.

After giving an account of the different ſymptoms of gonorrhœa, both in men and women, and of the effects of the diſeaſe on the conſtitution in both ſexes, he next proceeds to treat of the cure. The general intention, which he points out in the cure, is to deſtroy the diſpoſition and ſpecific mode of action in the ſolids of the parts; and as that is changed, the poiſonous quality of the matter produced will alſo, he tells us, be deſtroyed. As this diſpoſition and action, however, muſt of itſelf terminate in a longer or ſhorter time, he conſiders the diſeaſe

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as admitting in every caſe, of what may be called a natural cure. And he is inclined to believe, that medicine is very ſeldom of any kind of uſe. Accordingly he has found many patients recover, when he directed only pills of bread; though he believes, that ſome of them did not get well ſo ſoon as they would have done, had artificial methods of cure been employed.

In caſes where the ſymptoms run high, nothing, he tells us, ſhould be done to ſtop the diſcharge. The conſtitution is to be altered by remedies adapted to each diſpoſition, with a view to alter the action of the parts ariſing from ſuch diſpoſitions, and reduce the diſeaſe to its ſimple form. And when the inflammation is conſiderably abated, it may be attacked either by internal remedies, or local applications. The internal remedies are principally evacuants and aſtringents. The evacuants are principally of the purgative or diuretic kind. Theſe, he thinks, under proper management, may, to a certain degree, be uſeful. But he conſiders mercury as being no farther ſerviceable than as it operates as a purgative. Many objections which have been made to aſtringents he conſiders as groundleſs. He believes,

that they do not, in any caſe, leſſen the inflammation, but they certainly leſſen the diſcharge. And he thinks, that a combination of aſtringents, eſpecially the ſpecific aſtringents of theſe parts, as the balſams, with any other medicine which may be thought of ſervice, may help to leſſen the diſcharge in proportion as the inflammation abates.

Local applications may be either internal to the urethra, external to the penis, or both. Local applications to the urethra may be either in a fluid or ſolid form. The firſt of theſe, or injections, he divides into four kinds; the irritating, the ſedative, the emollient, and the aſtringent.

The irritating he ſuppoſes to act by producing an irritation of another kind, and greater than the venereal; by which means, the venereal is deſtroyed and loſt, and the diſeaſe cured. They do not, however, agree with all inflammations; and they ſhould never, he tells us, be uſed where there is already much inflammation. But in caſes that are mild, and in conſtitutions not irritable, they will remove the diſeaſe almoſt immediately. And he thinks, that two grains of corroſive ſublimate, diſſolved in eight ounces

ounces of diſtilled, or roſe water, is one of the beſt injections of this kind.

He conſiders opium as the beſt ſedative we have; but it will not, he obſerves, act as a ſedative in all conſtitutions or parts; on the contrary, it has often the effect of producing great irritability. Lead, while it operates as a ſedative, abating inflammation, acts alſo as an aſtringent; and he tells us, that fourteen grains of the Sal. Plumbi, in eight ounces of roſe water, make a good ſedative aſtringent injection.

Emollient injections are the moſt proper applications where the inflammation is very great. Thus a ſolution of gum arabic, milk and water, or ſweet oil, will leſſen the pain, when the more active injections have done nothing, or to appearance have done harm.

Aſtringent injections act chiefly by leſſening the diſcharge; but, as they affect the actions of the living powers, they may, he obſerves, alter the venereal diſpoſition. They ſhould only, he thinks, be uſed towards the end of the diſeaſe, when it has become mild, and the parts begin to itch. Mr Hunter's experience has not taught him, that one aſtringent is better than

another. He mentions the aſtringent gums, oak bark, Peruvian bark, green blue and white vitriols, ſalts of mercury, and allum; and he remarks, that on changing the injection. one will ſometimes ſucceed after ſeveral others have been tried in vain.

The external applications are poultices and fomentations; but theſe can, he thinks, be of little ſervice, excepting when the external parts are in ſome degree inflamed. Mercurial ointment has often been applied externally, but he is not ſatisfied of the utility of this practice.

The cure of gonorrhœa in women is nearly the ſame as in men; but as the parts affected are neither of ſo great extent, nor ſo liable to inflammation, it becomes more ſimple. Injections are the beſt means that can be uſed; but they may be made double the ſtrength of thoſe uſed with men.

With reſpect to the treatment of the conſtitution in the cure of gonorrhœa, he obſerves, that in ſtrong and plethoric conſtitutions, evacuations, particularly bleeding, and gentle purging are neceſſary; while it is alſo requiſite to live ſparingly, and, above all, to uſe little exerciſe. In the weak and irritable habits, in place of evacuation,

evacuation, the conſtitution ſhould be ſtrengthened; and for this purpoſe, the Peruvian bark may be employed with great advantage. There are, however, caſes where evacuations have produced no abatement, and the ſtrengthening plan has been as unſucceſsful. With ſuch, he thinks that the ſoothing plan is the beſt.

In the treatment of gonorrhœa, it is always neceſſary, he thinks, to have in view the poſſibility of ſome matter being abſorbed, and afterwards appearing in the form of lues venerea. To prevent this, he adviſes ſmall dozes of mercury internally, or the mercurial ointment externally, where the medicine diſagrees with the ſtomach and inteſtines. Yet he admits, that very few are infected from a gonorrhœa, although they have taken no mercury.

Our author next conſiders the treatment of what may be called the occaſional ſymptoms of gonorrhœa; particularly bleeding from the urethra, painful erections, chordee, ſuppuration of the glands of the urethra, affections of the bladder, and ſwelling of the teſticles. As theſe, however, are the effects only of irritation on the urethra, and therefore not

venereal; they are to be treated in the ſame manner as if they aroſe from any other cauſe.

In gonorrhœa, certain ſymptoms often remain after the diſeaſe is ſubdued. Such as the remains of the diſagreeable ſenſations excited by the original diſeaſe, a gleet, the chordee, the irritable ſtate of the bladder, and the increaſe and hardneſs of the epididymis. As the firſt of theſe, remaining diſagreeable ſenſations, vary conſiderably in their nature, no one method of treatment will always be proper. Mr Hunter has known benefit derived from bougies, from gently-irritating injections, and from cicuta. But a bliſter applied to the perinæum has, he thinks, more effect than any other remedy.

He is inclined to ſuſpect, that a gleet ariſes from the ſurface of the urethra only, and not from the glands. In this complaint, we may employ either a conſtitutional or local method of cure. The remedies employed with the firſt intention, are either ſpecifics, as the native balſams, turpentines, and cantharides; ſtrengtheners, as the cold bath, and the Peruvian bark; or aſtringents, as the aſtringent gums, and ſalt of ſteel. The local applications may, he thinks, be divided into

into ſpecifics, aſtringents, and irritating medicines, and ſuch as act by derivation. The ſpecifics applied locally, have a greater effect than when given internally, becauſe they may be applied ſtronger. And the ſame obſervation is, he thinks, alſo applicable to the aſtringents. Irritating applications may be uſed either under the form of injections, or bougies. But theſe ſhould never, he thinks, be had recourſe to, till other methods have been fully tried and found unſucceſsful. When they are neceſſary, as an irritating injection, two grains of corroſive ſublimate may be added to eight ounces of water. Bougies however are, he thinks, more efficacious than injections; and a ſimple unmedicated bougie, is in general ſufficient for the cure of a gleet. But it will require application for a month or ſix weeks before the cure can be depended on. Where it is neceſſary that they ſhould ſtimulate otherwiſe than as extraneous bodies, a little turpentine or camphire is the beſt mode of medicating them. When other methods fail, a cure may ſometimes be obtained by producing an irritation in another part of the body, which ſhall deſtroy the mode of action in the urethra, on which the gonorrhœa

hœa depends. Thus, gleets of long ſtanding have been cured by the application of a bliſter to the under ſide of the urethra, and by electricity.

For combating a remaining chordee, Mr Hunter recommends the external application of mercurial ointment, joined with camphire. Electricity and the Peruvian bark have alſo been of uſe.

The continuance of the irritation of the bladder, is ſometimes, he obſerves, very troubleſome. The cure is in general to be effected by opiates, clyſters, cicuta, bark, and ſea-bathing. Mr Hunter is alſo inclined to recommend the application of a bliſter to the perinæum in men.

A remaining hardneſs of the epididymis will often continue for life; but it is ſeldom that any bad conſequence ariſes from it. Sitting over the ſteam of warm water with camphire, and rubbing the ſcrotum with mercurial ointment, joined with camphire, have ſometimes been of ſervice. But in moſt caſes this practice proves inefficacious.

In the third part of this work, Mr Hunter proceeds to treat of different morbid affections, which have been ſuppoſed to ariſe in conſequence of gonorrhœa. And in the firſt chapter,

ter, he conſiders theſe diſeaſes which have been ſuppoſed to ariſe in conſequence of venereal inflammation in the urethra of men. He begins by treating of ſtrictures, and points out three different kinds of theſe, viz. The true permanent ſtricture, ariſing from an alteration of the ſtructure of part of the urethra; a mixed caſe, compoſed of permanent ſtricture and ſpaſm, and the true ſpaſmodic ſtricture.

The true permanent ſtricture moſt frequently occurs about the bulbous part of the urethra. Sometimes they are without the bulb, but ſeldom within it; and Mr Hunter never ſaw a ſtricture in that part of the urethra which paſſes through the proſtate gland. Permanent ſtrictures have their ſymptoms conſiderably varied by different accidents. Theſe ſymptoms are increaſed by hard drinking, violent exerciſe, or the retention of urine. But they are particularly augmented by cold weather. A cold day, nay, even an hour of cold weather, will produce a change in them. The cure of the permanent ſtricture is to be accompliſhed only by local applications; either by a dilatation of the contracted part, or a deſtruction of it, by ulceration or eſcharotics. Dilatation is performed by bougies,

bougies, but is ſeldom, if ever, more than a temporary cure. The ulcerative proceſs is alſo affected by the bougie; and the deſtruction by eſcharotics is by means of cauſtics, particularly the lunar cauſtic. Where a bougie cannot paſs, temporary relief is ſometimes obtained by the warm bath, and by glyſters with opium.

In the introduction of the bougie ſometimes great difficulty occurs. In theſe caſes Mr Hunter has ſometimes got it to enter by rubbing the perinæum externally with the finger of one hand, while he puſhed the bougie on with the other. He has alſo often ſucceeded by letting the bougie remain a little while cloſe to the ſtricture, and then puſhing it on. The time for which a bougie ſhould remain in the paſſage, muſt be determined by the feelings of the patient. It ſhould never give pain if poſſible. At firſt, it ſhould not be left in above five minutes, nor even ſo long, if it give great pain in paſſing. Each time of application is to be lengthened gradually. The beſt time to let them remain in the paſſage, is when the patient has leaſt to do, particularly in the morning when he is in bed. The bougie ſhould be

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increaſed in ſize, according to the facility with which the ſtricture dilates, and the eaſe with which the patient bears the dilatation.

When a ſtricture is to be cured by ulceration, the bougie ſhould be introduced as far as poſſible, and the ſize of it increaſed as faſt as the ſenſations of the patient can bear. To prevent the inconvenience of a bougie coming out, or the miſchief of its paſſing into the bladder, it is neceſſary to tie a ſoft cotton thread round that end of the bougie which is out of the urethra, and then round the root of the glans. The projecting end of the bougie is to be bent down upon the penis.

In the removal of the ſtrictures by the application of the cauſtic, Mr Hunter tells us, that in many caſes he has ſucceeded beyond expectation. If the obſtruction be any where between the membranous part of the urethra and the glands, while the canal is nearly ſtraight, or can eaſily be made ſo by the introduction of a ſtraight inſtrument, it becomes an eaſy matter to deſtroy them by cauſtic. Beyond that it becomes more difficult. But moſt of the ſtrictures Mr Hunter has examined after death, appeared to be in the power of ſuch treatment. The

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application of the cauſtic need not be longer than a minute, and it may be repeated every day, or every ſecond day, allowing time for the ſlough to come off. For the application of cauſtic in theſe caſes, Mr Hunter has invented an inſtrument, which conſiſts of a canula with a plug at its extremity, capable of being withdrawn. After the canula is introduced, till it reach the ſtricture, and the plug withdrawn, a port-crayon with the cauſtic is introduced, and by this means it is made to act on the ſtricture alone.

From the repeated application of cauſtic in this manner, a bougie can ſoon be made to paſs. And after this is accompliſhed, the caſe is to be treated as a common ſtricture.

There are few ſtrictures which are not attended with ſpaſms. But in ſome caſes the ſpaſm is more the diſeaſe than the ſtricture itſelf. In whatever part of the urethra the ſpaſm be, if time will allow, it is proper to try internal medicines, and alſo external applications. The beſt internal remedies are opiates, and the turpentines, given either by the mouth or by the anus; but eſpecially opium in the form of clyſter. Camphire, Mr Hunter thinks, may be

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uſeful in ſtranguaries ariſing from ſpaſm, as well as in thoſe produced by cantharides. The Peruvian bark, which many have recommended, he thinks rather prejudicial. The external remedies are the ſteam of warm water with ſpirits the warm bath, bladders of warm water applied to the perinæum, and ſimilar applications. The crumb part of a new baked loaf warm from the oven, applied to the perinæum, has been found to give eaſe. And a cure has alſo been effected, by bliſters applied either to the loins, or to the perinæum. But where the circumſtances of the caſe require immediate relief, recourſe muſt be had to the catheter or bougie. Where the contraction is near the bladder, the catheter will anſwer beſt; but in moſt caſes the bougie will be ſufficient, and is a much ſafer inſtrument.

In moſt caſes, there is, Mr Hunter obſerves, an uneaſy ſenſation at the end of the penis, which leads the patient to rub theſe parts; and ſometimes during the friction the water will paſs; while the ſame effect is ſometimes alſo obtained, from gently irritating injections thrown in but a little way.

In oppoſition to retention of urine from ſpaſm,

ſpaſm, Mr Hunter next treats of the paralyſis of the urethra. In this diſeaſe the bladder is hardly allowed to be filled, but the water dribles away inſenſibly as faſt as ſecreted. This diſeaſe is to be cured by ſtimulants, ſuch as a bliſter to the loins, a bliſter to the perinæum, cantharides taken internally, electricity, or waſhing the parts with cold water.

Though caruncles and excreſcences in the urethra have been conſidered as a common cauſe of obſtruction to the paſſage of urine, yet Mr Hunter thinks they are very rare; and in all his examinations of dead bodies, he has met only with two inſtances of this kind. He imagines they are to be conſidered as a ſpecies of internal wart. He thinks that this diſeaſe is not to be cured by the bougie; and he recommends the uſe of the cauſtic, if the parts are ſo ſituated as to admit the application of it.

Swelling of the proſtate gland is of more ſerious conſequence than perhaps any other cauſe of obſtruction to the paſſage of urine, becauſe we have few means of cure. It is, however, very rarely a diſeaſe with young men. The proſtate gland, when ſwelled, generally becomes harder in its conſiſtence. Thus while the

the compreſſion ariſing from its ſize prevents the urine from entering the urethra, its increaſed firmneſs hinders it from yielding; and the ſymptoms ariſing from it are neceſſarily ſuch as proceed from a ſtoppage of urine, producing an irritable bladder. For detecting this diſeaſe, the finger, after being properly oiled, muſt be introduced into the anus, with its fore part towards the pubis. If the parts be hard, making an eminence backwards into the rectum, ſo that the finger is obliged to be moved from ſide to ſide, to feel the whole extent of ſuch a ſwelling; and if it alſo appears to go beyond the reach of the finger, we may be certain that the gland is conſiderably ſwelled.

In this diſeaſe, for obtaining temporary relief, recourſe is had to bougies, and to the catheter. The management of theſe requires great judgment on the part of the practitioner, to be regulated by the circumſtances of the caſe. Often, by giving a particular bend to the bougie, ſometimes in one direction, ſometimes in another, it may be introduced with eaſe, when that cannot otherwiſe be affected. A catheter flexible at the point only, for about an inch, is, Mr Hunter thinks, the beſt.

While by theſe means temporary relief is obtained from the retention of urine, ſo to give temporary eaſe from pain, and to remove ſpaſm, recourſe muſt be had to opiate clyſters. Theſe it is often neceſſary to throw up even twice a-day. With a view to the radical cure, Mr Hunter has ſeen hemlock and ſea-bathing of ſervice in ſeveral caſes. He has heard of one caſe, in which the ſwelling was conſiderable, removed by the uſe of burnt ſponge; and he ſuggeſts the trial of mezereon. He mentions alſo in a note, a caſe treated by Mr Earle, where, after a bliſter to the perinæum had been tried in vain, a ſeton was paſſed in the direction of the perinæum, having its orifices about two inches diſtant from each other. Upon this, the ſymptoms of irritability in the bladder began to abate, and in time went entirely off. Upon examination of the proſtate gland, from time to time, it was found to decreaſe gradually, till it was nearly of the natural ſize. After the ſeton had been continued for ſome months, it was withdrawn. The ſymptoms ſoon again began to revive. It was afterwards introduced a ſecond time, but without the former good effects. This, however, may ſtill be an encouragement

ragement to future trials. But, as Mr Hunter obſerves, a certain cure for this diſeaſe is not yet known.

From obſtruction to the paſſage of urine diſeaſes are induced in the bladder, particularly irritability and its conſequences; by which the bladder admits of little diſtenſion, becomes quick in its actions, and thick and ſtrong in its coats. When the irritation of fulneſs comes on, the contraction of the bladder becomes more violent, in proportion to the reſiſtance, whether permanent or temporary only; the ſympathetic contraction of the muſcles of the abdomen takes place, and is alſo violent; yet the urine can only be diſcharged in ſmall quantity, ſo that the bladder is never entirely empty; and what does paſs, is no more than ſufficient to take off the irritation of fullneſs. Thus the actions become frequent, and there is almoſt a conſtant oozing of urine from the penis between the times of making water. Sometimes the bladder is ſo irritable as never to ceaſe acting; but ſtill ſtrains, though there be nothign to throw out, even the action of the bladder becoming a cauſe of its own continuance.

In this caſe, the cure conſiſts in removing the

over-action of the urethra, and the irritable diſpoſition of the bladder. Opiate clyſters are, Mr Hunter obſerves, the beſt means of temporary relief. He has alſo known good effects from a bliſter to the loins, or perinæum. But the radical cure muſt conſiſt in the removal of the ſtricture, whether from a contraction of the urethra, a ſwelled proſtate, or any other mechanical obſtruction.

As obſtruction to the paſſage of urine, in ſome caſes, gives riſe to increaſed action of the bladder, in others it produces a paralytic ſtate of that organ. And when the bladder has its contractile power deſtroyed by diſtenſion, there is often a conſiderable extravaſation of blood from its inner ſurface, ſo that the water when evacuated is extremely bloody. In ſuch caſes, after firſt attending to the abſtraction of the water, ſtimulants and ſtrengthners are uſeful. Bliſters to the loins, and to the perinæum, we are told, often ſucceed; and electricity is ſometimes of ſingular ſervice. But through the whole of the cure the water muſt be frequently drawn off, and the bladder ſhould not be allowed to be diſtended.

In caſes of total ſuppreſſion of urine, when other

other means fail, an artificial opening muſt be made into the bladder for the evacuation of the urine. This opening may be made in the perinæum, where we now cut for the ſtone; above the pubis, where cutting for the ſtone was formerly practiſed; or within the rectum, where the bladder lies in contact with the inteſtines. Each of theſe methods, in certain circumſtances, Mr Hunter thinks may have peculiar advantages; and he very candidly acknowledges, that he has not ſeen caſes enough to enable him to give all the varieties that commonly happen, and of courſe to give all the advantages and diſadvantages of each method.

Another diſeaſe of the bladder ranked among the ſuppoſed conſequences of gonorrhœa, is where that viſcus becomes extremely irritable, and will not allow of its uſual diſtenſion. In this diſeaſe, though in ſome reſpects the ſymptoms are ſimilar to thoſe ariſing from ſuppreſſion, yet the diſcharge of water is free. But after it is diſcharged, there is a conſiderable ſtraining ariſing from the muſcular coat of the bladder ſtill continuing its contractions; and the diſeaſe often terminates fatally, from producing waſting and hectic fever.

Temporary relief is here procured by opium, particularly when applied near the part, as under the form of clyſter. But Mr Hunter places more reliance on bliſters applied to the perinæum, to the upper part of the back, or to the ſacrum.

Among other ſuppoſed conſequences of gonorrhœa, Mr Hunter treats of impotence. This he conſiders as either depending on the mind, or on a want of proper correſpondence between the actions of the different organs. Thus there may be an erection of the penis, where neither the mind nor teſticles are ſtimulated to action; and, on the other hand, the teſticle may perform the action of ſecretion too readily for the penis. In both caſes, he conſiders the ſoothing plan as being the beſt mode of cure, and looks upon opium as being in many inſtances a ſpecific. But he obſerves, that waſhing the penis and ſcrotum with cold water, is often alſo of ſervice; and to give it an additional degree of cold at ſome ſeaſons of the year, he adviſes, that a proportion of common ſalt be added to the water, and the parts waſhed when the ſalt is almoſt diſſolved.

He concludes his obſervations on gonorrhœa with

with ſome remarks on the decay of the teſticle. The teſticles, he thinks, are more ſubject to ſpontaneous diſeaſe than any other part of the body; but what is moſt ſingular, is their waſting. Teſticles have been known to waſte in caſes of rupture, or of hydrocele. But they will alſo waſte wholly away without any previous diſeaſe; or, when they have been, inflamed and augmented in ſize, after beginning to ſubſide, as in the reſolution of common inflammations, they will ſometimes not ſtop at the former ſize, but continue to decay till they wholly diſappear. He relates ſeveral caſes of this kind. In all of theſe, however, the methods tried to prevent the gradual decay of the organ were of no effect. But if one teſticle remained ſound, it performed every function without any apparent defect.

In the fourth part of this work, Mr Hunter treats of the chancre. There are, he tells us, three ways in which chancres are produced: *1ſt*, By the poiſon being inſerted into a wound: *2dly*, By its being applied to a non-ſecreting ſurface: And, *3dly*, By its being applied to a common ſore. The poiſon, applied to any of theſe ſurfaces, produces its ſpecific inflammation and ulceration,

ceration, attended with ſecretion of pus. The diſtance of time between the application of the poiſon and the occurrence of the diſeaſe is uncertain. But upon the whole, chancre is longer of appearing than the gonorrhœa. Mr Hunter has known inſtances where they appeared in twenty-four hours; and others, where they appeared at the end of ſeven weeks.

Of chancre the moſt troubleſome concomitants are phymoſis, and paraphymoſis. Theſe being a thickening of the cellular membrane of the part, will commonly, he thinks, be in proportion to the degree of inflammation, and the diſtenſibility of that membrane at the part.

In women, though ſubject to chancres, from the ſimplicity of the parts, theſe affections cannot take place. But the ulcerations are often more numerous in women, becauſe the ſurface upon which they can form is larger.

This form of the diſeaſe, both in men and women, Mr Hunter conſiders as entirely local, the conſtitution having no connection with it, but ſympathetically.

While gonnorhœa has evidently a tendency to a natural cure, Mr Hunter admits that this is never the caſe with chancre. For this he allows

allows it is difficult to account; but he ſuggeſts, that it may perhaps ariſe from the inflammation ſpreading, and thus always attacking new grounds, and giving a ſucceſſion of irritations.

Chancres admit of two modes of treatment; the object of the one is to deſtroy or remove them by means of eſcharotics; that of the other, to overcome the venereal irritation by means of the ſpecific remedy of that poiſon. The firſt is the moſt ſimple method, but can be followed only on the appearance of the chancre when the ſurrounding parts are not yet contaminated. It may be done either by inciſion, or by cauſtic. But if the chancre appear upon the glans, cauſtic is preferable, becauſe the hemorrhage from inciſion, is very often conſiderable. The common ſenſation of the glans is not very acute; therefore cauſtic gives but little pain. The cauſtic to be uſed ſhould be pointed at the end like a pencil, that it may only touch thoſe parts which are really diſeaſed. And this treatment, Mr Hunter tells us, ſhould be continued till the ſurface of the ſore looks red and healthy, after having thrown off the laſt ſloughs. When it has arrived at this ſtate, it will be found to heal like any other ſore produced from a cauſtic.

When

When a cure is to be attempted, not by the deſtruction of the cancer itſelf, but of the venereal diſpoſition and action; this may be done either by external applications, or by internal applications, thro' the circulation. Mercury, he obſerves, though it has no effect in gonorrhœa, will cure every chancre that is truly venereal. But as other diſpoſitions alſo take place, ſo other aſſiſtance is neceſſary. The mercury is commonly applied under the form of ointment; but when mercury is united with watery ſubſtances in place of oil, by mixing with the matter, the application becomes more effectual. Mr Hunter has alſo experienced the beſt effects, from uniting mercury with conſerve of roſes, honey, mucilage, or the like, in place of unctuous matters.

When chancres take on an indolent diſpoſition, recourſe muſt be had to ſome warm balſam, combined with the mercury; or to ſome ſtimulant mercurial, as the red precipitate. When, on the other hand, they are extremely irritable, opium, or ſome of the preparations of lead, may with advantage be added to the mercury. The dreſſings require to be often ſhifted; three times a day is neceſſary in moſt caſes.

caſes. When, after the venereal taint is corrected, they become ſtationary, they may often be cured by touching them ſlightly with lunar cauſtic.

After ſome obſervations on the treatment of the Phymoſis, and Paraphymoſis, ariſing from chancres, he proceeds to treat of their cure, by mercury given inte nally.

In every caſe of chancre, let it be ever ſo ſlight, mercury ſhould be given internally; and it ſhould even be continued for ſome time after the chancres are healed. For as there are few chancres without the abſorption of matter, it is the only means of preventing a conſtitutional affection. According to circumſtances, it may be thrown in, either by the ſkin or ſtomach; and the quantity muſt, in general, be proportioned to the ſize, number, and duration of the chancres. Chancres in women require nearly the ſame treatment as in men. But as it is difficult to keep dreſſings on the parts, they ſhould often be waſhed with mercurial ſolutions; and Mr Hunter thinks corroſive ſublimate one of the beſt. To prevent preternatural adheſions, it is often neceſſary to keep ſome ſubſtance, ſuch as a little lint, in the vagina, till the ſores be ſkinned over.

After

After chancres have been healed, and the venereal taint completely removed; it ſometimes happens that the prepuce ſtill retains a conſiderable degree of tumefaction. In removing this, benefit is ſometimes derived from the ſteam of warm water; from fomentations with hemlock; and alſo fumigations with cinnabar. But if theſe are ineffectual, it may be proper to remove part of the overgrown prepuce; and the beſt way of removing it is by the knife.

Warts are another common conſequence of chancres. The knife, or eſcharotics though not always neceſſary, act moſt quickly in removing them. A ſilk thread tied round the neck will often do very well. But in whatever way the wart is ſeparated, it will in general be neceſſary to touch the baſe with cauſtic.

In the fifth part of this work Mr Hunter treats of bubo. He applies this term to every abſceſs in the abſorbing ſyſtem, whether in the veſſels or glands, ariſing in conſequence of the abſorption of venereal matter. He conſiders buboes as being exactly ſimilar in their nature and effects to chancre, the only difference being in ſize. Inflammation of the veſſels is not

ſo

ſo frequent as that of the glands. They in general appear like a chord leading along the back of the penis. This chord often inflames ſo much as to ſuppurate ſometimes in more places than one; and thus a chain of theſe buboes, or little abſceſſes, takes place along the upper part of the penis through its whole length. Inflammation of the glands is much more frequent than that of the veſſels, and happens from the venereal matter being carried on to theſe. The glands neareſt the origin of the diſeaſe, as thoſe in the groin, are in general the only ones that are attacked. In females, the ſeat of abſorption from the parts of generation is more extenſive than in men; hence the ſituation of the buboes is more varied.

For diſtinguiſhing the true venereal bubo from other ſimilar ſwellings, he obſerves, that it is moſt commonly confined to one gland; it keeps nearly its ſpecific diſtance, till ſuppuration has taken place, and then becomes more diffuſed; it is rapid in its progreſs from inflammation to ſuppuration and ulceration; the ſuppuration is commonly large for the ſize of the gland, and but one abſceſs; the pain is very acute; and the colour of the ſkin, where the inflammation attacks, is of a florid red.

When

When a bubo is aſcertained to be venereal, reſolution is always to be attempted, if it be in a ſtate of inflammation only. This reſolution depends principally upon mercury, and almoſt abſolutely on the quantity that can be made to paſs through them. Hence it is to be applied to thoſe ſurfaces from whence lymphatics going into the bubo ariſe. Mercury, however, can only cure the ſpecific diſpoſition of the inflammation, and the diſeaſe is often attended with other kinds. Sometimes the common inflammation is carried to a great height; at other times the inflammation is eryſipelatous, or ſcrophulous. In the firſt caſe, bleeding, purging, and fomenting, are recommended; in the ſecond, the Peruvian bark is the beſt medicine; and, in the third, hemlock, and poultices made with ſea water, may be of ſervice. Vomits have ſometimes been uſeful in reſolving buboes, even after matter has been formed in them. Mr Hunter relates a very remarkable inſtance of this, which happened to an officer, with whom vomiting was excited by ſea-ſickneſs.

In ſome inſtances, notwithſtanding every attempt to reſolution, buboes will ſuppurate. This

This is to be forwarded by the ſame means as in other caſes. It has been a diſpute, whether mercury ſhould be continued or not during the ſuppuration. Mr Hunter is of opinion, that many advantages ariſe from continuing it, in a ſmall quantity. Before a bubo is opened, it ſhould be allowed to go on, thinning the parts as much as poſſible. It has been diſputed, whether an opening is to be made by inciſion or cauſtic. In this, Mr Hunter thinks the ſurgeon ſhould, in ſome degree, be guided by the patient. If it be wholly left to the ſurgeon, and if the bubo be ſmall, he recommends a ſlit with a lancet; but when there is a large quantity of looſe ſkin, he thinks the cauſtic will in general anſwer better. The bubo is to be dreſſed afterwards, according to the nature of the diſeaſe, and the conſtitution is to be attacked with mercury, either by applying it internally or externally. The giving it internally aſſiſts the external applications to cure the buboes, and prevents the effects of the conſtant abſorption of the venereal matter from the ſore.

It ſometimes happens, that the ſores from buboes, after being entirely deprived of their venereal diſpoſition, form into a ſore of another

ther kind. In theſe caſes, Mr Hunter is apt to ſuſpect that there is often ſomething ſcrophulous in them. He has often ſeen them give way to hemlock, eſpecially when joined to the Peruvian bark. The hemlock anſwers beſt when it is applied both internally and externally. He has alſo ſeen benefit from ſarſaparilla, from ſea-bathing, and from the ſea-water poultice. Mezereon is in ſome inſtances of ſingular uſe; and he has ſeen good effects from the juice of oranges being taken in large quantities, which has been particularly recommended by Dr Fordyce.

The ſubject of the ſixth part of Mr Hunter's treatiſe is the Lues Venerea. When the blood is contaminated with venereal virus, the effects upon the conſtitution, according to Mr Hunter, are all of one ſpecies, that is, ulcers; and theſe local effects upon the conſtitution are, in general, ſlow in their progreſs, attended with little inflammation, and ſeldom or never painful, excepting in particular parts. He contends, that neither the ſemen, ſaliva, breath, ſweet milk, or any other ſecretion, is affected with this poiſon; and he brings even very ſtrong inſtances to ſhew, that the venereal virus may be

be taken into the ſtomach, and digeſted without producing any inconvenience. He argues, that even the blood of a pocky perſon has no power of contaminating, and is incapable of giving the diſeaſe to another by inoculation.

He next endeavours to ſhew, that the matter ſeparated by thoſe ſores, which ariſe from contaminated blood, is very different from the matter of chancres and of buboes. He relates ſeveral experiments which he performed, and which he thinks prove that this matter is not contagious. But we muſt acknowledge, that to us theſe experiments neither ſeem to be concluſive, nor does the caſe of which he gives a detail overturn the generally-received opinion, that nurſes are frequently infected with ſyphilis from ulcers in the mouths of infants; which can only have been ſecondary, ariſing from blood contaminated, in conſequence of the diſeaſe firſt appearing at other parts. And we cannot help regreting, that the experiments he inſtituted were entirely with the matter from chancres and buboes, none of it with that from gonorrhœa. We muſt however obſerve, that on this ſubject his reaſoning is highly ingenious; and we conſider it as well

deſerving the future attention of practitioners. It is by future and accurate obſervation alone, that the conjecture he has thrown out, which is unqueſtionably of conſiderable importance in practice, can either be confirmed or refuted.

After making many obſervations on the local effects from the conſtitution on the ſymptomatic fever, on the local and conſtitutional forms of the diſeaſe never interfering with each other, on the ſuppoſed termination of lues in other diſeaſes, on the ſpecific diſtance of the venereal inflammation on the parts moſt ſuſceptible of Lues, and on the time and manner in which theſe parts are affected, Mr Hunter gives a general ſummary of his doctrine in the following concluſions: 1*ſt*, Moſt of the parts which are affected in lues venerea receive the venereal irritation at the ſame time: 2*dly*, The parts expoſed to cold are the firſt that take on the venereal action; then the deeper-ſeated parts, according to their ſuſceptibility for ſuch an action: 3*dly*, The venereal diſpoſition, when once formed in a part, muſt neceſſarily go on to form the venereal action: 4*thly*, All parts of the body under ſuch diſpoſition do not run into action equally faſt; ſome requiring ſix or eight weeks, others as many months:

5*thly*,

5*thly*, In the parts which come firſt into action, the diſeaſe goes on increaſing, without wearing itſelf out; while thoſe that are ſecond in time, follow the ſame courſe: 6*thly*, Mercury hinders a diſpoſition from forming, or, in other words, prevents contamination: 7*thly*, Mercury does not deſtroy a diſpoſition already formed: 8*thly*, Mercury hinders the action from taking place, although the diſpoſition be formed: And, *Laſtly*, Mercury cures the action. On theſe principles, he thinks that many facts reſpecting the cure are eaſily explained.

Mr Hunter next proceeds to give a detail of the ſymptoms of Lues Venerea. After enumerating thoſe of the firſt ſtage, particularly the affections of the ſkin, the throat, the mouth, and tongue; he relates an experiment made to aſcertain the progreſs and effects of the venereal poiſon; and which, in his opinion proves the following points, or at leaſt renders them probable: 1*ſt*, That matter from a gonorrhœa will produce chancres: 2*dly*, That the glans does not take on the venereal irritation ſo quickly as the prepuce: 3*dly*, That Mercury, applied to the legs and thighs, is the beſt method of reſolving a bubo: 4*thly*, That buboes

may be reſolved in this way, altho' the conſtitution be at the ſame time infected: *5thly*, That parts may be contaminated, and not having taken on the action, may have the poiſon kept dormant in them, while under a courſe of mercury for other ſymptoms, but break out afterwards: And, *Laſtly*, That the poiſon having originally contaminated only certain parts, when not completely cured, can break out again only in theſe parts.

We ſhall not here enter into any particular detail of theſe doubts which, in our opinion, may be raiſed with reſpect to this experiment. We ſhall only obſerve, that before the cautious reader adopts all the concluſions which are drawn from it, he would require a ſatisfactory account of many particulars of which no mention is made in the relation given in Mr Hunter's treatiſe. And indeed, as an objection to the experiment from its very commencement, it may be aſked, Why nearly the ſame ſeries of appearances, as are there deſcribed, does not take place in every inſtance of gonorrhœa, where either no mercury is taken, or where it is employed only in ſmall quantity? There is certainly no inſtance of any perſon labouring under gonorrhœa, to

whoſe glans and prepuce contagious matter is not copiouſly applied. And there are very few, if any inſtances, in which better opportunities for abſorption are not afforded, than can ariſe from a ſmall puncture with the point of a lancet. Hence then it is evident, that the matter of gonorrhœa is ſeldom, if ever, capable of producing in other caſes ſuch conſequences as are related in the experiment now under our conſideration.

Mr Hunter next proceeds to enumerate the ſymptoms of the ſecond ſtage of Lues Venerea. Theſe are chiefly affections of the perioſtium, tendons, faſciæ, and ligaments. The progreſs is here ſtill more gradual than in the firſt ſtage; and as the ſwellings increaſe by ſlow degrees, they ſhow but little ſigns of inflammation. When the bones become affected, the pain is ſometimes very conſiderable, at others hardly perceptible; and they are in general periodical, being moſt ſevere in the night.

The general effects of the venereal poiſon on the conſtitution, are ſimilar to other irritations; it produces fever of the ſlow kind, and what is called a hectic diſpoſition. Theſe complaints, however, are not always to be found;

the poiſon, in ſome caſes, ſtimulating ſo ſlowly, as hardly to affect the conſtitution, unleſs it be allowed to remain in it a long time.

To cure the local and viſible effects of lues venerea, we muſt, Mr Hunter obſerves, attack it through the medium by which it was communicated, that is the blood, without, however, conſidering the blood itſelf as the diſeaſed part, or containing the poiſon, but as the vehicle of our medicine, which will be carried by it to every part of the body where the poiſon was carried, and in its courſe will act upon the diſeaſed ſolids. Mercury is the great ſpecific, and hardly any thing elſe is to be depended on. Mercury, when introduced, acts on all parts of the animal machine. It cures thoſe that are diſeaſed, and affects but little thoſe that are ſound. It may be carried into the conſtitution, either externally or internally. Sometimes, however, in the one way, no effect will be produced, either on the diſeaſe or in the conſtitution. It is then neceſſary to try the other mode; and ſometimes advantage ariſes from varying the preparations, one being introduced when another cannot. In this way, the practitioner will very generally ſucceed, at leaſt

leaſt Mr Hunter tells us, he has never met with a caſe where an abſorption of mercury could not be accompliſhed, either by internal or external application.

In giving mercury in the venereal diſeaſe, the firſt attention ſhould be to its quantity, and to the viſible effects in a given time. Theſe, when brought to a proper pitch, are only to be kept up, and the decline of the diſeaſe to be watched; for by this we judge of the inviſible or ſpecific effects of the medicine.

The quantity of mercury to be thrown in muſt be proportioned to the violence of the diſeaſe. Here, however, regard muſt be paid to the time in which a given quantity is to be thrown in, and to the effects it has on ſome parts of the body; as the ſalivary glands, ſkin, or inteſtines. If it be given in very ſmall quanties, and increaſed gradually, ſo as to ſteal inſenſibly on the conſtitution, its viſible effects are leſs; and it is hardly conceivable how much may at laſt be thrown in, without having any viſible effect at all. Its ſenſible effects are generally an increaſe of ſome of the ſecretions, a ſwelling in the ſalivary glands, and an increaſe of ſaliva. It ſometimes alſo gives riſe to pur-

ging, ſweating, and diureſis; ſometimes one ſecretion only is affected, ſometimes more, ſometimes altogether. But the effects on the mouth are the moſt frequent.

As mercury generally produces evacuations, it was once imagined that it was by this means it effected the cure of the venereal diſeaſe. But experience, Mr Hunter obſerves, has taught us, that theſe are of no ſervice; and that, on the contrary, evacuations produced by this medicine retard the cure. They are, however, in ſome degree, a gage of its conſtitutional effects; and we have, he obſerves, no good proof of its affecting the conſtitution, but by its producing an increaſe of ſome of the ſecretions. He is of opinion, that the action of mercury, in overcoming the diſeaſe, depends on its deſtroying the diſeaſed action of the living parts, counteracting the venereal irritation by producing another of a different kind.

An almoſt infinite diverſity of modes have been propoſed for introducing mercury into the ſyſtem. Mr Hunter gives the preference to external application, under the form of ointment. It is often, however, much more convenient to give it internally. But, in this way,

way, it often produces diſagreeable effects on the ſtomach and inteſtines, as ſickneſs, griping, and purging. For counteracting its effects on the ſtomach, he recommends eſſential oils, as that of cloves; and for preventing its action on the inteſtines, he adviſes that opium ſhould be added.

He obſerves, that the corroſive ſublimate often removes viſible local effects very ſuddenly, but without deſtroying the venereal action. Hence, he thinks, that it is not be depended upon for a radical cure. And indeed he recommends, that in every caſe, after the local ſymptoms are removed, the mercurial courſe ſhould be continued for a fortnight or three weeks, particularly if the ſymptoms have diſappeared ſuddenly. In the advanced ſtages of the diſeaſe, the greateſt quantity of the medicine that the patient can bear is to be thrown in, and continued with ſteadineſs, till there be reaſon to conclude that the diſeaſe is deſtroyed.

Mr Hunter is of opinion, that during a mercurial courſe little alteration is in general neceſſary in diet. And he does not ſee why mercury ſhould not cure the diſeaſe, under any mode whatever of regimen or diet. But as a ſevere

mercurial

mercurial courſe is very weakening, and as from the ſtate of the mouth the patient is often prevented from taking many kinds of food, recourſe muſt be had to fluids of the moſt nutritious kind, as milk, eggs, and the like. He thinks ſugar one of the beſt reſtoratives of any kind. And he adviſes, that ſugar, or honey, which he thinks is perhaps of a ſtill more nutritive quality, ſhould be employed for ſweetning every thing that is either to be eat or drunk in theſe caſes.

In general, mercury introduced into the ſyſtem removes the local complaints that take place in lues venerea. In theſe caſes, the cure may ſometimes be aſſiſted by the local application of mercury to the part, particularly in the form of ointment. And Mr Hunter tells us, that he has ſeen a venereal node, which gave excruciating pain, cured by an inciſion being made to the bone the whole length of the node; after which the pain has ceaſed, the ſwelling diminiſhed, and the ſore healed up mildly. Bliſters, he obſerves, have alſo been applied with ſucceſs to nodes, removing the pain and diminiſhing the ſwellings.

When an abſceſs forms in a node on the perioſteum,

rioſteum, the bones are generally affected, and make part of the abſceſs. In ſuch caſes, opening with great freedom is abſolutely neceſſary; for the violence, in Mr Hunter's opinion, aſſiſts in deſtroying the venereal diſpoſition. He, however, tells us, that no ſkin covering a bone ſhould be removed from an abſceſs, eſpecially in the lower extremities. Exfoliation, if here taking place, is to be healed as in other caſes.

In particular caſes, effects take place from mercury which require to be corrected. When mercury falls upon the mouth, Mr Hunter never ſaw any benefit from purging; but he thinks he has ſeen good effects from ſulphur, and from employing as a gargle the tinctura thebaica diffuſed in water; a dram of the former being added to an ounce of the latter. When it falls upon the ſkin, he conſiders the bark as the beſt corrector. This may alſo be of uſe when it falls upon the kidney; but in that caſe it may in general be allowed to go on. When it falls upon the inteſtines, mercury will ſeldom fail of removing all the ſymptoms. Mr Hunter is of opinion, that under whatever form mercurial medicines be exhibited, all of them act ultimately from mercury being in a ſtate of ſolution

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in the fluids; and he thinks it much more probable, that in this way, it acts by producing an irritation in the conſtitution, than on any other principle. In illuſtration of this opinion, he relates the caſe of a gentleman to whom electricity had been recommended for ſome complaint, and tried without any effect. But this gentleman was afterwards put upon a mercurial courſe, from which the irritability of his ſyſtem was ſo far increaſed that he was unable to bear ſhocks of half the former ſtrength. It had then, however, the effect of removing the complaint againſt which it was at firſt employed; a circumſtance which ſuggeſts the propriety of combining theſe modes of cure on ſome occaſions.

Although Mr Hunter conſiders mercury as the only medicine to be depended on, in the cure of lues venerea, yet as gum guaiacum, and ſarſaparilla root, have both been recommended, he took opportunities of trying their comparative powers. He is of opinion that guaiac has conſiderable ſpecific power in this diſeaſe, but the ſarſaparilla appeared to him to have no effect.

In treating of the effects remaining after the lues

lues venerea is cured, and of the diſeaſes ſometimes produced by the cure, Mr Hunter, after mentioning the advantages which have ſometimes been obtained in theſe caſes, from the decoction of the woods, the Liſbon diet drink, mezereon and hemlock, makes ſome remarks on the uſe of opium. This, he obſerves, has of late been ſuppoſed to cure lues venerea. He relates ſome caſes treated by this medicine, which have convinced him that it is inadequate to the cure of ſyphilis, and which ſerve to ſhew, that in ſome caſes it is capable of producing very violent effects in the conſtitution. It has, however, he tells us, been long a favourite medicine with him; not only as relieving pain, but as altering diſeaſed actions, and producing healthy ones; and in this manner he explains the benefit derived from it, in ſome of thoſe affections remaining after lues venerea has been overcome, and in all ſores attended with irritability. In theſe, he obſerves, that a decoction of poppy-heads made into a poultice is an excellent application.

This part is concluded with ſome obſervations on the prevention of the venereal diſeaſe. Preventives may, he thinks, be divided into various

kinds;

kinds; as thoſe which will not allow the venereal matter to come in contact with the parts; thoſe which waſh it off before it ſtimulates; and thoſe which act chemically, deſtroying the poiſon. This leads him to mention oils, cauſtic, alkali, lime-water, Goulard's extract of lead, and corroſive ſublimate diſſolved in water, as having ſometimes been employed with the deſired effect.

In the ſeventh and laſt part of this work, our author makes ſome remarks on the diſeaſes reſembling lues venerea which have been miſtaken for it. Here he endeavours to ſhow, that moſt of the ſymptoms of the venereal diſeaſe, in all its forms, are common to other diſeaſes. Hence, to determine what the diſeaſe is, we muſt attend to the original cauſe of the complaint, to a number of leading circumſtances as dates, to its effects upon others from connection when only local, joined with the preſent appearances and ſymptoms. But even with all this knowledge, he obſerves that we are often miſtaken. To prove this, he relates ſeveral doubtful caſes which he thinks may put it in the power of others to judge for themſelves, in future inſtances of a ſimilar nature. And he concludes with

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ſome obſervations on diſeaſes ſuppoſed to be venereal, produced by tranſplanting teeth.

After offering ſome remarks on different caſes of this kind which have fallen under his obſervation, particularly on that related by Dr Watſon in the Medical Tranſactions of London, he thus ſums up the argument in favour of the diſeaſe not being venereal. 1. Two patients, whoſe caſes were ſimilar to the others in their origin, recovered without medicine. 2. They who ſeemed to be cured by mercury, had not a treatment exactly ſimilar to thoſe who were indiſputably poxed. 3. It is impoſſible for parts to have the power of contaminating, which have not themſelves aſſumed the diſeaſed action. 4. The parts here ſuppoſed to contaminate, were never known to have been contaminated themſelves.

But although Mr Hunter thus contends againſt the diſeaſe being venereal, yet he admits, that in conſequence of this operation a diſeaſe moſt certainly has taken place, cured even with more difficulty than the lues venerea is in common. And he ſuppoſes it to ariſe from the peculiar irritation, occaſioned even by a ſound tooth. Drawing the tooth early has, he tells

us,

us, been ſucceſsful in one caſe; and he conſiders it as the only mode of preſervation yet known.

To this work are annexed ſeveral very elegant and accurate engravings, illuſtrating different diſeaſed ſtates deſcribed in the courſe of the work. For theſe, however, we muſt refer the reader entirely to the work itſelf. And we may conclude with obſerving, that though our analyſis has extended to an uncommon length, and has, we hope, given a tolerably diſtinct view of thoſe practices which may be conſidered as new ones; yet it is only from a careful peruſal of the original, that the medical reader can expect to obtain a proper knowledge of thoſe peculiar and ingenious opinions which Mr Hunter endeavours to eſtabliſh.

IV.

IV.

Medical reports of the effects of Arsenic in the cure of agues, remitting fevers, and periodic headachs. By Thomas Fowler, *M. D. Physician to the General Infirmary at Stafford.* 8vo. London.

THOUGH arsenic has long been reputed one of the most violent poisons hitherto known, yet it has long been, in some degree, in use in the practice of medicine; and, for more than a century past, it has particularly been recommended by some, as a most efficacious remedy in the cure of intermittent fevers. But it does not seem to have been from the authority of Wepfer, Friccius, Newman, or other writers of that period, that Dr Fowler was first led to the use of it.

Not many years ago, a remedy began to acquire considerable reputation in the different parts of the country, particularly in those parts where intermittents were most frequent, under

the name of the Taſtleſs, or Patent Ague Drops. Theſe were occaſionally adopted in the hoſpital practice at Stafford, in the years 1781, 82, and 83. And in the beginning of October 1783, Mr Hughes, to whom Dr Fowler pays a high compliment, for induſtry, attention, and abilities, in the line of his profeſſion, informed our author, that he had tried to imitate theſe ague drops, and that from a number of experiments he was convinced they were a preparation of arſenic.

This information directed the attention of Dr Fowler to the uſe of arſenic in intermittents. Following a hint given by Dr Lewis, he thought of preparing a watery ſolution of it, by means of the fixed vegetable alkali. And after trials of ſuch a ſolution, with different degrees of ſtrength, he adopted the following formula:

R. Arſenici albi in pulverem ſubtiliſſimum triti.

Salis Alkalini fixi vegitabilis purificati ſingulorum grana ſexaginta quatuor.

Aquæ fontanæ diſtillatæ libram dimidiam.

Immitantur in ampullam florentinam qua in balneo arenæ poſita, aqua lente ebulliat donec arſenicum perfecte ſolutum fuerit, deinde ſolutioni frigidæ adde. Spiritus

Spiritus Lavendulæ compoſiti unciam dimidiam. Aquæ fontanæ diſtillatæ libram dimidiam, plus vel minus, adeo ut ſolutionis menſura libra una accurata ſit, vel potius pondere unciæ quindecim cum dimidia.

This formula our author employed in a very great variety of different caſes, ſeveral of which are detailed at full length; but in others, to avoid prolixity, he has thought it ſufficient to mention merely the general reſult. And as the name of arſenic is ſtrongly connected with the idea of a poiſon, he preſcribed it under the general title of the Mineral Solution. When any particular doſe of this was directed thrice a-day, as was done to many of his patients, it was given at ſix o'clock in the morning, two in the afternoon, and ten in the evening: and when it was directed twice a-day, the hours of exhibition were ten in the morning, and ten in the evening. To adults, unleſs when ſome particular directions were given, it was exhibited in a tea-cup-full of water, to children it was given in the ſame vehicle, but in leſs quantity.

Having premiſed theſe circumſtances, with reſpect to the method in which Dr Fowler employed arſenic, we ſhall next give ſome account

of the caſes in which he uſed it, and of the ſucceſs which attended his practice.

The firſt caſe we ſhall here deliver at full length, in the words of the author.

Catharine Homes of Tainworth, aged 17, admitted an in-patient January 31. 1784, has had a quotidian ague for four days paſt. Appetite impaired. Ordered to take eight drops of the mineral ſolution three times a-day, for three days.

January 26th. The ſolution cauſed no diſturbance in the ſyſtem, and ſhe has miſſed her fit this morning. Appetite very bad. Ordered ſixteen drops of the ſolution this evening, and then to reſume the former doſes three times a-day, for two days.

January 28th. Sixteen drops did not prove emetic, but cauſed a looſe ſtool, with ſome griping. The ſubſequent doſes of eight drops each gave no diſturbance, and ſhe continues free from her ague. Appetite ſtill very indifferent. Ordered half an ounce of a ſpiritous tincture of rhubarb at bed-time.

January 31ſt. The tincture operated gently with relief to her ſtomach. No return of fits.

February 7th. No relapſe.

From

From this caſe Dr Fowler remarks, that although the doſes were ſmall, yet the cure was ſpeedy and ſucceſsful. The doſe of ſixteen drops was given with the view of exciting vomiting, in order to reſtore her appetite by cleanſing the ſtomach, but it operated rather downwards.

In the next caſe which is related, the patient was ordered ten drops twice a-day; but in place of this, he took by miſtake fifty drops within the ſpace of nine hours. It operated for the ſpace of ten hours afterwards as a violent emetic, attended with griping and purging. But ſoon after this, all its effects ceaſed, and ſhe had afterwards no return of her intermittent.

In the third caſe, that of a young man, twenty drops were taken three times a-day. It proved emetic, and cathartic, but with no great degree of ſeverity. The cure was ſpeedy and permanent. The fourth patient, a child, took eight drops twice a-day. The operation was not violent, and the event ſucceſsful.

The fifth patient had been ſubjected to an intermittent for five months. During moſt of that period, it had obſerved the quartan type, and

it had originated in a fenny country; yet it was entirely removed in eight days by the uſe of the ſolution to the extent of ten drops three times a-day. In the ſixth caſe, twenty-ſix drops of the ſolution taken twice a-day in general excited vomiting. It was cured in five days, although of ten weeks continuance, before the uſe of the ſolution.

In theſe caſes our readers have ſtriking examples of the efficacy of this medicine, ſo that we reckon it unneceſſary to take notice of the others mentioned in this ſection which in all amount to fifty-two. It is ſufficient to remark, that moſt of them afford unequivocal evidence of its ſucceſs, and that it was equally effectual with both ſexes at all ages.

In the ſecond ſection of this work, Dr Fowler preſents us with twelve caſes, in which the mineral ſolution failed when given by itſelf. The patients were afterwards cured by the Peruvian bark. But there ſeems to be good reaſon for believing, that with many of them at leaſt, the ſolution had conſiderable influence in aiding their recovery. In ſome of theſe the ſolution was irregularly taken; in others, from peculiar idioſyncracy, its uſe could not be perſiſted

ſiſted in. But in all of them it had evidently a very conſiderable effect upon the diſeaſe. And in ſome, after the Peruvian bark, as well as the ſolution, had failed, when taken by itſelf, the diſeaſe was ſpeedily and radically cured by the combined uſe of both medicines at the ſame time.

The ſucceſs which attended Dr Fowler's practice with the mineral ſolution, in caſes of intermittent fever, led him alſo to employ it in ſome caſes of remitting fevers, and of periodical headachs. And accordingly, in the fourth ſection of his treatiſe, we are preſented with nine caſes of patients to whom it was exhibited, when labouring under the former diſeaſe. In ſome of theſe, the remiſſion obſerved a quotidian, in others a tertian type. In moſt of them the ſolution, taken to the extent of ten or twelve drops twice or thrice a-day, was ſoon productive of a cure. But in one, its operative effects were ſo troubleſome, that it appeared moſt prudent to complete the cure by other medicines. In another, where it was exhibited only for three days, it produced no relief. Beſides the caſes here particularly alluded to, Dr Fowler has employed this remedy alſo in ſome

others. And he concludes the preſent ſection with remarking, that of ſixteen caſes of remitting fever, in which he has employed it, ten were cured by means of it. Four had the diſeaſe ſuſpended, and two only employed it without relief.

In the fifth ſection, Dr Fowler preſents his readers with ſeven caſes of periodical headachs in which he employed it. Six of theſe were radically cured by means of it, when taken from twelve to twenty drops twice or thrice a day. And in the ſeventh caſe, the medicine had obviouſly a good effect, altho' taken only for three days; ſo that Dr Fowler thinks it probable this caſe alſo would have been ſucceſsfully terminated, had ſhe continued the uſe of it.

After giving, in the ſixth ſection, the formula for the preparation of the mineral ſolution, which we have already tranſcribed; and likewiſe formulæ for a Pulvis Emeticus Antimonialis, Miſtura Cathartica, Electarium Aperiens, Pilulæ Chalybeatæ, and Miſtura Peruviana, which in particular caſes were uſed in conjunction with it, Dr Fowler proceeds, in the ſeventh ſection, to make ſome obſervations on the doſes and mode of adminiſtring the mineral ſolution in agues. He

He has uſed it, he tells us, with adults, from ten drops twice a-day, to twenty drops thrice a-day, and has cured agues by both extremes, as well as by all the intermediate doſes. The latter, however, he found to be more efficacious than the former. But this ſuperior ſucceſs was counterbalanced, by their operative effects being troubleſome and diſtreſſing. Hence he gives the preference to intermediate doſes; which will, at the ſame time, in general, be found to be ſufficiently ſucceſsful; and he propoſes the following doſes, which he thinks maybe moſt advantageouſly employed. Patients from two to four years of age, may take from 2 to 4 drops; from five to ſeven years, may take from 5 to 7 drops; from eight to twelve years may take from 7 to 10 drops; from thirteen to eighteen, may take from 10 to 12 drops; and from eighteen and upwards, may take 12 drops as a doſe. He directs, that theſe doſes be given at ſtated hours, whether they coincide with the paroxiſm or not. And he adviſes, that doſes proportioned to the age of the patient ſhould be adminiſtred three times a-day for five days. At the end of that time, the fits being ſuſpended, let the uſe of the medicine

be

be omitted for two or three days, and then repeated for three days, to prevent a relapſe.

This he conſiders as the moſt general direction relative to the uſe of the ſolution in the cure of intermittents. But he obſerves, that it admits of a conſiderable number of exceptions and qualifications in the courſe of practice. If, after a ſucceſsful adminiſtration of the ſolution, a relapſe of the diſeaſe be occaſioned, by catching cold, caſual intemperance, extraordinary fatigue, or any other accidental cauſe; the ſame courſe of medicine ought to be ſpeedily repeated, without variation. But if no ſuſpenſion of the diſeaſe takes place, from the uninterrupted uſe of the medicine for eight days; if a relapſe has occurred, without any obvious cauſe, within a ſhort time after a regular courſe of the medicine; or if the operative effects of the ſolution prove very troubleſome, he adviſes, that the cure ſhould be attempted by a regular courſe of the Peruvian bark. If the ſolution and Peruvian bark have been ſeparately adminiſtred, and have failed, it will ſometimes, he thinks, be adviſeable to try the joint power of the medicines at the ſame time, but in doſes rather ſmaller than uſual.

In

In theſe caſes, the ſolution is to be taken at ſtated hours three times a-day, and the Peruvian bark may either be given combined with it at the ſame periods, or between the fits, in as frequent doſes as the ſtomach can bear.

When the operative effects from the ſolution are very troubleſome, it is neceſſary that the doſe ſhould be leſſened. But if they be ſupportable, they may be much diminiſhed, by the addition of a few drops of liquid laudanum; and thus the courſe of the ſolution may be ſucceſsfully continued without diminiſhing the doſes.

If at any time, during the courſe of the treatment, the ſtomach appears to be loaded from indigeſtion, or the body happen to be very coſtive; a gentle emetic, or laxative, may, he tells us, be adminiſtred with advantage. The diet ſhould be plain and mild, care being taken to avoid much mixture of food, or loading the ſtomach.

Though Dr Fowler has employed the ſolution with ſucceſs, both in caſes of pregnancy and early infancy; yet, when its operative effects are troubleſome, he thinks that with theſe patients it ought not to be perſiſted in.

In

In the treatment of remitting fevers and periodic headachs, the ſame rules and cautions are to be obſerved as in intermittents.

In the eight ſection, Dr Fowler offers ſome obſervations on the operative effects of the mineral ſolution. After accurately deſcribing what he has obſerved to occur on different occaſions, particularly nauſea, gripes, vomiting, purging, ſwellings on different parts of the body, eſpecially the face, diureſis, a diminution of the urinary diſcharge, uneaſineſs at the pit of the ſtomach, ſlight eruptions reſembling nettle-raſh, ſweating, headach, and ſlight tremors, which, however, he tells us, are very rare occurrences; he proceeds to take notice of the means of obviating theſe, when neceſſary.

A nauſea, he obſerves, of half an hour, a ſtool extraordinary in a day, or very ſlight griping pains in the bowels, are ſuch gentle effects, as ſeldom to require the adminiſtration of the medicine to be interrupted. The vomiting alſo, although ſevere in general, goes off when the medicine is interrupted. When the purging becomes troubleſome, opiates in ſmall doſes, two or three times a-day, will generally give effectual relief to the bowels.

When

When the griping is very ſevere, to the uſe of opiates, gentle laxatives muſt be premiſed.

The ſwellings which ſometimes attend the uſe of the ſolution, are rather, he obſerves, of the elaſtic kind. They moſt frequently appear on the face, particularly affecting the eye lids, and are worſt in the morning. When they do occur, which is but ſeldom, it is generally within a few days after commencing the uſe of the medicine. They do not ſeem to have any dangerous tendency; and, in general, ſubſide on the uſe of the medicine being given up. When they occaſion a troubleſome ſenſation, their removal, Dr Fowler obſerves, ſeems to be accelerated by gentle emetics and cathartics. Though the anorexia be even conſiderable, the appetite is in general ſoon recovered, on omitting the uſe of the ſolution. But when this does not happen, relief is ſpeedily obtained by gentle evacuants, eſpecially emetics. The other effects have been very rare; and, in theſe, Dr Fowler has ſeldom found it neceſſary to do more than ſuſpend the uſe of the ſolution. And even this was not done in all caſes.

After ſome obſervations on the curative effects of the ſolution, in the ninth ſection; in which

which we are preſented with a tabular view of the intermittents he has treated by means of it, and from which it appears, that of two hundred and forty-ſeven caſes of intermittents, in which he has given it, one hundred and ſeventy-one were cured, fifty-one ſuſpended, twenty relieved, and five only employed it without relief, Dr Fowler proceeds, in the tenth ſection, to draw ſome practical concluſions from his experience. And from what he has ſeen, he thinks that the following general obſervations may juſtly be deduced:

1. That the mineral ſolution is an efficacious and valuable remedy in the cure of agues.

2. That in proportion to the number of caſes in which it has been tried, it appears to be equally ſucceſsful in remitting fevers and periodic headachs.

3. That being taſtleſs, it may often be conveniently exhibited to children, and certain adults; who cannot be prevailed upon to take the Peruvian bark, from its bitterneſs, or other medicinal qualities.

4. That from its general efficacy, it is highly probable it will prove ſucceſsful in moſt caſes, wherein

wherein the Peruvian bark ſhall fail in producing its uſual effects.

5. That although its curative virtues will be obvious, in almoſt every caſe of ague, the paroxiſms, in a number of inſtances, will not be relieved or ſuſpended for a certain time.

6. That a very frequent cauſe of the failure of the medicine, is owing to its operative effects proving troubleſome, and thereby not permitting a regular courſe of its adminiſtration.

7. That the operation of the medicine on the bowels, which is often a cauſe of failure, may frequently be obviated, and its adminiſtration ſucceſsfully continued, by the aſſiſtance of ſmall doſes of liquid laudanum.

In concluding this ſubject, Dr Fowler remarks, that from the variety of diſeaſes, in which he has tried the mineral ſolution, there is good reaſon to believe that its efficacy will not be confined to periodical diſtempers. As, however, he has not had ſufficient experience for eſtabliſhing any general facts, he is entirely ſilent with regard to its effects in theſe caſes. We however hope and truſt, that he will continue

tinue his valuable reſearches for enriching medicine, by uſeful facts founded on cautious trial and accurate obſervation; and that, at ſome future period, the public ſhall be favoured with the fruits of his farther obſervations, continued with his uſual induſtry and diſcernment.

To this treatiſe are ſubjoined two letters addreſſed to Dr Fowler; the one from Dr Arnold, phyſician to the infirmary and diſpenſary at Leiceſter; the other from Dr Withering, phyſician to the hoſpital at Birmingham; from both which, additional confirmation is afforded of the efficacy of arſenic in the cure of intermittents. They employed it, indeed, in a form ſomewhat different, that, viz. of a ſimple watery ſolution, without any alkaline ſalt, and in a larger proportion of water. The medicine is probably, from this circumſtance, leſs ſteady, and leſs readily diffuſible in a farther quantity of menſtruum, than when in a ſaline ſtate. Still, however, they ſerve to confirm the power of this active mineral in caſes of intermittents. Dr Arnold tells us, that he began by trying it in a very bad and obſtinate caſe, which had reſiſted the power of the Carribbean and red bark; and that this at length completely yield-

ed

ed to the arſenical ſolution. He then began to give full ſcope to this medicine, and preſcribed it in almoſt every caſe which offered. And at the time when his letter was dated, he had tried it in about eighty caſes of intermittents, quotidians, tertians, and quartans; and he had ſeldom known it fail of ſucceſs. In a few inſtances he had ſeen reaſon for laying it aſide, and truſting the cure to the red bark, which had ſucceeded. But he found the ſolution ſucceed in as many inſtances where the red bark failed. And in no caſe was he ſenſible that it ever produced any permanent ill effect, or any other tranſient inconvenience, than nauſea, vomiting, griping, and purging. Theſe, by care in the exhibition of the medicine, were always prevented from becoming troubleſome, or in the ſmalleſt degree alarming.

He is of opinion, that the Peruvian bark and arſenical ſolution cure intermittents with equal certainty and ſafety; nor has he been able to determine which cures with greateſt celerity. And even allowing that the arſenical preparation was not ſo expeditious as the Peruvian bark, yet, in conſequence of its being inſipid,

it will often be found an uſeful ſubſtitute, when a load of bark could not be borne.

From Dr Withering's letter, it appears that he began the uſe of the arſenical ſolution nearly about the ſame time with Dr Fowler; and principally alſo, in conſequence of the analyſis of the taſteleſs ague and fever drops, made by Mr Hughes of Stafford. In autumn 1783, Dr Withering employed the arſenical ſolution with forty-eight patients, labouring under intermittents. Of theſe, thirty-three were cured by the uſe of the ſolution alone; three complained of pain in the ſtomach, loſs of appetite, and had ſwoln faces; but their fevers were cured, and a little ſoluble Tartar removed theſe ſymptoms. The other twelve patients received no benefit. In autumn 1784, it was, he tells us, almoſt conſtantly preſcribed, and with him has ever ſince maintained its credit, under a very great number of trials.

With other practitioners at Birmingham, it has been employed no leſs ſucceſsfully. For Dr Withering tells us, he was informed by Mr J. Freer, junior, an eminent ſurgeon there, and who was one of the firſt to turn his attention to this medicine, that he had given it to more

more than a thouſand patients, without either hazard or inconvenience.

Thus then it appears, that we have the concurring teſtimonies of ſeveral eminent, impartial, and diſintereſted practitioners, in favour of this mineral, as a ſafe, active, and efficacious medicine. On ſuch authority, notwithſtanding the terror which has been entertained for the name of arſenic, it may ſurely be conſidered as entitled to a fair and candid trial from others.

V.

Diſſertations relative to the Natural Hiſtory of Animals and Vegetables. Tranſlated from the Italian of the Abbé Spallanzani, *Royal Profeſſor of Natural Hiſtory in the Univerſity of Pavia, Superintendant of the Public Muſeum, and Fellow of various learned Societies.* vol. II. 8vo. London.

IN the 10th volume of our firſt decade, the reader was preſented with a pretty full analyſis of the ingenious experiments made by Mr Spallanzani on the ſubject of Digeſtion,

which have thrown ſo much light on that important function. In the volume now before us, he proſecutes, with ſimilar ſucceſs, his inquiries on a ſubject ſtill more intricate, that, viz. of Generation.

In his firſt diſſertation concerning the generation of animals, he begins, by treating of the generation of the green frog, or that commonly met with in waters, particularly in puddles and ditches.

This animal, in general, begins its amours in April, and ends them in May. And during their continuance, the males maintain a conſtant croaking. In autumn and winter, the immature eggs all lie in the ovarium, which is divided into two lobes. Theſe lobes conſiſt of leſſer ones, each of which is inveſted with a peculiar membrane. The eggs are of two ſizes; ſome very ſmall, ſo as ſcarce to be viſible by the naked eye, others ſeven or eight times larger. Both kinds are globular. The ſmall ones are of a livid grey colour; of the large, one hemiſphere is white, and the other black. The ſlighteſt touch is ſufficient to burſt them, after which they are diſſolved into a cineritious viſcid fluid.

If

If theſe eggs be examined in ſpring, they are ſtill found in the ovarium, but conſiderably enlarged; and they are found to be mature, when the male is coupled with the female. In the copulation of this ſpecies, the male, climbs upon the back of the female, and paſſing his fore-legs under her axillæ, brings them to meet upon the breaſt; and there claſping his fingers, holds her cloſe till ſhe has diſcharged her eggs. When the heat of the atmoſphere is conſiderable, the female will be free in five or ſix days. But in a cold ſeaſon, he has obſerved that the embraces of the male continue for eight or nine days. From more than an hundred and fifty trials, Mr Spallanzani has found, that eggs taken from the ovarium, the oviductus, and even the uterus, when the male is embracing the female, are not prolific. The diſcharge of eggs laſts for an hour; and, during this proceſs, he has killed a female, and put the eggs which remained in her body into the ſame water into which theſe diſcharged by the animal fell. But while the latter produced tadpoles, the former became an offenſive putrid maſs. From theſe facts, he concludes

that the fecundation of eggs does not take place within, but without the body of the female.

Of this he had even farther opportunity of being ſatisfied. He had not only obſerved, that during the diſcharge of eggs the agitation and croaking, both of the male and female, were very remarkable; but alſo, that an obtuſe, tumid point, which he ſuſpected to be the penis, was elongated, and now and then brought towards the eggs neareſt the vent. But while the animal remained in water, its natural ſituation for copulation, he could not perceive any emiſſion from this ſuppoſed penis. He therefore placed ſome couples, of which the female was beginning to diſcharge her eggs, in empty veſſels. He then ſaw, that there ſpirted a ſmall jet of limpid liquor, from the tumid point in the vincinity of the anus, upon the eggs hanging out at the vent of the female. This phænomenon took place only at intervals; the female from time to time diſcontinuing the diſcharge of eggs, and the male the emiſſion of ſemen. As theſe eggs, when afterwards put into water, brought forth young, he had no heſitation in concluding that the liquor emitted by the male was real ſemen.

In

In imitation of the Abbé Nollet, our author put breeches of waxed taffety on the male frog. This encumbrance did not prevent him from ſeeking the female with equal eagerneſs. But the eggs of the female were never in theſe caſes prolific. He diſcovered the ſemen, however, in the breeches, in the form of drops, and by means of this obtained artificial fœcundation.

After theſe obſervations on the impregnation of frogs, Mr Spallanzani next preſents us with a very minute and accurate deſcription of what have been called their eggs. From this it appears that the tadpole does not come out of the egg, but that the egg is tranſmuted into a tadpole; or rather, that the egg is nothing but the tadpole wrapt up and concentrated; which, in conſequence of fecundation, is evolved, and aſſumes the lineaments of an animal. From this he deduces the following conſequences: 1. As theſe ſuppoſed eggs exiſted in the ovarium before their deſcent through the oviducts into the uterus, and long before fecundation, the fœtus exiſted in the mother's body long before fecundation: 2. Although the evolution of theſe fœtuſes is never

ſo conſiderable and quick as after fecundation, it is however remarkable before that time; for when in the uterus, they are about ſixty times larger than when they adhere to the ovarium: 3. Beſides the fœtus, the amnios and the umbilical cord exiſt alſo before fecundation.

In the ſecond chapter, Mr Spallanzani treats of the generation of the tree frog. The copulation here has been ſaid to continue for three whole days. But our author has ſeldom obſerved it for more than a few hours. The eggs, as they have been called, are alſo in this ſpecies chiefly impregnated only after they are diſcharged. In ſome inſtances, however, the eggs of the uterus, neareſt the anus, are impregnated before they are diſcharged. This ſhews, that the ſemen ſometimes penetrates a little way into the body of the female, whether it be projected by the male, or whether the eggs, already fecundated after their diſcharge, are ſometimes retracted, when the female is unexpectedly ſeized by the obſerver.

In the caſe of the tree frog, as well as of the green frog, Mr Spallanzani is perſuaded, from accurate obſervation, that tadpoles exiſt in the female

male before fœcundation. And this leads him to correct ſeveral miſtakes of Mr Roeſell, who was of a different opinion.

He next treats of the generation of the Toad, denominated by Mr Roeſel, *Buſo terreſtris dorſo tuberculis exaſperato.* The amours of this animal are very early in the ſpring; often in March, ſometimes even in February, before the ſnow is melted. Tho' the male is not above a fifth of the ſize of the female, yet he holds her ſo faſt that ſhe cannot diſengage herſelf from his embraces. Copulation laſts till the eggs are diſcharged; which does not happen till ten, twelve, fourteen, or even ſometimes twenty days, if the ſeaſon be cold. And during the whole time the male makes a grunting noiſe, never to be obſerved at any other ſeaſon.

In Toads, the diſcharge of the eggs is a very tedious proceſs. Two cords, conſiſting of a viſcid tranſparent matter, and containing a number of black globules, which are the eggs, come out from the vent, and are diſcharged ſo ſlowly that the eye cannot diſtinguiſh any movement in them: But in a few hours they meaſure ſeveral feet. The diſcharge generally laſts about

about twelve hours, ſometimes it will be completed in nine, ſometimes it will extend to thirty hours. Mr Spallanzani found, that two entire cords meaſured forty-three Paris feet, and the number of eggs in them amounted to one thouſand two hundred and ſeven. During the diſcharge of theſe cords, the male reaches them with the extremity of his body, and bedews them with ſemen. This is done by ſimple contact, ſo that the cord appears moiſtened as if with a pencil dipt in ſome fluid. Thus it appears, that in theſe animals likewiſe fecundation takes place without the body of the female. And here alſo he has found, that the bodies called eggs are tadpoles not unfolded.

In the ſucceeding chapter, the author treats of the generation of the foetid terreſtrial toad. This ſpecies of Toad lives on dry ground all the year, excepting the ſeaſon of copulation. With them it begins later than the former ſpecies, and ſeems to require a warmer temperature. For if the weather becomes ſuddenly cold, they abandon the buſineſs of generation, and retreat to dry grounds. The expulſion of the cords containing the ova begins in general, in this ſpecies, about the fifth day of their embraces,

braces, and always ends before the ſeventh. The eggs are here alſo moiſtened by the ſeminal fluid after they are diſcharged, and the little bodies called eggs are tadpoles in miniature.

In the fifth chapter, Mr Spallanzani treats of the generation of the water-newt, or ſalamander. Theſe animals, which, during the winter, conceal themſelves under ground, in the clefts of rock, in vaults, or at the bottom of deep waters, make their appearance again about the middle of February. The males are then obſerved to chace the females, to ſurround and careſs them. It is not, however, till the end of March, or beginning of April, that their connection can be ſaid to take place. About that time the male purſues the female, who at firſt makes a ſhew of flying, but ſoon ſtops of her own accord. The male than brings the lower part of his head in contact with the upper part of the head of the female. Their bodies form an acute angle, of which the point is made by the union of the two heads. In this ſituation, after violent agitations on the ſide of the male, in which he laſhes the female with his tail, he emits from the aperture of the anus,

anus, now unuſually tumid and dilated, a copious jet of ſemen, which mixes with the water; and thus diluted arrives at the anus of the female, which likewiſe on this occaſion appears more enlarged, and wider than uſual. After the male has ejected this jet of ſemen, he reſts for a while, on ſome occaſions quitting the female. He then returns to his employment, repeating the contorſions of the tail, and emiſſion of ſemen. And theſe alternations will ſometimes continue for more than an hour. The ſemen of the newt is of a white colour, and in conſiſtence reſembles thick milk. Thus then it appears, that copulation is not neceſſary for the fecundation of theſe animals.

After thus deſcribing what happens on the part of the male, the author next proceeds to give an account of the progreſs on the part of the female. Having premiſed ſome account of the ovaria, oviducts, and ova, he obſerves, that when the male has ejected the ſemen, and when from its vicinity to the female it has inſinuated itſelf into her anus, that portion of eggs is fecundated which is neareſt the vent. The amours in this ſpecies of animal laſt ſometimes twenty, ſometimes thirty days, not terminating till

till the females have diſcharged all their mature eggs. The eggs, after being brought forth, ſink to the bottom of the water: But if the weather be warm, a quantity of air bubbles ſoon appear upon the gluten which includes them. From theſe gradually increaſing, the eggs become lighter than water, and ariſe to the ſurface. But upon the burſting of the bubble, the ova fall again to the bottom, and riſe no more. In this ſituation their ſhape begins to change. After being gradually increaſed and elongated, it begins to agitate itſelf at intervals, and at length, from progreſſive elongation, and evolution, it appears that the ſuppoſed egg is a real newt in diſguiſe. They require ſix or ſeven days to paſs from the illuſive form of ovum to that of newt, and three or four more before they burſt the amnios, and gluten, ſo as to ſwim at liberty in the water.

After ſtating theſe facts reſpecting the generation of frogs, toads, and newts, in the five firſt chapters, Mr Spallanzani offers, in the ſixth, ſome reflections on what has been delivered. He obſerves, that frogs, toads, and water-newts, ought to be removed from the claſs of oviparous animals, to which they have been hitherto

hitherto referred, and placed among the viviparous. The depoſition of the ova in water, and not in that of rapid ſtreams, but of ditches, lakes, and ponds, where it either ſtagnates or runs ſlowly, ſhews a careful proviſion in the animals for the continuation of the ſpecies. For the long-continued and cloſe attachment of the males to the females, Mr Spallanzani obſerves, that he can aſſign no other cauſe, than that phyſical neceſſity which compells individuals of different ſexes to approach each other. The copulation muſt laſt till their mutual neceſſities are ſatisfied; this neceſſity in the female conſiſts in the expulſion of the foetuſes, and in the male in the emiſſion of ſemen. The impulſe on the part of the male is ſo ſtrong, that a great variety of injuries, nay even the amputation of limbs, and decapitation itſelf, were not ſufficient either to hinder the embraces or the fecundation.

Though daily experience ſhews, that in an immenſe number of animals fecundation takes place within the body of the female, yet this is not an univerſal law of nature. And beſides frogs and toads, there is reaſon to ſuppoſe that fecundation is external alſo in ſcaly fiſhes, while recent obſervations ſeem to have con-

firmed

firmed the certainty of external fecundation in bees. Though the number of animals in which we are certain that external fecundation takes place be but inconſiderable, Mr Spallanzani is of opinion, that the induſtry of obſervers will increaſe it.

From what happens in the generation of frogs, Abbé Spallanzani thinks, that irrefragable arguments are afforded againſt the doctrine of Epigeneſis, or that theory adopted by Mr Buffon and others, which ſuppoſes generation to depend on organic molecules. And while among thoſe naturaliſts, ſuppoſing the fœtus already formed and pre-exiſting, and that fecundation only unfolds them and renders them viſible, there are ſome who ſuppoſe them pre-exiſtent in the male, others in the female, our author is led to adopt the latter opinion. He thinks it clear, that in the caſe of the frog little foetuſes are found in the ovaria, at leaſt a year before theſe animals ſeek each other for the purpoſe of generation; and therefore they do not paſs from the male to the female during the act of fecundation. And from this, conjoined with the obſervations of Dr Haller, ſhewing that in birds the young exiſts in the female

female before fecundation, he is led to the general concluſion of the pre-exiſtence of the foetus in the female in every caſe.

The ſeventh and laſt chapter of this diſſertation is employed in refuting ſome objections made againſt the pre-exiſtence of the germ in the female by Dr Pirri, a celebrated phyſician and philoſopher at Rome. But as this anſwer principally conſiſts in ſhewing that his meaning has been miſunderſtood, and miſquoted by Dr Pirri, we reckon it unneceſſary to enter into particulars; and ſhall only obſerve, that it is concluded by a letter from Mr Bonnet at Geneva, to Abbé Spallanzani, in which Dr Pirri is treated with very great ſeverity for want of accuracy and fidelity in quoting authors.

Without pretending to enter into this controverſy, we ſhall only beg leave to obſerve, that, even ſuppoſing we were to allow the germ in every caſe to be pre-exiſtent in the female, yet every one who pays due regard to the influence which, in the human ſpecies, the colour of the male parent has upon the children he begets, and to the production of mules with ſome of the brute creation, muſt at leaſt admit, that the evolution of the germ not only cannot take

place

place without the influence of the male ſemen, but that the particular mode of evolution is very much dependent on the particular ſemen by which that germ is impregnated.

The ſubject of the ſecond diſſertation, is the artificial fecundation of certain animals. And he firſt treats of the artificial fecundation of the terreſtrial toad with red eyes, and dorſal tubercles. He ſeparated a female of this ſpecies of animal from the male, when, from the ſwelling of her belly, there was reaſon to ſuppoſe that the expulſion of the cords containing the ova would ſoon follow. In a few hours, after the female had been placed by herſelf, in a veſſel full of water, the cords began to appear. When about a foot was excluded, he cut it off. He left one half in the veſſel, and took out the other, in order to wet it with ſemen, which he procured from the male, that had been ſeparated from the female, and which he had put into a watch-glaſs. This liquor he ſpread with a pencil on the cord, which, after this operation, was placed in a veſſel of the ſame water as that in which the unimpregnated portion lay. For five days he could perceive no apparent difference between the impregnated and unim-

pregnated portions. But on the ſixth, he began to conceive hopes that the application of the ſeminal liquor had not been ineffectual. For then many of the tadpoles, in the portion which had been artificially impregnated, began to aſſume an elongated figure. On the ſeventh day, with manifeſt elongation, there was a viſible increaſe of bulk. On the eleventh, he perceived them moving within the amnion; and on the thirteenth, they quitted their membranes and ſwam about the water. On the other hand, the unimpregnated tadpoles began to corrupt, and ſoon turned putrid.

On a repetition of ſimilar experiments he found, that in a portion of cord thus artificially impregnated, evolution and animation of the germs, took place in preciſely the ſame time, as in another portion naturally impregnated. He found, that by the artificial application of the ſemen, germs taken out of the uterus of the female, by opening the abdomen, could be fecundated as well as thoſe which were naturally expelled. Though the ſemen of the toad in general abounds with ſpermatic worms, yet when the ſemen was totally deſtitute of theſe animals, he found it to be as effectual in giving

fecunda-

fecundation, as when it moſt abounded with them. Here, however, it may be aſked, Whether, although theſe animals were not viſible, it is not probable that they did not alſo exiſt in this ſemen in a ſtate to be afterwards evolved? There can be no doubt, that animals muſt often be preſent in fluids, in ſtates when they cannot be detected by our ſenſes, or the aid even of the beſt glaſſes. If, therefore, they be generally even viſible in the ſemen, is there not reaſon to infer that they are always preſent.

Upon different trials, Mr Spallanzani was never able to fecundate germs taken either from the ovaria, or even the upper part of the oviducts. Nor was he able to produce impregnation from injecting ſemen, at an opening made into the cavity of the abdomen; and thus immediately applying it to the ovaria, although the germs were afterwards diſcharged at the anus in a ſtate of perfect health. This he aſcribes to their not being then ſurrounded with mucus, which he conſiders as neceſſary for their immediate nutrition after animation.

Having produced artificial fecundation with ſemen from the veſiculæ ſeminales, he next tried whether this effect would alſo be produ-

ced by the fluid expreſſed from the teſticles. From this he found ſimilar ſucceſs, both fluids producing their effects in nearly the ſame time.

In the ſecond chapter, Abbé Spallanzani relates the trials which he made for the artificial fecundation of the water newt. He was never able to obtain it by employing the ſemen in its pure ſtate. But upon his want of ſucceſs, it occurred to him, that the ſemen, when applied in the natural way, is diluted with water. And when he tried both the ſemen and the juice obtained from the teſticles, previouſly diluted, artificial fecundation was produced.

In the trials which he made for artificial fecundation of the tree frog, and green aquatic frog, which are deſcribed in the third chapter, he found very little difference from what has been related above. He found, that an inexpreſſibly ſmall quantity of ſemen is ſufficient for fecundation. Three grains of ſemen, diffuſed even in twenty pounds of water, retains ſome portion of its virtue, though more than a pound and a half ſeemed to be prejudicial. And in every reſpect the juice of the teſticles was of equal efficacy.

From theſe experiments, Abbé Spallanzani draws

draws ſome reflections, with which we are preſented in the fourth chapter. He contends, that as the females of ſeveral amphibious animals contain in their uterus fetuſes completely generated, before the approaches of the male, and as artificial fecundation takes place with ſemen without worms, the ſyſtems of the Epigeniſiſts, and of the Vermicaliſts, are thereby completely overturned.

He contends, that the ſemen penetrates into the body of the tadpole, by pores on the ſurface of the membranes for its admiſſion. And he conſiders the ſeminal fluid as being a ſtimulus, which, penetrating to the heart, and powerfully irritating the internal parts, excites more frequent and ſtronger pulſations; whence ariſes the manifeſt extenſion of parts, and the animation which follows impregnation.

From what happens in the caſe of mules, Mr Bonnet, for whom our author expreſſes the the higheſt veneration, had inferred, that the ſemen is not only the ſtimulant, but alſo the nutriment of the fœtus. And Dr Haller, in part at leaſt, adopts the ſame opinion. For he conſiders the evolution of the hair, the horns, and the creſt, as owing to the ſperm received into

the blood, acting as an impelling and ſtimulative principle. But from the inconceivably-ſmall quantity of ſemen, which in the caſe of the toad and frog is ſufficient for fecundation, the prolific fluid cannot, he thinks, with any probability be ſuppoſed to perform the office of a nutritive principle.

In the ſucceeding chapter, Mr Spallanzani proceeds to conſider, whether the groſs viſible part of the ſeed be neceſſary to fecundation of man and animals; or whether this be effected by the inviſible attenuated part, uſually called the ſeminal vapour, or aura. After giving a ſummary view of the arguments formerly employed on both ſides of this controverſy, all of which he conſiders as unſatisfactory, he relates ſome experiments, in which tadpoles were expoſed for a conſiderable time to the vapour of ſemen, but no fecundation took place. From many experiments of this kind, it appears that fecundation is not the effect of the aura, but of the groſs part of the ſeed.

It had been conjectured by Mr Bonnet, that fecundation might perhaps be effected by means of the electric fluid. This led Mr Spallanzani to try the effect of electricity upon tadpoles.

But

But neither by this, nor by any other ſtimulating fluid, was he able to produce the deſired effect. He found, however, that the electrical fluid accelerates the growth of fecundated tadpoles.

As we learn, both from ancient and modern hiſtory, that the ſeed of one animal frequently impregnates another, when there is a near reſemblance between them, Mr Spallanzani was led to entertain hopes, that he ſhould obtain intermediate productions, by impregnating the embryos of one ſpecies with the prolific liquor of another. But after a great variety of trials, he found, that the ſemen of frogs and toads cannot reciprocally impregnate the females of a different ſpecies, neither could he ever make toads copulate with frogs. And after having repeatedly moiſtened the embroys of frogs and toads with the ſeminal fluid of the newt, evolution did not take place in any one inſtance.

When Mr Spallanzani was about to conclude this diſſertation, he thought it might not be amiſs to try to fecundate ſome of thoſe animals in which it is certain that impregnation takes place internally. He took the unimpregnated eggs

of the phalena originating from the ſilk-worm, and moiſtened ſome of them with a large quantity, others ſparingly, with ſemen obtained from the genital organs of the male. But all theſe trials were fruitleſs, when made with that ſpecies of which the eggs are hatched only in the ſpring. He afterwards tried another ſpecies, which produces three generations in the year. In this he was more ſucceſsful. He procured fifty-ſeven worms at two trials.

Having thus ſucceeded with an oviparous animal, he reſolved to try artificial fecundation with one of the viviparous kind. For this purpoſe he choſe a bitch ſpaniel, of a moderate ſize; and ſuſpecting from certain appearances that ſhe would ſoon be in heat, he confined her in an apartment of which he always kept the key himſelf. On the thirteenth day of her confinement ſhe began to ſhew evident ſigns of being in heat, and on the twenty-third ſhe ſeemed to be fit for the admiſſion of the male. He then obtained nineteen grains of ſemen, furniſhed by a ſpontaneous emiſſion from a young dog of the ſame breed. This he injected into the female by means of a ſmall ſyringe, heated to about the natural temperature of the animal.

animal. Two days after the injection, the bitch went off her heat, and in twenty days her belly appeared ſwoln, which induced him to ſet her at liberty on the twenty-ſixth. After this, the ſwelling of the belly gradually increaſed, and on the ſixty-ſecond day after the injection, ſhe brought forth three lively whelps, two males and one female; reſembling, in colour and ſhape, not only the bitch, but the dog alſo from which the ſeed had been taken.

In this manner then did the Abbé Spallanzani ſucceed in fecundating a quadruped; and he tells us, he has no difficulty in believing, that, by proper precautions, we may thus be able to give birth to ſome large animals, without the concurrence of the two ſexes.

To theſe two diſſertations our author has annexed two letters, written to him by Mr Bonnet of Geneva, on the ſame ſubject, in conſequence of Mr Spallanzani's having tranſmitted to him ſome account of his diſcoveries. In theſe are contained many intereſting and ingenious remarks: But as they eſpecially refer to particular paragraphs in Mr Spallanzani's diſſertations, and can be readily underſtood, only by thoſe who have the work before

before them, we ſhall not here endeavour to give any analyſis of them; but ſhall proceed to the third and laſt diſſertation contained in the volume before us, in which Mr Spallanzani treats concerning the generation of plants.

He ſets out with obſerving, that the three principal ſyſtems reſpecting the generation of animals have been transferred to plants. Some think, that the embryos pre-exiſt in the ovarium; others, that they are tranſported thither in the impregnating powder; while a third ſet believe, that they are generated in the ovarium by the combination of two fecundating principles, the one furniſhed by the piſtil, the other by the ſtamina. To diſcover whether any of theſe opinions was well founded, and to arrive at the truth, Abbé Spallanzani inſtituted a great number of experiments on different vegetables; of which a particular account is given in the firſt, ſecond, third, and fourth chapters of this diſſertation. The limits of our work, however, will not permit us to enter into a full detail of theſe. We ſhall therefore content our ourſelves, with preſenting to the reader ſome account of the concluſions he draws from them in the fifth chapter.

Though,

Though, from attending to the progreſs of the ſeed of plants, there is ſome reaſon for believing that the embryos of plants pre-exiſt in the powder of the antheræ, yet from the experiments which Mr Spallanzani made, in which all acceſs of pollen to the ovaria was prevented, he concludes, that the embryo does not depend on the powder of the ſtamina, and is not the reſult of two principles, one depending on the pollen, and the other on the piſtil; but that it exiſts in the ovarium, independently of this powder.

Suppoſing the embryo to belong to the ovarium, it may be either mechanically formed there, or it may pre-exiſt. His experiments however afford, he thinks, direct proofs, that though the embryo does not appear, it really exiſts; it is organized when its organization cannot be ſeen.

In moſt caſes, the embryo, or plantule, is evidently attached to the ſeeds. Hence, he thinks, there is ground to infer that it is always ſo, tho' the connecting media be either too ſmall or too tranſparent to be viſible. And when it is conſidered that the embryo and lobules thus form as it were one whole with the ſeeds,

which

which evidently exiſt before fecundation, he thinks it highly probable that the embryo likewiſe pre-exiſts that period. And he thinks it probable, that the pre exiſtence, which in his opinion evidently takes place in ſome plants, equally holds in all of them, although all have not been examined with the ſame attention. But notwithſtanding this general doctrine, he admits, that in ſome plants, as appeared from his experiments with the baſil and the annual mercury, the pollen is neceſſary for fecundation. And he expreſſes a wiſh, that ſome naturaliſts would extend the experiments made for the artificial fecundation of the palm, to the latter of theſe plants. But if mercury and baſil require pollen for their fecundation, his experiments, he thinks, tend demonſtratively to ſhew, that with two ſpecies of the pumpion, with hemp and ſpinach, fructification has no dependence on this powder. And he contends, that it is perfectly conformable to what we every day obſerve in animals, that ſome plants ſhould require the influence of pollen, to multiply the ſpecies, while it is not neceſſary to others. Numberleſs animals are, he obſerves, incapable of multiplying without the concurrence of both

ſexes;

ſexes; or, at leaſt, without the intervention of ſemen. This is evident in man, quadrupeds, birds, fiſhes, reptiles, and inſects. But a vaſt number, on the contrary, propagate without ſuch means; as for inſtance, the Polypes, under which denomination is included an immenſe variety of ſmall animals, inhabiting the bottom of freſh water, of ditches, ponds, puddles, and of the ſalt water of the ſea. Many ſpecies are multiplied by a natural diviſion of the body; ſome ſplitting into two portions, ſome into four, &c. Some are oviparous, ſome viviparous, and all ſtrictly hermaphrodite; each individual propagating its kind, without needing the concurrence of another. Thus he thinks it may, and really does come to paſs with ſome plants, which multiply without the influence of the fecundating duſt.

We have thus then endeavoured to give ſome view of thoſe ingenious and elaborate diſſertations, on a ſubject no leſs curious than it is difficult; and which, at the ſame time, may juſtly be conſidered as an object of admiration. He himſelf obſerves, that he is far from thinking he has entirely diſſipated that darkneſs with which this ſubject is involved. Yet, he hopes,

hopes, that by means of his diſcoveries it has been ſomewhat cleared, and that a light leſs feeble and uncertain now ſhines through it. And, we apprehend, there is not any reader, who, after a careful peruſal of his treatiſe, will not allow him this merit. There can be no doubt, that by due attention to the diſcoveries which he has made, and the ſuggeſtions he has thrown out, future philoſophers may proſecute their reſearches with greater ſucceſs, in unfolding what has hitherto been conſidered as one of the myſteries of nature.

VI.

Account of the Electrical Eel, or the Torpedo of Surinam. By Wm. Bryant, Eſq. Vide *Tranſactions of the American Philoſophical Society.* Vol. II. Quarto. Philadelphia.

THE author of this paper, who reſided for ſome time at Surinam in South America, a colony belonging to the States of Holland, and abounding

abounding with many natural curioſities, conſiders this animal as one of the moſt ſurpriſing of them. By the Dutch it is called Beave Aal, and by the Engliſh inhabitants the Numbing Eel. It is caught in nets among other fiſh, chiefly in muddy rivers. In ſize and colour, it is, he tells us, not unlike a common eel of Europe or America: and in its ſhape there is ſtill a greater reſemblance; excepting that it is thicker in proportion to its length, and the head is more flat, and not ſo pointed. It comes to the ſurface of the water to breathe air.

On touching this fiſh, as it lies in the water in a tub provided for it, a ſudden and violent ſhock is received. This is, we are told, in all reſpects like that which is felt on touching the prime conductor of an electrical machine, when charged with the electrical fluid from the globe. Like that, it chiefly affects the ends of the fingers, and the elbows. When the tail of the fiſh is gently held by one hand, and the head touched with the other, a very violent ſhock is felt in both elbows, and through the breaſt and ſhoulders. Mr Bryant at firſt imagined, that the violence of the ſhock proceeded from both arms receiving it at the ſame time; and

that

that the pain was no more than that of the two ſhocks added together. But in this he found himſelf miſtaken; for when ſeven perſons joined hands, if, when the firſt gently held the tail, the ſeventh touched the head, all were affected at the ſame inſtant, in both elbows, in the ſame manner as happens in electrical experiments.

Mr Bryant finds, that the ſhock of the electrical eel may be received through metallic ſubſtances. Thus he was ſtrongly affected on touching the fiſh with an old ſword-blade. But if it was armed with ſealing wax, no effect was produced; nor had it any obvious effect when touched with glaſs. But notwithſtanding this, no diminution of quality is produced, by placing the tub which contains the fiſh on glaſs bottles. And our author is at a loſs to conjecture, whether it has an unaccountable faculty of collecting the electrical fluid from the ſurrounding waters, or through the body of the perſon touching it, or has in its own body a large fund which it can diſcharge at pleaſure.

He has in general found that it has no effect on the human body when touched with a piece of wood, or indeed with any other ſubſtance

ſtance not metallic. Yet an accident diſcovered to him, that on ſome occaſions the effect is very ſenſible through wood. He accidentally ſtood by, one morning, while a ſervant was emptying a tub, containing one of the largeſt eels of this kind he had ever ſeen, and which had been but lately caught. He had lifted the tub entirely from the ground, and was pouring off the water to renew it. When the fiſh was left almoſt dry, the negro who held it received ſo violent a ſhock that he let the tub fall. Another negro was then called to his aſſiſtance. Mr Bryant made them lift the tub free from the ground. And when in this way they were pouring off the remains of the water, both of them received ſuch ſmart ſhocks, as obliged them to deſiſt from emptying the tub in that manner. Upon ſimilar trials, Mr Bryant received ſimilar ſhocks himſelf.

Mr Bryant is diſpoſed to conjecture, that this animal has the power of communicating the ſhock when and with what degree of force it pleaſes; and that this power ſerves it as a weapon of defence againſt its enemies. For he has obſerved, that when it is firſt taken hold of, the ſhocks are tolerable; but when the

animal perceives itſelf to be confined, they are much more violent. This he experienced one day, from taking hold of a fiſh by the middle, and lifting it partly out of the water. He received ſo ſmart a ſhock, that it occaſioned a ſtrong contraction in the bending muſcles of his fingers, ſo that he could not immediately let it go; but on endeavouring to diſengage his hand, he threw it upon the ground. When he took hold of it a ſecond time, to return it into the tub, he was more ſtrongly affected than at firſt, and that not only in his hands and arms, but throughout the whole body. The fore part of his head, and the back part of his legs, ſuffered principally, and in the ſame manner as on receiving a very ſmart ſhock from a highly-charged phial in electrical experiments.

He obſerved, that the ſenſation occaſioned by the ſhock, on touching different parts of the fiſh, was different. He was at firſt inclined to think, that this might be owing to its having an extraordinary faculty, of containing more of the fluid in one part of its body than another. From the extremity of the tail, to about one third of its length upwards, it occaſions rather a numbneſs and tingling, than pain. But,

upon

upon applying the ends of the fingers to the back, head, and upper part of its body, it cauſes a ſharp prickling pain. This, he is now diſpoſed to think, may be accounted for, from a difference in the texture of the ſurface of the ſkin, in a manner ſimilar to the electrical fluid coming from a glaſs tube; which is well known to be different, when its ſurface is altered from being rubbed with different ſubſtances.

From theſe obſervations, there can be no doubt that the peculiar properties of this animal depend upon electricity.

VII.

Obſervations on the Numb Fiſh, or Torporific Eel. *By* Henry Collins Flagg, *South Carolina.* Vide *Tranſactions of the American Philoſophical Society.* Vol. II. Quarto. Philadelphia.

IN this paper, we are preſented with ſeveral curious facts concerning this animal, in addition to thoſe contained in the former.

The apparent difference, he obſerves, between the torporific and common eel, is, that the former is flater on the back and head, the the upper part of which is perforated with ſeveral holes, and has on each ſide, behind, a ſmall fin, which is voluntarily elevated or depreſſed as the animal is pleaſed or not. The body is larger in proportion to its length, and it has a broad fin connected to the belly, and continued to the tail. Mr Flagg has ſeen ſome of them four feet long. The firſt fiſh of this kind which he got, he received from a negro in a wicker baſket. When he ſet the baſket on the ground, he received a conſiderable ſhock, exactly ſimilar to an electrical one. The ſame thing happened when he turned the fiſh out of the baſket into a tub of water. He has found, that the ſhock is greater when the fiſh is enraged, but frequently repeated touches ſeem to exhauſt this ſtrange power. If one perſon hold his finger in the water at an inch diſtant from the fiſh, and another touch it, both feel a ſhock equally ſevere. There are, however, ſome individuals incapable of being affected by it. Thus Mr Flagg knew a lady who could handle this fiſh at will, without feeling

ing any inconvenience. Others are affected to an uncommon degree. Mr Flagg relates the caſe of a negro, who, upon attempting to graſp an eel with both hands, received ſuch a ſhock, that confirmed paralyſis was the conſequence; from which he recovered only by ſlow degrees, at the end of ſeveral years. And Mr Flagg thinks, that, in general, the numbneſs occaſioned by touching the eel continues longer than from an electrical ſhock of the ſame degree of force.

With an eel in a very languid ſtate, though he could perceive no ſhock, by touching it on or near the tail, yet when he applied his finger near the belly, the torporific power was very conſiderable, although the fiſh was now almoſt dead. This ſpecies of eel, he tells us, is frequently eat by the negroes, and is reckoned very delicious. Its common food is ſhrimp, or any ſmall ſhell fiſh. Mr Flagg received no ſhock, when he applied to the eel an iron rod, held between two pieces of glaſs. And the ſame thing took place when the rod was held in a ſilk handkerchief. Upon repeatedly trying the effects of this fiſh on the needle of a compaſs, he could never perceive that it

had any influence. This eel, we are told, raiſes its head every few minutes above water, as if to reſpire.

From theſe additional circumſtances, reſpecting this ſingular animal, farther and inconteſtible proof is afforded of its electrical power.

VIII.

Account of a Worm in a Horſe's Eye. By F. Hopkinſon, Eſq Vide *Tranſactions of the American Philoſophical Society.* Vol. II. Quarto. Philadelphia.

THE fact which Mr Hopkinſon here relates deſerves the attention of the phyſician and phyſiologiſt, if not for its importance, at leaſt for its ſingularity. And it is this circumſtance which has led him to record it in the American philoſophical tranſactions. Having heard from ſeveral of his acquaintance that a horſe was to be ſeen in Philadelphia, kept by a free negro in Arch Street, in one of whoſe eyes there was a living ſerpent, Mr Hopkinſon, though

though at firſt diſpoſed to diſregard the report, had the curioſity to viſit it, taking a friend along with him.

He examined the eye with all the attention in his power; expecting, as he tells, either to detect a fraud, or to diſcover the grounds of a deception. He was, however, much ſurpriſed to ſee a real living worm within the ball of the eye. This worm was of a clear white colour, and in ſize and appearance much like a piece of fine bobbin. It ſeemed to be from two and a-half, to three inches in length. But this could not be duly aſcertained, its whole length never appearing at one time, but only ſuch a portion as could be ſeen through the iris, which was greatly dilated. The animal, we are told, was in a conſtant lively vermicular motion; ſometimes retiring ſo deep into the eye, as to become totally inviſible; at other times, approaching ſo near to the iris, as to be plainly and diſtinctly ſeen, or at leaſt ſo much of it as was within the field of the iris. He could not, however, diſtinguiſh its head, neither end being perfectly exhibited while he viewed it. And indeed its motion, he tells us, was ſo briſk and conſtant, that ſo nice a ſcrutiny was not to be expected.

There was a conſiderable inflammation and ſwelling of the parts contiguous to the eye-ball, with ſome diſcharge. And the horſe ſeemed to have great pain from the eye, ſo that it was with difficulty it could be kept open for more than a few ſeconds at a time; and Mr Hopkinſon was obliged to watch favourable moments for a diſtinct view of the animal. He was inclined to think the horſe quite blind in this eye, for it appeared as if all the humours were confounded together, and the worm had the whole orb to range in. The humours of the eye were even beginning to grow opake, like a chilled jelly, at the time when Mr Hopkinſon ſaw it, and he was informed that they afterwards became entirely ſo.

As a farther evidence that in this affair there was no impoſition, deception, or miſtake, we may obſerve, that in another paper, contained in the ſame volume of the American philoſophical tranſactions, an account is alſo given of it by Dr Morgan, Profeſſor of the Theory and Practice of Phyſic in Philadelphia, in which he treats of a living ſnake in a living horſe's eye. He gives, in almoſt every particular, the ſame account with Mr Hopkinſon. He obſerves,

that

that the animal, when he ſaw it, was as thick as a knitting needle, or piece of common twine. Though Dr Morgan conſiders this as being a ſingular occurrence, and almoſt unprecedented in the annals of medicine, yet he obſerves, that of the fact there could be no doubt. And he mentions ſeveral other caſes, in which animals of unuſual kinds were produced in the living body, equally difficult to explain; particularly, caſes of the guinea-worm, jointed worms generated in the liver, and the like.

After ſtating the difficulties in explaining the generation of thoſe animals, he acknowledges himſelf loſt in wonder, and leaves the explanation to ſome happy genius who may afterwards ariſe.

IX.

IX.

An inquiry into the cauſe of the increaſe of Bilious and Intermitting Fevers in Penſylvania, with hints for preventing them. *By* Benjamin Ruſh, *M. D. Profeſſor of Chemiſtry in the Univerſity of Penſylvania.* Vide *Tranſactions of the American Philoſophical Society*, vol. II. Quarto. Philadelphia.

DR RUSH ſets out with remarking, that Penſylvania, for ſome years paſt, has become more ſickly than formerly. And fevers, he obſerves, which a few years ago appeared chiefly on the banks of creeks and rivers, and in the neighbourhood of mill-ponds, now appear in parts remote from all theſe, and in the higheſt ſituations. This change, with reſpect to the healthineſs of the country, he thinks may be traced to three cauſes.

The firſt he mentions, is the eſtabliſhment and increaſe of mill-ponds. There are, he obſerves, whole counties in Penſylvania, in which inter-

intermittents were unknown until the waters in them were dammed up for the purpoſe of erecting mill-ponds.

The ſecond cauſe he mentions, is the cutting down of wood under certain circumſtances. It has, he tells us, been remarked, that the intermittents on the ſhores of the Suſquehannah have kept an exact pace with thoſe paſſages which have been opened from the banks of the river, by cutting down the wood which formerly grew in its neighbourhood. By theſe, he imagines that the marſh effluvia have an opportunity of being propagated upwards. He tells us, he remembers the time when intermittents were known only within half a mile of the river, whereas now they are to be met with ten miles from it, in ſome parts of the State. Here he points out a diſtinction between the effects of clearing and cultivating a country. While he is of opinion that clearing a country makes it ſickly in the manner mentioned, he contends, that cultivating it, by draining ſwamps, deſtroying weeds, burning bruſh, and exhaling the unwholeſome and ſuperfluous moiſture of the earth, by frequent crops of grains, grapes, and vegetables of all kinds, render it healthy.

The

The third and laſt cauſe which he points out, is the unequal quantities of rain which have fallen in Penſylvania within theſe laſt ſeven years. While, from the uniformity of ſeaſons, creeks and rivers were confined to ſteady bounds, there was, he thinks, little or no exhalation of febrile miaſmata from their ſhores. But by the dry ſummers of 1780, 81, and 82, the creeks and rivers were reduced far below their ancient marks. And by the wet ſprings of 1784 and 85, they were ſwelled beyond their natural heights, from which they again fell in the ſummer. In both caſes, a large and extenſive ſurface of moiſt ground was left expoſed to the action of the ſun, and, of courſe, he thinks, to the generation and exhalation of febrile miaſmata.

After ſtating theſe cauſes producing the encreaſe of intermitting fevers, he comes next to ſuggeſt a few hints for obviating and preventing them, and for rendering the country again healthy.

The firſt thing he recommends, is the planting of trees round all the mill-ponds. And he adviſes, that the trees be in greateſt number, and cloſeſt together, to leeward of the ordinary current

current of the ſummer and autumnal winds. Theſe trees may, he thinks, act in a ſmall degree mechanically. By ſheltering the pond from the action of the ſun, they leſſen exhalation, as well as obſtruct the paſſage of the vapours that are raiſed to the adjacent parts. But they act likewiſe chemically. For it has, he obſerves, been demonſtrated, that trees abſorb unhealthy air, and again diſcharge it in a highly purified ſtate, in the form of what is now called dephlogiſticated air.

The ſecond mode of preventing fevers which he points out, is to let the cultivation always keep pace with the clearing of the lands. And nature has, he thinks, in this inſtance, connected duty, health, and intereſt together. He recommends, that every ſpot covered with moiſture, from which wood has been cut, be carefully drained, and afterwards ploughed and ſowed with graſs ſeeds; that weeds of all kinds be deſtroyed; and the waters be ſo directed as to be prevented from ſtagnating in any part of their courſe.

Theſe he conſiders as the two principal means of extirpating intermitting and bilious fevers from Penſylvania. But as theſe are ſlow in their operations,

operations, he ſubjoins a few directions for preventing fevers till they can take effect.

From the influence which fire, or the ſmoke or heat which iſſue from it, have in deſtroying the effects of marſh miaſmata on the human body, he adviſes that large fires ſhould be made every evening of bruſh-wood, between the ſpots from whence noxious exhalations are derived and the dwelling houſe; being as near the latter as is ſafe, and not diſagreeable: And during the ſickly ſeaſon, he recommends that fires ſhould be kept in every room in the dwelling houſe; even when the heat of the weather makes it neceſſary to keep the doors and windows open.

He adviſes, that in ſickly ſituations, woolen and cotton ſhould be preferred to linen clothes. In proof of the advantage of this, he mentions the benefit that has been derived from it in the iſland of Jamaica. And he conſiders the efficacy of woolen clothes in wet and cold ſituations, in preventing fevers of all kinds, as an undeniable fact.

He recommends, that the diet during the ſickly months ſhould be generous. Wine and beer, in place of ſpirits and water, ſhould be the

the drinks of this ſeaſon. A large proportion of animal food ſhould be employed. He conſiders ſalted meat as preferable to freſh, and he adviſes that it ſhould always be well ſeaſoned.

The evening air ſhould, he thinks, be avoided as much as poſſible; and the morning air, he tells us, ſhould never be breathed until the body has been fortified with a little ſolid aliment, or a draught of bitters.

Laſtly, He obſerves, that too much cannot be ſaid in favour of cleanlineſs. While the body ſhould be bathed and waſhed frequently, equal care ſhould be beſtowed on every ſpecies of apparel. And offal matters, eſpecially thoſe of a vegetable matter, ſhould be removed from the neighbourhood of a dwelling-houſe.

Though it will not be imagined that theſe modes of preventing fever are equally applicable to every ſituation, yet there can be no doubt, that, if they be well calculated for Penſylvania, they may be alſo uſeful elſewhere. And we are inclined to think, that there are few ſituations in which ſome of them may not be put in practice with advantage.

X.

X.

An account of the late Dr Hugh Martin's *Cancer-powder, with brief obſervations on Cancers. By* Benjamin Ruſh, *M. D. &c.* Vide *Tranſactions of the American Philoſophical Society,* vol. II. Quarto. Philadelphia.

THOUGH from the account given in this paper it would appear that Dr Martin can hardly be conſidered in any other light than that of an empyric, yet the reputation which his noſtrum acquired was ſuch as juſtly to claim the attention of Dr Ruſh. And when we reflect that the inventions, and even the temerity of quacks, has given birth to ſome of the moſt important improvements in medicine, ſuch inveſtigations cannot be thought unworthy of the inquiries of the philoſophical and benevolent phyſician.

Dr Martin had been for ſome time a regimental ſurgeon, ſtationed in the back parts of Penſylvania, at Fort Pitt. And his advertiſe-

ments

ments bore, that he was able to cure cancer, by a medicine which he had diſcovered in the woods in the neighbourhood of that garriſon. After his medicine had gained conſiderable credit in Philadelphia, Dr Ruſh took the liberty of waiting upon him, and of aſking him ſome queſtions reſpecting his diſcovery. The anſwers he gave were calculated to make Dr Ruſh believe that his medicine was of a vegetable nature, and that it was originally an Indian remedy. He ſhewed ſome of it, which appeared to be the powder of a well-dried root of ſome kind; and he admitted Dr Ruſh to ſee him apply it in two or three caſes. In ſome inſtances, Dr Martin applied a powder to the parts affected. In others, he only touched them with a feather, dipped in a liquid which had a white ſediment, and from which Dr Ruſh inferred that it was a vegetable root diffuſed in water.

The effects reſulting from theſe applications were very conſiderable; and Dr Ruſh witneſſed their efficacy in ſeveral inſtances. In ſome cancerous ulcers, the cures he performed were complete: but where the cancers were much connected with the lymphatic ſyſtem, or accompanied with a ſcrophulous habit of body, his

medicine always failed, and in ſome inſtances did evident miſchief.

Dr Ruſh was anxious to diſcover a medicine which promiſed relief, even in a few caſes of cancer. As he obſerved that the effects of Dr Martin's powder ſhewed it to be of an acrid nature, and as he ſuppoſed all cauſtic vegetables to be nearly the ſame, he had recourſe to different ones. He tried in a ſimilar manner the phytolacca, the ſtramonium, the arum, and ſome others, in hopes of ſeeing from them the ſame effects as from Dr Martin's powder. But in theſe he was diſappointed. They gave pain, but they performed no cures. He was afterwards furniſhed with a powder by a gentleman from Fort Pitt, which, from a variety of circumſtances, he inferred to be of the ſame kind with that uſed by Dr Martin. He applied this to a fungous ulcer, but it did not produce that degree of pain, inflammation, and diſcharge, which he had been accuſtomed to ſee from the application of Dr Martin's powder. After this, he ſhould probably, he tells us, have ſuſpected that the powder was not formed from a ſimple root, had not Dr Martin, upon all occaſions, continued to aſſure him that it was wholly a vegetable preparation.

Dr

Dr Martin died in the year 1784; and, a few weeks after his death, Dr Ruſh procured from one of his adminiſtrators a few ounces of the powder, with the view of examining it minutely. Upon throwing the powder, which was of a brown colour, upon a piece white paper, he could diſtinctly perceive a number of white particles ſcattered thro' it. He at firſt ſuſpected that theſe were corroſive ſublimate, but the uſual teſts of that metallic ſalt ſoon convinced him that he was miſtaken. Reflecting that arſenic was the baſis of moſt of the celebrated cancer-powders that have been uſed in the world, he had next recourſe to the teſts for detecting it. Upon ſprinkling a ſmall quantity of the powder on live coals, it emitted the ſmell of garlic, a well known teſt of arſenic, ſo perceptibly, as to be known by ſeveral perſons whom he called into the room where he made the experiment, and who knew nothing of the object of his inquiries. As a ſecond teſt, he picked out from the powder three or four grains of the white particles; theſe he bound between two pieces of copper, which he threw into the fire. After the pieces of copper became red hot, they were taken out; and, when they were cooled, it appeared that an evi-

dent whiteneſs was imparted to both of them. To theſe two he added ſtill a third teſt. He infuſed a ſmall quantity of the powder in a ſolution of vegetable alkali in water, for a few hours, and then poured it upon a ſolution of blue vitriol in water. The colour of the vitriol was immediately changed to a beautiful green, and afterwards precipitated. From all theſe teſts then, there could remain no doubt that Dr Martin's powder contained a proportion of arſenic, which probably was its active baſis.

Dr Ruſh concludes this paper with a few remarks upon this powder, and upon the cure of cancers and foul ulcers of all kinds. He obſerves, that the uſe of cauſtics, in cancers and foul ulcers, is a very ancient and univerſal practice; and he believes arſenic to be the moſt efficacious of any that has ever been uſed. The great art of applying it ſucceſsfully, is to dilute and mix it in ſuch a manner as to mitigate the violence of its action; and he thinks Dr Martin's compoſition was happily calculated for this purpoſe.

He thinks that the arſenic uſed by Dr Martin was the pure white arſenic; and he conjectures, that the proportion which it bore to the vegetable

vegetable powder, could not be more than one fortieth part of the compound. He thinks that the vegetable matter, uſed in the powder given to him, was the root and berries of the ſolanum lethale. But he has reaſon to believe that Dr Martin employed different vegetable ſubſtances at different times.

He is of opinion, that Dr Martin's want of ſucceſs in many caſes aroſe from his uſing it indiſcriminately in all caſes. He thinks, that in ſchirrous and cancerous tumours, the knife ſhould always be preferred to the cauſtic. And in cancerous ulcers, attended with a ſcrophulous habit of body, ſuch particularly as have their ſeat in the breaſts of females, it can only, he thinks, protract the patient's miſery. Moſt of the cancers which Dr Martin cured by it were ſeated on the noſe, or cheeks, or upon the ſurface or extremities of the body.

It is not, he tells us, in cancerous caſes only, that Dr Martin's powder has been found to do ſervice. He has ſeen this powder uſed with advantage in ſores of all kinds, and from a variety of cauſes, when they have been attended with fungous fleſh, and callous edges.

Every one converſant in practice well knows,

that theſe affections, which this remedy is ſaid to combat, are frequently of the moſt obſtinate nature. And although, as Dr Ruſh juſtly remarks, we are not indiſcriminately to expect from its uſe the cure of every cancer, yet if it be attended with advantage in the caſes which he has pointed out, the labour he has beſtowed in the inveſtigation of it muſt be an acceptable and important ſervice to the public.

XI.

Obſervations on the cauſe and cure of Tetanus. By Benjamin Ruſh, *M. D. Profeſſor of Chemiſtry in the Univerſity of Penſylvania.* [Vide *Tranſactions of the American Philoſophical Society.* Vol. II. Quarto. Philadelphia.

DURING the courſe of private as well as military practice, Dr Ruſh had met with ſeveral caſes of tetanus in which opium, the ordinary remedy employed, proved ineffectual, after the faireſt trial. This led him to a more minute inveſtigation of the diſeaſe; and reflecting,

ting, that it is a diſorder of warm climates and ſeaſons, he was led to aſcribe it to relaxation. He was, therefore, led to attempt the cure by a different ſet of medicines.

Soon after adopting this reſolution, he was called to viſit Col. John Stone, who was wounded through the foot. When Dr Ruſh ſaw him, he was in the third day of a tetanus. His ſpaſms were violent, and his pains ſo exquiſite, that his cries were heard near an hundred yards from his quarters. His head was thrown a little backwards, and his jaw had become ſtiff, and contracted.

He was at that time under the care of a ſkilful regimental ſurgeon, who had poured down opium in large quantities, but without effect. Dr Ruſh immediately omitted the opium, and had recourſe to wine, and the Peruvian bark. He took from two to three ounces of the latter, and from a bottle, to three pints of the former in the day. Even in the ſpace of a few hours, Dr Ruſh had reaſon to be much ſatisfied with the ſucceſs of this practice. His ſpaſms and pains were leſs frequent and violent, and he ſlept for ſeveral hours, which he had not done for ſome nights before. With the ſame

view that wine and bark had been employed, a bliſter was applied between his ſhoulders, and two or three ounces of mercurial ointment rubbed in, upon the outſide of his throat. He continued to mend gradually under the operation of theſe medicines, though for ſome weeks he was affected with ſpaſms in his wounded foot.

In the ſummer 1782, Dr Ruſh was called to viſit a ſervant girl who had brought on tetanus by ſleeping in the evening, on a damp brick pavement, after a day in which Fahrenheit's thermometer had ſtood at near 90°. This caſe was nearly as violent and alarming as that deſcribed above. Dr Ruſh treated her in the ſame manner, and with the ſame ſucceſs. To the wine and bark he here added the oil of amber, after he began to ſuſpect they were loſing their influence. The good effects of this latter remedy were obvious. She recovered gradually, and has ſince that continued in good health.

In ſummer 1782 Dr Ruſh was called to a joiner, ſubjected to alarming ſymptoms, from having run a nail into his foot. He found him, the day after the accident, in extreme pain, with ſmall convulſions, and now and then a twinge

twinge in his jaw. The wound of the foot was without ſwelling or inflammation. Dr Ruſh immediately dilated the wound, and filled it with lint moiſtened with ſpirit of turpentine. This, in a ſhort time, produced a great deal of pain, and a great inflammation in his foot. It was Dr Ruſh's intention, to have afterwards treated this patient in the ſame manner he did the two former ones. But the pains and ſpaſms of his body ſuddenly left him, and in twenty-four hours after Dr Ruſh firſt ſaw him, he complained of nothing but the pain and ſwelling of the foot, which, however, continued for ſeveral weeks, and did not leave him till it ended in a ſuppuration.

Theſe three caſes, it will readily be allowed, exhibit to the public a new and ſucceſsful treatment of this diſeaſe. From theſe, Dr Ruſh draws ſeveral concluſions which will merit attention.

He infers, that the prædiſpoſition to tetanus depends upon relaxation, and that this relaxation is generally produced by heat; tho' exceſſive labour, watchings, marches, or fatigue from any cauſe, all produce it likewiſe; and hence, he thinks, that it is more frequent from wounds

wounds received in battle, than from ſimilar wounds received in any other way.

He concludes, that as tetanus ſeems to be occaſioned by relaxation, the medicines indicated to cure it, are ſuch only, as are calculated to remove this relaxation, and to reſtore a tone to the ſyſtem. The bark and wine appear to him to act in this way; and though the operation of bliſters be more complex, yet, in the peculiar ſtate of irritability, which occurs in tetanus, he conſiders their effects as ſimply ſtimulating. Mercury, he thinks, goes even farther, and acts by promoting the inflammatory diatheſis, which he conſiders as abſent in this diſeaſe. He conſiders the oil of amber to act chiefly, at leaſt, as a ſtimulant: and he thinks, that we are to refer the good effects derived from large doſes of muſtard, and from the cold bath, to their ſtimulant and tonic powers. The excitement of topical inflammation, by artificial means, diſpoſes to a general inflammatory diatheſis; and it is thus, Dr Ruſh thinks, that inciſions and dilatations of the wound, particularly if they be filled with ſpirit of turpentine, are attended with good effects. On the ſame principle alſo he explains the benefit of a practice

tice uſed by the negroes of St Croix for the prevention of tetanus; the application, viz. of a mixture of tallow and ſalt to their freſh wounds.

To theſe obſervations on tetanus Dr Ruſh adds a few words on the diſorder commonly called the Jaw-fall of infants, the Triſmus Naſcentium of Dr Cullen.

This, he conſiders alſo as being a ſpecies of tetanus; and he tells us, that he has met with three inſtances of it in Philadelphia, all of which proved fatal. In theſe inſtances, the age and weakneſs of his patients prevented him from attempting any thing for their relief. But he mentions a fact with reſpect to it which he conſiders as of great importance. He was informed by the late Dr Cadwallader Evans, who practiſed medicine for ſeveral years in Jamaica, that he had many opportunities of ſeeing the diſeaſe in that iſland, particularly in the black children. In every inſtance after it was diſtinctly marked, he found it incurable. But having reaſon to infer, from ſome circumſtances, that it depended on the retention of meconium in the bowels, he was led invariably to purge every child born upon the eſtates committed to his

his care; and, after he adopted this practice, he never met with a ſingle inſtance of tetanus among children.

Tetanus, Dr Ruſh obſerves, is a diſeaſe not peculiar to the human ſpecies. He has known ſeveral inſtances of it in horſes, from running nails into their feet, and ſimilar accidents. It is attended with rigidity of the muſcles of the neck, ſtiffneſs of the limbs, and ſuch a contraction of the jaw, as to prevent their eating. It is in general fatal. But, in two caſes, Dr Ruſh had the pleaſure of ſeeing the diſeaſe perfectly cured, by applying a potential cauſtic to the neck, by large doſes of amber oil, by plunging one of them into a river, and throwing buckets of cold water upon the other.

Theſe inſtances may, perhaps, be conſidered as giving ſome confirmation of what Dr Ruſh has ſaid concerning the nature and treatment of the diſeaſe with the human ſpecies.

XII.

XII.

The antiſeptic virtues of vegetable Acid and marine Salt combined, in various diſorders accompanied with putridity; communicated in a letter to John Morgan, *M. D. F. R. S. and Profeſſor of the Theory and Practice of Phyſic in Philadelphia. By* Wm. Wright, *M. D. F. R. S. of Trelawney, in Jamaica.*

DR WRIGHT tells us, that having experienced the virtues of the vegetable acid and marine ſalt, when combined, he has publiſhed his obſervations on this ſubject, with the ſincere wiſh, that the remedy may prove as beneficial to mankind in general, as it has been to many of his patients, in Jamaica.

He gives the following direction for preparing this remedy. Take of lime-juice, or lemon-juice, three ounces; of marine ſalt as much as the acid will diſſolve; of any ſimple diſtilled cordial water one pint; and of loaf-ſugar a ſufficient quantity to ſweeten it. The doſe

doſe of this mixture muſt, he tells us, be proportioned to the age and ſex of the patient, and to the violence of the diſeaſe.

He obſerves, that from Geoffroy's table, it appears that the foſſil alkali has a greater affinity with the marine than with the vegetable acid. He finds, however, that the marine ſalt readily diſſolves in lime-juice; that it throws up a white ſcum to the ſurface; and that on applying the ear near the veſſel where the mixture is made, a ſlight hiſſing may be heard, ſimilar to what occurs on the mixture of acids and alkalines. From this, he thinks it probable that part of the marine ſalt is decompoſed. That vegetable acids and marine ſalt are antiſeptic, has, he obſerves, been long known; but theſe effects when mixed, he conſiders as a late diſcovery. Without farther preface, however, he next proceeds to mention particular diſeaſes, in which this remedy has been adminiſtred with advantage.

Dyſentery, he obſerves, is a very frequent diſorder in Jamaica, and other Weſt-India iſlands. Sometimes it is epidemic, eſpecially in rainy reaſons, and when proviſions are ſcarce. After particularly deſcribing the ſymptoms which

which attend dyſentery, and eſpecially thoſe which occurred in 1771, he obſerves, that it proved fatal to many people both young and old, though treated according to the moſt approved methods of cure. And the loſs of ſeveral of his patients convinced him of the neceſſity of uſing antiſeptics early in the diſeaſe.

In the treatment, a vomit ſeemed neceſſary at firſt to clear the ſtomach, and ſome gentle cathartic to carry off part of the offending matter by ſtool. But the action of theſe, though mild, often, he obſerves, increaſed the proſtration of ſtrength, and rendered the ſtools ſooner bloody; nor did he find opium of any real uſe. Simarouba, with ſome, ſeemed to have a good effect, but with others it could not be retained on the ſtomach.

From a conſideration of the antiſeptic effects of ſea-ſalt and the vegetable acid, Dr Wright was induced to try their effects united in the manner mentioned above. This combination acted, he tells us, like a charm. And from the uſe of it, he found, that the frequency of the ſtools, the gripes, and the teneſmus ſoon wore off. The ſtools ſoon became natural in conſiſtence and quantity; the ſpirits, ſtrength, and appetite returned,

returned, and the patient was reſtored to health in a few days. He found this medicine equally ſerviceable in diarrhœas.

The remittent fever, he obſerves, is by much the moſt common one which occurs within the tropics. For an accurate and juſt deſcription of it, as well as for a ſimple and eaſy method of cure, he refers to the writings of Drs Cleghorn and Lind. But he remarks, that theſe fevers are often attended with diarrhœa, with diabetes, and ſometimes with a copious diſcharge of ſaliva, as if mercury had been previouſly given. In ſuch circumſtances, he has never found the Peruvian bark of ſervice. But a few glaſſes of the mixture mentioned above fully anſwered his intention, not only of removing theſe ſymptoms, but the fever alſo at the ſame time. After this, the Peruvian bark, taken in the ſame mixture as a vehicle, effectually ſecured the patient from any relapſe.

Another diſeaſe, which has frequently occurred to him in the courſe of his practice, is the belly-ach, with inflammatory ſymptoms. This diſeaſe, he has found, yield with difficulty to the common practices of blood-letting, emetic tartar, mercurial purgatives, caſtor oil, diluents

diluents with nitre, fomentations, and clyſters. He has obſerved in many caſes, that after moſt excruciating belly-achs, the ſtools were liquid, white, ſmall in quantity, and very fœtid. The patients, worn out with pain, grew diſpondent, fell into clammy ſweats, and were very reſtleſs. They complained of a bad taſte in their mouths, their tongues were much furred, their breath offenſive, and they had a great propenſity to vomit. Dr Wright formerly attempted relief from theſe threatning ſymptoms, by exhibiting Peruvian bark in various forms, in conjunction with claret wine. By theſe he thinks that he often ſaved his patient, tho' he ſometimes failed of ſucceſs. But when ſuch caſes now fall under his care, he has immediate recourſe to the antiſeptic mixture, and he has not been diſappointed of ſucceſs in any caſe in which he has hitherto uſed it. On its uſe, the ſtools, he tells us, become leſs frequent, and of a better conſiſtence; the cold ſweats diſappear, and the ſpirits ſoon return with an appetite for food.

In June 1770, the putrid ſore throat made conſiderable havock, both among adults and children in Jamaica. After deſcribing the ſymptoms with which this affection was attend-

ed, Dr Wright obſerves, that antimonial wine, with cordials and nouriſhing diet, ſucceeded beſt, till the ſloughs or ſpots were removed or ſeparated. The Peruvian bark then completed the cure. But in all caſes which were accompanied with diarrhœa, a frequent attendant of this affection, he gave the antiſeptic mixture with ſucceſs.

In all diſeaſes where a gargle is neceſſary, he employs the above mixture in preference to any other. And he finds, that it ſpeedily cleanſes the tongue, gums, and fauces, and ſweetens the breath.

In the preparation of this mixture, where lemons and limes cannot be had, he thinks that vinegar, or the cream of tartar, may be ſubſtituted in their place.

From the obſervations that have been offered above, Dr Wright thinks it evident, that this medicine is poſſeſſed of conſiderable antiſeptic powers, and that its virtue conſiſts in correcting the peccant matter in the ſtomach and inteſtinal canal.

If this remedy ſhall be found equally ſucceſsful in the hands of others, in thoſe diſeaſes where there is an evident putrid tendency, the intro-

introduction of it into practice will doubtleſs be conſidered as an important diſcovery.

XIII.

Obſervations on the Typhus, or low contagious Fever, and on the means of preventing the production and communication of the diſeaſe. By D. Campbell, *M. D.* 8*vo.* London

IN a ſhort preface to this treatiſe, Dr Campbell aſſigns the following reaſon for the publication of it. A few years ago, he tells us, a Diſpenſary was eſtabliſhed in Lancaſter, for furniſhing the poor with medical aſſiſtance. During the laſt three years, a contagious fever has prevailed among thoſe perſons who were the objects of this inſtitution, and alſo at ſome neighbouring cotton-works, in conſequence of which, a great variety of caſes of this complaint fell under his notice. In the courſe of this practice, he has ſo frequently ſeen the exhibition of opium attended with good effects, that he conceived it to be a duty he in ſome

meaſure owed to ſociety, to point out the particular ſtate of the diſeaſe, and the doſe in which he has found this medicine uſeful.

Such being the laudable object of the preſent publication, we reckon it leſs neceſſary to give any very particular account of the obſervations with which we are preſented in the three firſt chapters of this treatiſe, but ſhall confine our analyſis principally to his obſervations with regard to the cure which is contained in the fourth chapter. We may only obſerve, that in the firſt chapter he treats of the circumſtances which give riſe to the typhus, or low contagious fever. And he conſiders it as an incontrovertible fact, that this fever is apt to be produced in conſequence of perſons reſiding in apartments where there is not a ſufficiently free circulation of air, eſpecially if crouded together, and accompanied with neglect of cleanlineſs, and a deficiency of proper food. While thoſe who labour under this diſeaſe emit a certain ſubtile effluvium, which, applied to the bodies of perſons in health, is capable of producing ſimilar ſymptoms in them. This effluvium is diſpoſed to adhere to cloathing, furniture, wool, cotton, ſilk, or the like. And by means

means of theſe the infection is often carried with greater certainty, and accompanied with more violent ſymptoms, than from the noxious effluvium which ariſes immediately from the body of the ſick perſon.

In the ſecond chapter, he treats of the means of preventing the production and communication of the diſeaſe, and of the ſteps neceſſary to be taken for eradicating it from ſuch articles as may contain the infection. With regard to the prevention of the formation of the diſeaſe in the firſt inſtance, this, he thinks, will beſt be done, by promoting a free circulation of air in the apartments where people ſleep or reſide, by the practice of cleanlineſs in all its varieties; with reſpect to perſons, cloathing, and habitations; and by the uſe of a diet ſufficient in quantity and nutritious in quality, with a competent proportion of fermented vinous or ſpirituous liquors, eſpecially if combined with moderate exerciſe and good ſpirits.

With a view of preventing the contagion from taking place in perſons unavoidably expoſed to it, Dr Campbell recommends ſtopping the noſtrils with ſnuff, tobacco leaves, doſils dipt in camphorated vinegar, and ſimilar ſub-

ſtances, upon entering places where ſickneſs prevails. Blowing the noſe upon coming out, ſmoking tobacco, chewing calamus aromaticus, tobacco, ginger, or other aromatic ſubſtances, may alſo, he thinks, be very beneficial. He adviſes alſo, that the ſaliva ſhould never, if poſſible, be ſwallowed in ſuch places; and he recommends, before entering them, the ſwallowing a ſmall portion of brandy, either in its ſimple ſtate, or impregnated with aromatic or bitter ſubſtances.

Dr Campbell next treats of the means of eradicating infection, when lodged in houſes, cloathing, furniture, or raw materials. Suppoſing a houſe or ſhip to contain the infection, every method is to be purſued to introduce and promote a free circulation of air, by opening the doors and windows, and lighting fires in open chimneys. All the varieties of cleanlineſs are to be practiſed; by ſcraping the floors of houſes, the decks and ſides of ſhips, and waſhing them firſt with ſoap lye, and afterwards with vinegar, or ſpirit of vitriol and water. The walls of houſes are to be ſcraped, and a waſh of lime and water applied; the lime being recently ſlacked, and laid on whilſt it is hot; after which,

which, the farther contagion that might eſcape theſe proceſſes is to be attempted to be removed by the proper application of fire and ſmoke. And the ſame methods of prevention and purification may be readily and effectually practiſed upon furniture, clothes, and ſimilar articles.

After theſe obſervations on the low contagious fever in general, Dr Campbell, in his third chapter, gives a very diſtinct and minute deſcription of the typhus, as it appeared in the town and neighbourhood of Lancaſter, in the years 1782, 3, and 4; and eſpecially in the cotton-works at Backbarrow, where the fever prevailed to a great degree. This diſeaſe, in its attack, progreſs, and termination, ſeems to have differed ſo little from the low, or typhus fever, as deſcribed by other authors, that we think it unneceſſary to enter into particulars, eſpecially as Dr Campbell's deſcription hardly admits of any abridgement.

In the fourth chapter, Dr Campbell treats of the cure of this affection. Conſidering this fever to be perfectly analogous to that which attends the ulcerated ſore-throat, he ſet out with the ſame plan of cure as he had experienced to be ſucceſsful in that diſorder. And

upon this principle, holding evacuations as pernicious, and tending to increaſe that ſtate of debility which gave a dangerous tendency to the complaint, he endeavoured to ſupport the ſtrength of the patient by means of tonic and cordial medicines, and a nutritious diet. With this view, he had recourſe to Peruvian bark in ſubſtance, and in as large doſes as the ſtomach would bear: wine was given freely, either by itſelf, or mixed with water, ſagoe, or gruel. In general, an ounce of the bark, and about a bottle of wine, was as much as the patient could conveniently take in one day. But if it was productive of relief from ſickneſs, faintneſs, or other ſymptoms, the doſe was never ſtinted, but proportioned to the recurrence of faintneſs, and other ſymptoms of debility.

If diarrhœa occurred, that evacuation was checked by the Confectio Japonica; for while he conſidered looſeneſs as a morbid and dangerous ſymptom, he viewed a coſtive habit as being a favourable occurrence. Indeed he ſeems to be much leſs anxious than moſt practitioners, to obtain a regular diſcharge by the belly. He tells us, that he has frequently ſeen patients three or four days without a ſtool, and

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no bad conſequences enſue. That no bad conſequences were obvious, may indeed be true. But can we from thence infer, that none took place? Might not the ſame obſervations which Dr Campbell has here applied to a bound belly, be applied alſo to want of cleanlineſs? Dr Campbell muſt, we are perſuaded, have met with many inſtances, where, though there was a very great neglect of cleanlineſs, yet it might be ſaid that no bad conſequence enſued. Notwithſtanding this, however, Dr Campbell has, as we think, with the greateſt propriety ſtrongly recommended attention to cleanlineſs in all its varieties. From this circumſtance, we ſhould naturally have inferred that he would have been anxious to prevent the retention of filth in the inteſtinal canal: For ſurely no more is to be dreaded from the evacuation of highly putrid feculent matter from the inteſtinal canal, than from the removal of filth from the ſurface. The one is as little an evacuation from the ſyſtem as the other. And, in our opinion, he who enforces the practice of cleanlineſs in all its varieties, will not allow a load of highly putrid matter to be retained for ſeveral ſucceſſive days in the rectum. We think this obſervation the

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rather neceſſary, becauſe Dr Campbell, in the ſummary view which he gives of his practice in the end of this chapter, is entirely ſilent with regard to any direction for obtaining a regular diſcharge by the belly; and becauſe there are ſome who are bold enough to aſſert that no bad conſequence ariſes, though the patient have no ſtool for eight, or even ten days ſucceſſively. An event which will more readily take place, if an opiate be given every night, and no practices employed to obviate coſtiveneſs.

When the pain of the head increaſed and became troubleſome, Dr Campbell tells us he has often ſeen it relieved by rubbing the forehead, temples, &c. with a mixture of camphorated ſpirit of wine, and vitriolic æther. But if no relief was obtained by this, and a tendency to delirium appeared, he found the application of bliſters often of ſervice in moderating or removing theſe ſymptoms.

This courſe, Dr Campbell aſſures us, was attended with moſt evident ſervice when the ſymptoms were moderate; and the delirium, if any occurred, was rather of the mild, low, and muttering kind, in oppoſition to a reſtleſs uneaſy ſtate, attended with quicker motions; when the

the tongue was moiſt and furred, or aphthæ appeared in oppoſition to a hard or dry tongue; when there were petechiæ, or hœmorhages, and when the marks which characterize debility were particularly ſtriking. But in the progreſs of the diſeaſe, this plan of cure appeared inadequate to the removal of a particular ſet of ſymptoms, which frequently appeared. This ſet of ſymptoms he deſcribes in the following manner.

After the ſymptoms of the firſt attack, ſuch as laſſitude, ſhivering, pains in the back, limbs, and head, the patient takes his bed; his nights are paſſed without ſleep; or if he falls into a ſhort ſlumber, he awakes diſturbed by ſome unpleaſant dream; he ſtarts up, and wants to get out of bed; he is continually turning and changing his poſture; complains of pain and confuſion in his head; of noiſe in his ears, and thirſt. His tongue is either dry, and hard, or covered with a thick diſagreeable furr; his eyes begin to grow muddy, and aſſume a dull look; his pulſe is about 120 ſtrokes in a minute, and ſmall; the ſkin dry, or bedewed with partial ſweats, which produce no alteration of the complaints. Theſe ſymptoms continue and grow more alarming; uneaſy days are ſucceed-

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ed by reſtleſs nights; the patient is exhauſted by pains, and by watching; the inclination and ability to take nouriſhment diminiſhes; the delirium, which for a while only took place on coming out of his ſlumbers, is more conſtant; and if ſome means cannot be found to interrupt the progreſs of the diſeaſe, ſlight convulſions, total refuſal of food, and inſenſibility, are certain to enſue; which, with cold extremities, and involuntary evacuations, cloſe the ſcene.

In this ſtate, Dr Campbell, having frequently ſeen all the uſual practices exhauſted without ſucceſs, had recourſe to opium. And he tells us, that, after trial, he can venture to recommend it as a moſt valuable medicine, where the brain is ſo much affected that delirium actually exiſts; but particularly for removing, or at leaſt greatly relieving that reſtleſs and uneaſy ſtate which is ſo apt to exhauſt the patient with thirſt, pain, and watching, and to terminate in delirium: in ſhort, for mitigating thoſe ſymptoms which give a violent form, and dangerous tendency to the diſeaſe.

When Dr Cambell began this practice, he was anxious to ſee what authorities could be brought in ſupport of it, and in what doſes it had

had been given in fevers, ſtrictly ſo called. Accordingly he here preſents us with the ſentiments of Sydenham, Doleus, Boerhaave, Van Swieten, Lind, and Cullen, on the uſe of opium in proper fever. To theſe authorities Dr Campbell might, we think, with great propriety have added that of the late Dr Gilchriſt of Dumfries. For he not only ſtrongly recommends opiates in the circumſtances mentioned by Dr Campbell, but alſo coincides with his ſentiments in adviſing their being given early in the diſeaſe. In proof of this, we ſhall here quote his own words, from his obſervations on the low nervous fever, publiſhed in the Edinburgh medical eſſays about forty years ago.

" When the diſeaſe ſeizes with greater ſigns of acuteneſs or inflammation, as vomiting, looſeneſs, heat, thirſt, ſighing, and ſtrong depreſſion (as this hurry of ſeeming inflammatory ſymptoms is more or leſs, ſo will the faintneſs and anxiety be.) When this is the caſe, I ſay, a gentle opiate, given in ſome refreſhing julep, will have a happy effect to allay theſe overbearing ſymptoms. Theſe ſymptoms then happen only the firſt days; for by the time the patient is delirious they are pretty much gone, and he

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is not ſenſible of them. This is the proper time to try opiates, leſt by the urgency of ſuch ſymptoms greater be brought on. A prudent uſe of them might hinder a delirium from coming ſo ſoon as would otherwiſe happen. This would be no ſmall advantage, for the patient's life depends upon the delirium coming ſooner or later. When the the ſeizure is with moderate ſymptoms, there is little occaſion for them till the diſeaſe be farther advanced, and a delirium comes on with watching, raving, and a dreadful train of nervous ſpaſmodic ſymptoms, which will not be commanded by a leſs powerful remedy than opium *."

We have the rather made this quotation from Dr Gilchriſt's Eſſay, becauſe, ever ſince its publication, both wine and opium, ſo ſtrongly recommended by him, have been very frequently uſed in typhus fever, by many of the firſt practitioners at this place. While the former is employed as the beſt cordial for counteracting the anxietas febrilis, and ſupporting the vis vitæ, recourſe is had to the latter in every ſtage of fever, whenever it becomes neceſſary to procure ſleep, to mitigate pain, to reſtrain

* Edinburgh Medical Eſſays. Vol. IV. P. 321.

reſtrain looſeneſs, or to allay convulſive agitations.

Theſe practitioners do not, indeed, like ſome others, expect from opium a total annihilation of the diſeaſe. This is an effect they have not obſerved to reſult from it, and in this their ſentiments preciſely coincide with thoſe of Dr Campbell. He obſerves, that the effects of opiates were ſometimes, indeed, a remarkable ceſſation of the febrile ſymptoms, but in general, that no conſiderable alteration in the pulſe was occaſioned by them; but rather a mitigation of thoſe more violent affections, which threatened to bring on delirium, or to exhauſt the patient by pain, ſickneſs, or watching; that they ſeemed to keep the diſorder within bounds, and induce it to go through its ſtages in a more mild and leſs dangerous form.

Nothing, Dr Campbell tells us, could be more ſtriking, than the contraſt which might be perceived in a morning between two patients in ſimilar ſituations, one of whom had taken the opiate the preceding night, and the other had not. The ſame obſervation, ſays he, might alſo be made upon a patient who by any accident had omitted the opiate in the evening,

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after having taken it a few preceding nights. In the one caſe, you would hear that the night had been paſſed quietly and eaſily, and find the patient in the morning refreſhed by the reſt he had obtained, and with few complaints. In the other, that he had been reſtleſs, diſturbed, and uneaſy, with a continuance or aggravation of all the diſagreeable ſymptoms.

That the repreſentation here given by Dr Campbell will often hold, we are very far from denying; and in practice we have often obſerved the ſame thing. But from repeated experience we may venture to aſſert, that he who expects it will hold uniformly or invariably, will find himſelf egregiouſly miſtaken. We have met with many inſtances of patients labouring under fever, who, as long as they took opiates at bed-time, paſſed the night in a reſtleſs and uneaſy ſtate, but upon the opiate being omitted had a quiet and eaſy night. And we need hardly remark, that there are ſome peculiar conſtitutions where opium, whatever be the form or doſe under which it is exhibited, never fails to produce an uneaſy ſenſe of heat, a diſtreſſing thirſt, and a diſagreeable confuſion of head, approaching to delirium. Theſe circumſtances,

ces, particularly the delirium, are augmented in proportion to the quantity taken; and with ſome it is only by exhibiting it, either in ſmall doſes combined with acid, or under the form of watery extract, that we can obtain from it the ſedative effect of inducing a quiet ſleep.

After Dr Campbell's general obſervations on opium, he next ſpeaks of the doſe, and manner of exhibiting this medecine. Opium, he juſtly obſerves, requires the ſame precautions, in its uſe, with all other medicines poſſeſſing particularly active qualities; for whilſt in too ſmall quantity the deſired effects are not produced, ſo in an over doſe it may be converted into a poiſon. To excite a juſt degree of caution, he points out thoſe remarkable varieties, with reſpect to the quantity of this medicine, which may be borne with impunity from habit, from diſeaſe, or from other cauſes. From theſe circumſtances, quantities almoſt incredible, when we conſider the influence which it in general has, may be taken without inconvenience. Upon the authority of a practitioner of unqueſtionable veracity, we have been informed of a lady in Edinburgh, who, for a conſiderable time before her death, took li-

quid laudanum to the extent of twelve ounces in the courſe of twenty-four hours. Dr Campbell, fully aware of inſtances of this nature, points out, however, the very great danger of truſting to them, and mentions ſeveral caſes, ſome of which fell under his own obſervation, where doſes, which could not be eſteemed very large, terminated in death. He gives a particular relation of one caſe, of a robuſt man, where eighty drops of liquid laudanum, repeated four times at the diſtance of an hour between each doſe, proved fatal; although in all it contained only thirteen grains of ſolid opium, and although that quantity had before been taken in a ſolid form without any bad effect. In another caſe, two drams of liquid laudanum, which was intended to be taken in a few drops every night at bed-time, to allay a tickling cough, being by miſtake exhibited at once, produced comatoſe ſymptoms, which terminated fatally in twenty-four hours, tho' at a moderate computation the whole of this quantity could not exceed 200 drops.

With theſe conſiderations in his mind, Dr Campbell began to exhibit opium. As it is when conjoined to camphire, ſo efficacious in producing a determination to the ſkin; and as

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this medicine has been conſidered as uſeful in theſe fevers, he at firſt gave it in the following formula:

R. Opii pur. gr. i. ad griſs.
Camphoræ gr. x. ad gr. xv. f. bol. hora decubitus ſumendus.

This doſe was attended with all the wiſhed-for effects, when the diſeaſe was mild, and in its early ſtages; but where the ſymptoms were violent, it was not adequate to the purpoſe. The formula which he then uſed was as follows:

R. Tinct. Theb. guttas lx.
Julep e Camphora unc. iſs. M.

This was ſometimes given with the addition of thirty or forty drops of antimonial wine, eſpecially when the tongue was dry and hard, or the thirſt conſiderable. Of this mixture, the patient was directed to take two thirds in the evening, and the remainder at the end of two hours, if ſleep, or at leaſt reſt did not enſue. And he even ſometimes found it neceſſary to give twenty or thirty drops more of tinctura thebaica at the end of other two hours. For he remarks, that unleſs the ſedative effects of the opium be produced, he never ſaw any good

conſequence from the medicine. In caſes of children, the doſe was diminiſhed in proportion to their reſpective ages. But in general, he gave from 20 to 25 drops to thoſe that were from twelve to fourteen years of age. He was ſometimes obliged to repeat the doſe in the morning. But in moſt inſtances, he tells us, that the truce obtained by the opiate given in the evening made the ſucceeding day paſs on tolerably eaſily.

Dr. Campbell concludes this chapter with ſome remarks on the practices which he employed for obviating anomalous ſymptoms. Convulſive twitchings of the arms generally diſappeared from the uſe of muſk and camphire. But this being an expenſive medicine for the poor, it was found that the ſame effect was obtained from a mixture of the tinctura fœtida, and ſpiritus volatilis aromaticus. When pains attacked the ſides, affecting reſpiration, recourſe was had to a bliſter. Hæmorrhages from the noſe were moſt effectually checked by doſils of lint moiſtened in vinegar, and then rolled *in* powder of allum, thruſt up the noſtrils.

After this account of the practice which he ſucceſs-

ſucceſsfully employed, our author, in the fifth, and laſt chapter, offers ſome conjectures on the proximate cauſe of the diſeaſe. Here, after ſome very judicious remarks on the fleeting and viſionary nature of medical theories, and on the prejudicial conſequences even, which have frequently reſulted from them, he propoſes his own conjectures with great diffidence. He thinks, that the remote cauſes induce a ſtate of debility in the ſyſtem; and that while the deliberating power influences the whole ſyſtem, the veſſels of the brain are, from the peculiar laxity of their fibres, apt to be affected with a greater proportional loſs of tone than happens in other parts of the body; and hence become diſtended with an unuſual quantity of fluids, which, from their increaſed bulk, and ſubſequent effuſions and ſuppurations, occaſion headach, irritation, delirium, and death.

He admits, however, that there ſeems to be ſomething in the effect of contagion, and the other cauſes which produce this fever, ſuperadded to that debility which ſo evidently occurs, and the obviating of which is at preſent the great object of our practice; becauſe, if it acted merely by producing a certain degree

of debility in the ſyſtem, it would naturally follow, that whenever debility was induced to that particular degree, by any means, the diſeaſe in queſtion in one ſtate or other would enſue. This, however, is not the caſe; and beſides, upon this principle, recovery, he obſerves, would be impoſſible, as no degree of debility can be more extreme than that which was ſometimes ſeen when the fever left the patient, and yet nothing that could be denominated diſeaſe then exiſted. It is, he thinks, probable, that the volatile ſomething which iſſues from the diſeaſed bodies, or infected clothes, and whatever elſe gives riſe to this fever, is abſorbed into the ſyſtem, where it continues to act on the irritable and muſcular fibres, by deſtroying their tone, and perhaps circulates with the fluids during the courſe of the diſeaſe; but that it is of too ſubtile a nature to be the object of our ſenſes, much leſs at preſent of our practice, otherwiſe than in tracing or obviating its effects.

Of this theory we do not conſider it as our province to offer any opinion. We muſt, however, candidly acknowledge, that we have yet met

met with no theory of fever which does not to us appear both inadequate to the explanation of the phænomena of the diſeaſe, and liable to unſurmountable objections. But while we view Dr Campbell's theory in this light, we are of opinion that the directions which he has given with reſpect to the practice may often be followed with advantage and ſucceſs. And he is juſtly intitled to praiſe, for having preſented the public with the reſult of extenſive and accurate obſervation.

XIV.

Clinical Obſervations on the uſe of Opium in Low Fevers, and in the Synochus, illuſtrated by caſes; with ſome previous remarks on the Epidemic Fever which prevailed at Oxford and in the neighbouring counties. In a letter to John Badeley, *M. D. Phyſician at Chelmsford, Eſſex. By* Martin Wall, *M. D.* Lord Litchfield's *Clinical Profeſſor, one of the Phyſicians to the Radcliffe Infirmary, and late Fellow of New College.* 8*vo.* Oxford.

AFTER having ſaid ſo much reſpecting the uſe of opium in the laſt article, it will not now be neceſſary to be very minute in our analyſis of the preſent treatiſe. But as the proper treatment of fevers is unqueſtionably a ſubject of the utmoſt importance in medicine, and as we are here furniſhed with the faithful reſult of obſervations made in actual practice by an attentive and diſcerning phyſician, we truſt that a ſhort view of them will not be unacceptable

to

to our readers, eſpecially as Dr Wall not only recommends opium in the low fever, or typhus, but alſo extends its uſe to the ſynochus, or that fever at the commencement of which there are evident marks of the inflammatory tendency. And we muſt own, that we cannot help adopting his opinion *, that the aphoriſm "*opium non quadrat genio inflammationis*," has been extended much too far to the excluſion of this valuable medicine, where it might be employed with very great advantage; and which, indeed, is of ſuch importa ce in the practice of medicine, that, to uſe the words of Dr Sydenham, we may with truth ſay, "Sine illo, "manca ſit et claudicet medicina."

The obſervations with which we are here preſented by Dr Wall are, the reader may naturally infer from the title, communicated to the public under the form of a letter to his intimate friend Dr Badeley. But they conſiſt principally of a diſtinct and minute relation of ſeventeen

* On this occaſion, we beg leave to recall the attention of our readers to a very excellent paper, by Dr Hamilton of Lynn Regis, publiſhed in the Ninth Volume of the Firſt Decade of our Commentaries.

venteen different caſes, which Dr Wall treated in the courſe of his practice. And though this mode be indeed liable to the charge of prolixity, yet it has alſo its advantages; among others, that of enabling the reader to judge for himſelf is not the leaſt conſiderable. And we muſt here remark, that notwithſtanding a high deference for Dr Wall's judgment, we cannot altogether agree with him in the concluſions which he has drawn on ſome occaſions from the caſes here related.

To the caſes themſelves, Dr Wall has prefixed a general account of the epidemic fever which prevailed in Oxford and its neighbourhood in 1785-6, the period during which all the caſes afterwards deſcribed occurred. But the particulars of this deſcription do not admit of abridgement; and indeed that is hardly neceſſary, ſince, as he himſelf very juſtly obſerves, it had much analogy with the ſlow nervous fever deſcribed by Dr Huxam, and many other writers.

Though the occaſional cauſe of this fever was not always eaſily traced, yet Dr Wall was inclined to think, that, in every inſtance, it was to be aſcribed to contagious miaſmata. And he

he has ſeen, he tells us, many inſtances of the truth of the remark made by Dr John Hunter, Dr Ruſh, Dr Blane, and others, that the influence of this contagion is ſometimes increaſed in the winter, by the confinement of the effluvia of diſeaſed animal bodies. He offers the following conjecture, reſpecting the influence of cold, particularly when conjoined with moiſture. The contagious effluvia exhaled from their ſources are, he tells us, ſuſpended round the place or body which ſupplied them, like an atmoſphere, by a ſort of ſolution in a watery vapour. An animal body, immerſed in, or expoſed more partially to the contact of this infectious atmoſphere, is liable to abſorb theſe noxious particles by the ſkin, by the lungs, or by the ſtomach; by one or more of theſe inlets into the ſyſtem, and poſſibly by all of them. If no particular cauſe of conſtriction or reſtraint acts upon the excretory organs, theſe infectious particles are probably again diſcharged harmleſsly into the air, with the excrementitious or uſeleſs fluids. But if the excretories become conſtricted, while theſe particles are accumulated in the ſyſtem, they are then allowed time to ferment and diſſeminate them-

themſelves, to exert their malignant qualities, and to convert the fluids of the body into their nature. Whether there be any truth in this explanation or not, it is at leaſt certain, that the typhus fever is as frequent, and as dangerous an occurrence, during the winter, as it is during the ſummer months. And all the caſes which our author has here related, happened between the end of October and the beginning of March.

To this account of the epidemic at Oxford, Dr Wall ſubjoins ſome obſervations on the ſynochus of noſologiſts, or that fever in which inflammatory and typhorid ſymptoms are conjoined. This, which begins with ſlight inflammatory ſymptoms, and ſoon ends in the debility of typhus, he conſiders as the moſt common form of continued fever in this country. He thinks, that in moſt caſes it originates from contagion, the operation of which is at firſt diſguiſed and modified, by a ſlight degree of inflammatory diatheſis; either previouſly exiſting in the ſyſtem of individuals attacked by the diſeaſe, or induced by the concurrence of certain occaſional cauſes, particularly cold, co-operating at its acceſſion with the contagious effluvia.

In

In the epidemic which occurred at Oxford, during the period we have mentioned, and in which there were many inſtances both of typhus and ſynochus, Dr Wall ſoon ſaw that bad effects reſulted, both from conſiderable evacuations, either by the lancet, or by purgatives, and alſo from nitrous medicines, and other ſaline neutrals. The ſame effect ſeems alſo followed from James's powder, and other antimonials, while the Peruvian bark, cordials, and antiſeptics, appeared to have merely ſupported the ſtrength of the patient, and given an opportunity to the vis medicatrux naturæ to exert its ſalutary influence.

Finding this to be the caſe, from the obſervations of Dr Campbell and others reſpecting the benefits derived from opium, and from the analogy of its uſe in intermittent fevers, where he obſerves that it has an almoſt ſpecific effect, in calming the agitation of the ſpirits, in moderating heat, in abating the quickneſs of the pulſe, relieving the pain and headach, inducing calm refreſhing ſleep, and ſhortening the paroxiſm when it is given at the acceſſion of the hot fit, he was led to have recourſe to the uſe of this medicine. And the caſes here related

related are intended to point out the propriety of this practice.

The firſt patient whoſe caſe is deſcribed had been blooded and purged in the beginning of his complaint. About the tenth day of his diſeaſe recourſe was had to draughts, containing xv drops of tinctura thebaica, and xxv of the liquor Anodynus Hoffmanni. This produced ſome alleviation of his ſymptoms. But the opiate being omitted for two days, he became much more reſtleſs, and ſhewed greater ſymptoms of debility, which, however, went off on the repetition of the opiate. By ſlow degrees he recovered his health and ſtrength; but he continued, we are told, near four weeks in very conſiderable danger.

In the ſecond caſe, after an emetic, a bliſter, and James's powder, and after the diſeaſe had continued, as we may preſume, for eight or ten days, in conjunction with five grains of James's powder, and fifteen of the confectio cardiaca, the patient got half a grain of the thebaic extract. This doſe was adminiſtrated every ſixth hour, and a draught with camphorated julep, ſpirit of Mindererus, and Hoffman's anodyne liquor interpoſed. Upon this, though the ſtate of the

the intellect, the appetite, thirſt, &c. continued nearly as before, yet the pulſe became more moderate, there was more diſpoſition to ſleep, and the urine let fall a good ſediment. Theſe favourable appearances, Dr Wall tells us, he could not but impute to the operation of the opiate. With the continuance of the opiate he had afterwards recourſe to bliſters, to eſſence of antimony, to Peruvian bark, Virginian ſerpentaria, and ſome other medicine. The patient gradually recovered his health, but was confined to bed little leſs than four weeks. Nearly the ſame event took place in the third and fourth caſes, viz. a recovery after a tedious illneſs.

In the fifth caſe, after the previous uſe of tartar emetic, infuſion of ſenna, Dover's powder, James's powder, eſſence of antimony, vitriolic æther, &c. recourſe was had to an opiate on the tenth day of the patient's diſeaſe. But for two days the pulſe continued very quick and very feeble, ſo that ſometimes it could hardly be felt, notwithſtanding the uſe of confectio cardiaca, tincture of ſerpentaria, and fomentation of the lower extremities. But on the thirteenth, after the application of a bliſ-

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ter the back, with the continuance of the tinctura thebaica, the pulſe became more ſtrong, and leſs quick, with a conſiderable remiſſion of the other ſymptoms. After this, ſhe continued gradually to recover, and was ſo well, by the twenty-fifth day of her diſeaſe, that Dr Wall diſcontinued his attendance.

The ſixth caſe, though in other reſpects very ſimilar, was more tedious; the patient being attacked on the 12th of December, and not well enough to be diſcharged till the middle of February.

From theſe caſes, Dr Wall was not only convinced of the efficacy of the opiate, but was alſo inclined to ſuſpect that this efficacy was reſtrained by the antimonials which were employed in conjunction with it. He therefore determined to give it a fair trial without the antimonal. And this opinion, he thinks, was eſtabliſhed by the five caſes which follow. Theſe caſes are indeed conſiderably ſhorter than the preceding ones. But to us we muſt acknowledge it does not appear by any means proved in a ſatisfactory manner, that this was effected by means of the opiates. And it is to be obſerved, that in two of them, viz. the ſe-

venth

venth and tenth, antimonials were uſed, James's powder being given in the one, and emetic tartar in the other. We need hardly obſerve, that fevers, treated in preciſely the ſame manner, will be very various in their duration, when no good reaſon can be aſſigned for the difference. But as Dr Wall conſiders the laſt of theſe five caſes, viz. the eleventh, as affording the moſt full and ſatisfactory evidence of the efficacy of the practice inculcated, we ſhall here preſent it to our readers in his own words.

Mr B—, a gentleman of the Faculty, diſtinguiſhed by his abilities, induſtry, and diligence, was attacked with febrile ſymptoms on the 21ſt of January 1786. As he had been obliged to ſleep in a cold room, rendered very damp by the melting of ſnow, his friends imputed his diſorder to the influence of cold only. But with more ſagacity, and probably with more truth, Mr B— was diſpoſed to attribute it to contagion. He allowed, that the cold might have co-operated as an occaſional exciting cauſe. When I firſt ſaw him, ſays Dr Wall, about ſeven in the evening, on the 22d of January, I could not but adopt his idea of his ſituation, eſpecially as I knew that his active

and regular attendance, in ſeveral places where contagious effluvia conſtantly abounded, expoſed him every day to their noxious influence. He complained of violent pain in the head, the loins, and all over the limbs. He had no diſpoſition to ſleep. His tongue was dry and white. His ſkin very hot. His eyes tender and watery. His pulſe about 130, and extremely feeble.

As I had formerly had much converſation with this gentleman, concerning the uſe of opium and ætherial fluids in fevers, I was not ſurpriſed to find him very ſolicitous to try their efficacy in his own caſe. From a conviction of the propriety of their uſe, I ordered him immediately Æther. vitriol. Tinct. theb. *aa* gt. xxx in a little mint water. My attention being much excited and engaged by this caſe, I ſaw my patient about one in the morning, and found him much more compoſed. He had had a little ſleep. His pains were mitigated. His pulſe was about 120, and much more ſtrong. His ſkin leſs hot and more open. I gave him myſelf another draught with æther. gt. xxx. tinct. theb. gt. xx.

January 23. His pulſe was reduced to 100.

He

He had ſlept a good deal, and found himſelf relieved. His urine depoſited a good ſediment. He was ordered during the day to take a ſaline draught, with æther. Spt. vol. aromat. & Tinct. ſerpent. every fourth hour.

In the evening, his pulſe was reduced to 84, and had, every eighth or ninth ſtroke, an intermiſſion. I will not pretend to point out the particular circumſtance to which this ſymptom ſhould be aſcribed. Some may impute it to the medicines employed. It was more probably owing to the natural conſtitution of the patient. As the body was diſpoſed to be coſtive, an emollient glyſter was injected, and, after its operation, a draught given, with xl drops of æther, xxv of tinct. theb. and xv of ſpt. vol. aromat.

January 24. He had a very good night. All the febrile ſymptoms being now removed, and the urine depoſiting a good ſediment, he was ordered the bark four times a-day.

On the 26th, he was well enough to walk out, and on the ſucceeding day began to return to his occupations.

We muſt own, that this caſe does not appear to us to afford that ſatisfactory teſtimony

of the efficacy of opium which Dr Wall is diſpoſed to imagine. Suppoſing this to have been decidedly an example of a contagious fever, is it at all uncommon to find inſtances of that diſeaſe, where infection alone could be ſuſpected to operate as the cauſe, running their courſe in a ſimilar manner, and in as ſhort a period, though neither opium, æther, volatile alkali, aromatic oils, ſerpentaria, bark, nor indeed any other medicine was employed?

It will not, we preſume, be diſagreeable to our readers, that we here mention a more ſimple, and not leſs ſucceſsful mode of treating infectious fevers than is commonly adopted, and which was lately put in practice at this place. One of the children belonging to the Orphan Hoſpital at Edinburgh, happening to viſit a relation ill of a fever, was ſoon after affected with the ſame diſeaſe. The progreſs of the contagion, thus introduced into the hoſpital, was ſo rapid, that in the ſpace of a few weeks, notwithſtanding many precautions to prevent it from ſpreading, of 130 children, contained in the hoſpital, 85 were ſeized with it. With regard to medical treatment, they were under the care of a very able and ingenious practi-

practitioner, Mr Kerr, ſurgeon at this place. Moſt of them had an emetic as ſoon as any ſymptoms of the diſeaſe appeared. During the courſe of it, the ſtricteſt attention was paid to cleanlineſs in all its varieties; the belly was kept regularly open by ſimple laxative injections; diluents were employed copiouſly, and ſometimes acidulated, while the apartments of the ſick were freely and almoſt conſtantly ventilated. Under this general treatment, though with ſome of them, the ſymptoms were alarming, the diſeaſe being, at a very early period of its progreſs, attended with petechiæ, vibices, and hæmorrhages; yet there was not one death, and in moſt of them the fever was not only extremely mild, but alſo of ſhort duration, finiſhing its courſe within the ſpace of ſeven or eight days. In not one of theſe caſes was a ſingle grain of opium employed. Beſides the children, the matron of the hoſpital, and three nurſes, alſo caught the diſeaſe; all of whom likewiſe recovered. The caſe of the matron in particular was very remarkable. As ſoon as ſhe felt that ſenſe of cold which preceded the other ſymptoms, ſhe immediately took one of thoſe emetics which had been depoſited in her

hands by Mr Kerr, to be given to the children on the firſt appearance of the diſeaſe. This vomit operated well, and without taking any thing elſe that could be called a medicine, on the fifth day from the commencement of her diſeaſe ſhe was again able to diſcharge the duties of her office. From this, as well as from many other inſtances, we own we are apt to infer, that, in the treatment of fevers, practitioners are as often apt to err, by doing too much, as by doing too little.

We mean not, however, from this to inſinuate, that opium is not frequently of very great benefit in fevers. Symptoms often occur, which will not yield to a leſs powerful medicine. And a quiet night may often have very great influence in giving an opportunity to the ſyſtem, or, to uſe the words of Dr Wall, to the vis medicatrix naturæ to exert its ſalutary power. But excepting in this way, we muſt own, that neither our own experience, nor a careful peruſal of the caſes contained in this volume, would lead us to adopt the concluſion of Dr Wall, who aſſerts, that in the low nervous fever, ſo frequently prevalent among the poor, he can

ſafely

ſafely give his teſtimony, both as to its power in curing and in ſhortening the complaint.

After the caſes of ſimple fever, Dr Wall next relates ſome in which there was reaſon to believe that the fever was complicated with ſome topical affection, by which, however, he was not prevented from uſing the opiate, and where the ſucceſs juſtified the practice. And he concludes with the hiſtory of three caſes, in which opium was employed, and where the diſeaſe terminated fatally. But notwithſtanding this, from the evident effects which followed from the uſe of the medicine, it did not, as he juſtly obſerves, loſe any part of its credit by its unſucceſsful adminiſtration.

To theſe caſes of unfavourable event, where opium was employed, he tells us, he could have added others, wherein he has given it without any decided effect. He has employed it ſeveral times in angina maligna, but has not been able to draw any poſitive inference concerning its efficacy in that form of putrid fever. He has given it in one or two deſperate caſes, and could not obſerve that it either expedited or retarded the fatal event. He has given it in others, where the patient has recovered, but

he could not preſume to aſcribe the recovery to the efficacy of the opium.

Upon the whole, though we have upon ſome occaſions expreſſed our doubts with regard to the concluſions which Dr Wall has drawn from ſome caſes, and in others, judging from our own experience, are led to form a different opinion from that which he ſeems to have adopted; yet we look upon his treatiſe as conveying uſeful information, and we hope that it will have the effect of inducing practitioners, not to deprive their patients, from any idle theories, of that alleviation of ſymptoms which opium in different modifications of fever is capable of procuring.

XV.

XV.

An Inquiry how to prevent the Small Pox, and Proceedings of a Society for promoting general Innoculation at ſtated periods, and preventing the natural Small Pox in Cheſter. By John Haygarth, *M. B. F. R. S.* 8*vo*. Cheſter.

FROM this publication, it appears that Dr Haygarth has beſtowed uncommon pains in forming a Society at Cheſter for the benevolent and humane purpoſe of preventing the natural ſmall pox. This diſtemper had, in Cheſter, been particularly fatal to the riſing generation before the eſtabliſhment of that Society; but ſince that time, from the aſſiduous care and attention of the members, and from the ſalutary regulations laid down, its ravages have been much leſſened, and in a great meaſure prevented. This circumſtance ſhould certainly have the effect of leading to ſimilar eſtabliſhments in other places. And although theſe might

might not be productive of all the ſame good conſequences as at Cheſter, yet they would unqueſtionably be attended with ſome benefit. This, however, as well as the plan on which it may beſt be obtained, will more fully appear from a particular conſideration of this treatiſe.

The learned and ingenious author ſets out, by endeavouring to eſtabliſh certain propoſitions, which are the baſis of the future regulations:

1. The ſmall pox, ſays he, are an infectious diſtemper.

This propoſition is ſo clearly eſtabliſhed by the practice of innoculation, that it is unneceſſary to bring other facts in ſupport of it.

2. The ſmall pox was never known, ſince its original commencement, to be produced by any other cauſe than infection.

This he endeavours to prove, from the following facts. The world, he obſerves, had exiſted between four and five thouſand years before hiſtory takes any notice of the diſtemper; it was originally endemic in or near Arabia, from whence all the known parts of the world received the infection. It did not appear in Greenland till 1733, being received by a native

tive who caught it at Copenhagen. In Minorca it entirely diſappeared from 1725 till 1742; that is for ſeventeen years. It was then again introduced by a Britiſh ſhip of war. In Boſton in New England, it has been epidemical only eight times ſince the firſt ſettlement of the province of Maſſachuſets; and every one of thoſe times it was evidently imported from foreign parts. At Rhode Iſland, it was never epidemical, owing to the means which have been taken to prevent it from ſpreading when introduced.

3. The variolous poiſon is ſoluble in the air.

The mode of combination between the variolous poiſon and the air, he apprehends to be by ſolution. This appears from there being no diminution of tranſparency. But ſtill that the atmoſphere is frequently impregnated with it, is evident from the diſagreeable ſmell perceptible in the chamber of a patient labouring under the ſmall pox. But though the variolous matter be ſtrictly ſoluble in the air, the atmoſphere may be ſo ſuperſaturated, that a portion of the variolous matter may be undiſſolved, and fit to impregnate a new portion of air. Hence

variolous

variolous matter is kept for years, when it is received on cotton, and put into a close-corked phial, the quantity of air in the phial not being sufficient to dissolve it.

4. If two persons be exposed, for the first time, to the variolous infection, they very rarely both escape catching the small pox; and if three persons be exposed together, they much more rarely all remain uninfected.

It has been estimated, by authors of high authority, that the proportion of mankind incapable of infection is not above one in twenty. Hence, from calculation, it appears, that it is eight thousand to one if three in a family escape when exposed to infection.

5. The period between the infection and the commencement of the variolous fever is generally from the 6th to the 14th day, inclusive, after innoculation, and this period is not much longer in the natural small-pox.

This appears, not only from the result of Dr Haygarth's own observations, and he has given several cases in support of it, but also from those of Baron Dimsdale, and the late Dr Monro.

6. Persons liable to the small pox are infected by breathing the air impregnated with the variolous

variolous miaſmes, either very near a patient in the diſtemper, from about the time that the eruption has appeared till the laſt ſcab is dropt off the body; or very near the variolous poiſon in a recent ſtate, or that has been cloſe ſhut up ever ſince it was recent.

Of theſe, while he thinks there can be very little doubt, he at the ſame time brings ſome facts very much in point to demonſtrate them.

7. Clothes, furniture, food, &c. expoſed to the variolous miaſmes, never or very rarely become infectious.

Though the contrary of his propoſition has been generally received, yet both from the theory of chemical ſolution, from the analogy of other vapours, and from facts, he is inclined to reject the common opinion; and he contends, that the variolous poiſon, in the form of ſerum, pus, or ſcab, by impregnating the air near it, is the ſole means of infection.

If this opinion be well founded, he contends, that the difficulty of prevention is leſs than on the former ſuppoſition, beyond all compariſon. The poiſon in this form may be ſeen and eaſily deſtroyed. One viſitor in 10 or 20, may poſſibly convey, out of an infectious room, ſome of the

the variolous matter capable of doing miſchief. It may accidentally adhere to ſome part of his clothes or perſon. But cleanlineſs alone would be fully ſufficient to prevent the communication of the infection, excepting by perſonal intercourſe with the patient. If this concluſion be admitted, may not the variolous poiſon, ſays he, be prevented from injuring mankind, with as much eaſe and certainty, as arſenic, laurel, or any other poiſon.

8. The air is rendered infectious but to a little diſtance from the variolous poiſon.

The ſmall pox have, in general, been ſuppoſed to infect the air of a place to a conſiderable diſtance. Hence the danger is acquieſced in as inevitable. This opinion, Dr Haygarth thinks, ſuggeſts fear where there is perfect ſafety, and prevents caution where there is the greateſt danger. Hence he is here at particular pains in ſtating the train of arguments which firſt ſuggeſted doubts concerning the truth of this opinion, and afterwards the facts which ſeem to prove that the opinion is utterly falſe. From the facts which he ſtates, it is very clear that the variolous poiſon is never propagated to any conſiderable diſtance, and that when exiſting in a houſe it is not infectious to any perſon out of it,

it, even although the doors and windows of the houſe be open. He concludes, that in a room there is the greateſt danger where the infectious poiſon is placed between the perſon liable to infection and the open air.

9. The ſmall pox may be prevented, by keeping perſons liable to the diſtemper from approaching within the infectious diſtance of the variolous poiſon.

This follows as a neceſſary conſequence of the truth of the former propoſitions.

After having thus conſidered how the ſmall pox may be prevented as a medical queſtion, he next conſiders in what manner this might be capable of a practicable application.

He thinks that the prevention of ſmall pox may be effected by obſerving the following rules:

1. Suffer no perſon, who has not had the ſmall pox, to come into the infectious houſe. No viſitor, who has any communication with perſons liable to the diſtemper, ſhould touch or ſit down on any thing infectious.

2. No patient, after the pox have appeared, muſt be ſuffered to go into the ſtreet, or other frequented place.

3. The utmoſt attention to cleanlineſs is abſolutely

ſolutely neceſſary. During, and after the diſtemper, no perſon, clothes, food, furniture, dog, cat, money, medicines, or any other thing that is known or ſuſpected to be bedaubed with matter, ſpittle, or other infectious diſcharges of the patient, ſhould go out of the houſe till they be waſhed, and till they have been ſufficiently expoſed to freſh air. No foul linens, or any thing elſe that can retain the poiſon, ſhould be folded up and put into drawers, boxes, or be otherwiſe ſhut up from the air; but immediately thrown into water, and kept there till waſhed. No attendants ſhould touch what is to go into another family, till their hands be waſhed. When a patient dies of the ſmall pox, particular care ſhould be taken, that nothing infectious be taken out of the houſe, ſo as to do miſchief.

4. The patient muſt not be allowed to approach any perſon liable to the diſtemper, till every ſcab is dropt off, till all the clothes, furniture, food, and all other things touched by the patient during the diſtemper, till the floor of the chamber, and till his hair, face, and hands have been carefully waſhed. After every thing has been made perfectly clean, the doors, windows,

dows, drawers, boxes, and all other places that can retain infectious air, ſhould be kept open till it be cleared out of the houſe.

To induce the poor to obſerve theſe regulations, he propoſes that a ſmall pecuniary reward ſhould be given to thoſe who accurately obſerve them; and he has little doubt that independent and intelligent citizens will be induced to obſerve them from motives of humanity. But in order to aſcertain with what degree of accuracy and fidelity the rules of prevention are obſerved, he thinks it neceſſary that an inſpector ſhould be appointed, whoſe office it would be to obtain information as ſoon as poſſible after the ſmall pox had appeared in a family, to give them the rules, to viſit them frequently, and to keep an exact regiſter on a plan which may include every neceſſary information that can be required to inveſtigate the progreſs of the diſtemper through a town.

To demonſtrate that the rules here propoſed are not theoretical and impracticable, Dr Haygarth ſubjoins to his inquiry, an account of the proceedings of a Society for promoting innoculation, and preventing the natural ſmall pox, in Cheſter. We are here preſented with many

detached papers of different dates; ſuch as an advertiſement ſoliciting a general meeting of the inhabitants to conſider this ſubject; the reſolutions of that meeting; the plan propoſed for a general innoculation; the propoſed regulation for preventing the propagation of the natural ſmall pox; different paragraphs in the news-papers reſpecting the Society; different addreſſes to the inhabitants of Cheſter; and reports from the Society itſelf at different times. From theſe, it appears that the obſervance of the rules propoſed had repeatedly extinguiſhed the natural ſmall pox in Cheſter, while from their general innoculations in 1780 and 81, four hundred and ſixteen children had the diſeaſe, of whom two only died after it; and in both caſes it was very doubtful whether the death was the conſequence of the operation.

After ſtating this evidence in favour of the doctrines contained in this inquiry, Dr Haygarth concludes it with an addreſs to the medical reader. In this addreſs, he ſubmits it to their deliberate conſideration, as a queſtion which it is peculiarly their duty to determine, whether it be not medically poſſible to prevent the ſmall pox? He is decidedly of opinion, that this

this might be effected. And, to correct the pernicious errors that univerſally pervade the kingdom, he contends, that no means could poſſibly prove ſo effectual, as the eſtabliſhment of ſmall-pox ſocieties to ſtop the ravages of this dreadful peſtilence. He entertains ſtrong hopes, that medical gentlemen may form ſuch aſſociations on benevolent and diſintereſted principles. It is from being ſtrongly impreſſed with the opinion, that the moſt important advantages may reſult to our country, and to mankind, from a medical combination to check the ravages of this deſtructive peſtilence, that Dr Haygarth has taken the liberty of addreſſing the gentlemen of the profeſſion moſt diſtinguiſhed for their knowledge and liberal ſentiments. From the degree of ſucceſs with which the regulations to prevent the ſmall pox have been executed at Cheſter, though generally oppoſed by the moſt untoward prejudices, he has no doubt that the natural diſtemper might be in a great meaſure excluded from any diſtrict whoſe inhabitants would willingly and gladly accept of innoculation.

Of the juſtice of this reaſoning, and of the ſalutary conſequences that would reſult from

general innoculation at ſtated periods, there cannot, we apprehend, remain even a ſhadow of doubt. It muſt certainly give a very high degree of ſatisfaction to Dr Haygarth, to obſerve, that inſtitutions for this ſalutary purpoſe have of late been eſtabliſhed in ſeveral different towns; and that general innoculations have been ſucceſsfully executed at Liverpool, Leeds, Whitehaven, and ſome other places. We are, however, ſorry to obſerve, that this laudable example has by no means been followed ſo generally as ought to have been the caſe. And in ſome places where attempts have been made, the moſt aſſiduous exertions of ſome of the medical faculty have proved altogether abortive. Among other places, this has been the caſe at Edinburgh. In this city, from the manner in which many of the lower claſs of people live, the prevention of the communication of the natural ſmall pox is altogether impoſſible. And although among the higher ranks innoculation is now become almoſt univerſal, yet among the vulgar, from ill-grounded prejudices, and even from erroneous religious tenets, it has made but very little progreſs; notwithſtanding the earneſt admonitions, and gratuitous aſ-

ſiſtance

ſiſtance of the medical practitioners. It would be but natural to think, that when the vulgar ſee daily, ſuch ſtriking examples of the benefit of this practice, they would be diſpoſed, on the death of an infant by the natural ſmall pox, to conſider themſelves as having tempted Providence, by neglecting the means of ſaving it which innoculation afforded. This, however, is by no means the caſe. For while they conſider themſelves as guilty of no crime when an infant loſes its life from innoculation being neglected, they think it highly criminal to induce even a ſlight temporary diſeaſe for the beſt of purpoſes.

Happily, however, theſe prejudices are not univerſal. For we are informed on good authority, that in ſome parts of the Highlands of Scotland, where they are almoſt deſtitute of medical aſſiſtance, innoculation is in very general uſe, being performed by the mothers by the aid of a needle. Perhaps therefore the period is not far diſtant when it may extend itſelf over the whole iſland. But whether this ſhall ever be the caſe or not, the Publick unqueſtionably is highly indebted to Dr Haygarth, not only for his ingenious obſervations, and judicious plans, but alſo for his beneficent exertions.

XVI.

Ed. Sandifort, *Medicinæ et Chirurgiæ in Academia Batava quæ Leidæ eſt Profeſſoris Exercitationes Academicæ.* Liber Secundus. Quarto. Lugduni Batavorum.

IT is ſome years ſince the learned author favoured the Public with the firſt volume of this work. And continuing the exertions of his induſtry and genius, he has now preſented them with a ſecond, which contains obſervations on ſeveral different ſubjects equally curious and intereſting. But of theſe the greater part are anatomical ſubjects, conſiſting of deſcriptions which do not admit of abridgement, and which indeed, although copied at full length, could be but ill underſtood, without the aid of thoſe elegant and accurate plates which the author has ſubjoined to this work. It is therefore only of a few of them that we can here propoſe to give an account. But we ſhall preſent

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our readers with a general view of the ſubjects that are treated of in this volume.

1. De mutationibus quas oſſa cranii in hydrocephalo ſubire ſolent.

2. De craniis præter modum craſſis.

3. De ſingulari oſſis frontis ex fungo duræ matris degeneratione.

4. De concretione plenaria cranii, omnium vertebrarum colli, duorumque ſuperiorum dorſi.

5. De maxilla inferiore, in latere dextro, cum cranio firmiter concreta, aliaque ſimili vitio, in oppoſito latere, laborante.

6. De cephalopharyngeo muſculo alioque ſupernumerario in cervice viſo.

7. De laryngis, aſperæ arteriæ, vaſorum viſcerumque degenerationibus nonnullis.

8. De hepate maximo, ponderoſiſſimo, ſteatomatoſo, in cadavere icterici obſervato, alioque inſignem abſceſſum recondente.

9. De fiſtuloſo pectoris ulcere.

10. De Hydrope peritonæi.

11. De renis dextri et veſicæ urinariæ notabili ulcere.

12. De iſchuria lethali.

13. De artreſia ani.

14. De calculis duobus rarioris figuræ.

15. De crure præter modum tumido.

16. De palato molli uvulaque a nativitate fiſſis, abſque ullo alio oris interni vitio.

17. De Forficula viva naribus excuſſa.

In the eighth chapter of this work, as the reader will obſerve from the contents, Dr Sandifort treats of a remarkable affection of the liver. Since the jaundice, he obſerves, depends either upon an obſtructed ſecretion of bile from the blood of the vena portarum, or upon obſtruction to its paſſage into the duodenum, it is by no means wonderful that the chief ſeat of this diſeaſe ſhould be in the liver, and that this viſcus ſhould in ſuch inſtances be found in general more or leſs in a diſeaſed ſtate. But in the man who is the ſubject of the following deſcription, ſuch a degeneracy of the liver had taken place as is very rarely obſerved.

There could be no difficulty, he obſerves, in determining the diſeaſe of which this man, whoſe body was brought, like many others, to the anatomical theatre, without having before been ſeen by Dr Sandifort, had died. While his whole body was highly emaciated, it was at the ſame time of a dark yellow colour, eſpecially in the eyes. His abdomen was ſwelled, and

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the right hypochondrium was uncommonly hard. From theſe circnmſtances, there could be no doubt that the ſecretion of bile was impeded, and that a repulſion of it had taken place into the maſs of blood. His abdomen ſeemed to be diſtended with a conſiderable quantity of water; but on the right ſide there was a very large and hard protuberance. The margin alſo of the right ſide of the thorax was more prominent than the left. And that the tumour within aroſe from a diſeaſe in the liver, was evident not only from the touch, but even from inſpection. It extended over the whole of the right ſide of the abdomen.

When the abdomen was opened, it was found to contain a large quantity of yellowiſh-coloured water. The membranes lining the abdomen, and even the inteſtines themſelves, were alſo tinged of the ſame colour. The inteſtines, however, were puſhed out of their natural ſituation by the liver, the ſize, hardneſs, and weight of which were very remarkable. It had extended itſelf ſo far through the abdomen, that neither the inteſtines nor ſtomach were viſible, and theſe parts placed below it were very much compreſſed. Its external ſurface was

rendered

rendered very uneven, by ſeveral tubercles of a yellow colour, and of different ſizes. At the place where the oeſophagus uſually deſcends, near the left boundary of the liver, this canal was not only firmly attached to it, but its external parts were alſo in a highly-diſeaſed, indurated, and almoſt cartilaginous ſtate. And there was alſo cloſe to it, an abſceſs filled with highly fœtid matter, penetrating deeply into the ſubſtance of the liver.

When it was entirely detached from the other parts, it weighed ten pounds. On the right ſide, it extended in height eleven inches, and on the left, nine. It was eleven inches in breadth, and five in thickneſs, from the ſpine to the ribs. The tubercles were found to be by no means confined to its external ſurface; many were alſo obvious in the internal, and they were even diſcovered in its ſubſtance. All theſe contained a thick yellow matter, not unlike that which is often obſerved in ſteotomes. But in ſome of them it was in a more firm, in others in a more fluid ſtate; and in a few of them there ſeemed to be ſome purulent matter. The gall-bladder contained very little bile.

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The membranes of other cavities had alſo a yellow colour, and indeed this prevailed in almoſt every part. In the head, nothing was found præternatural. And although the thorax was compreſſed to an uncommon degree, and had therefore a figure different from what is common, yet nothing remarkable could be obſerved, unleſs that on the ſurface of the anterior ventricle of the heart there was a ſmall ſuppuration. And the right ſide of the thorax was particularly ſmall, from the diaphragm riſing ſo high in it.

To this Dr Sandifort ſubjoins the deſcription of a liver alſo of a very great ſize, but from a different cauſe. In this caſe, the whole body was emaciated, but there was no ſymptom of jaundice. Upon opening the abdomen, it appeared extended much beyond the margin of the thorax, and in the right ſide it was obſerved to be very thick and red. The gall-bladder ſcarce contained any bile, but its coats were uncommonly thick and white. The interior and poſterior part of the liver, on its concave ſide, was particularly ſwelled, and towards the pylorus, and right kidney, there was a large and very tenſe protuberance.

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The liver, when entirely diſengaged from other parts, weighed eight pounds; and at the places moſt protuberant it not only felt hard, but ſeemed to contain a fluid. Upon a ſlight inciſion being made into it, there flowed out upwards of three pounds of very thick, white, inodorous, purulent matter. The ſubſtance of the liver was there only a few lines in thickneſs, and the whole of the right part was ſo conſumed, that the cavity, after the diſcharge of pus, would have contained the head of a child. In other parts of the liver there was no collection of pus. But it was remarkable, that every where about the large veſſels diſtributing themſelves into the ſubſtance of the ſound parts of this liver, purulent matter could be diſcovered. All the other viſcera, both in the thorax and abdomen, ſeemed to be ſound. But the pia mater of the cerebrum was uncommonly ſtrong.

To theſe he adds the deſcription of a third caſe. A porter, immediately after raiſing a heavy burden, felt great uneaſineſs in the region of the loins, by which he was at that time confined to bed for two days. Afterwards, he was ſo far debilitated, that he could not carry, without inconvenience, a burden even of twenty pounds.

pounds. About a month afterwards, upon turning himſelf in bed, he thought he heard the agitation of water in his belly, and then that he perceived a body riſing from the hypogaſtric region to the ſcrobiculus cordis, and ſtopping there, it gave the beginning to a hard tumour. On the fifth month after carrying the heavy weight, he came to the hoſpital. At that time there was water in his abdomen, and the tumour could be diſtinctly felt in the place mentioned, and below the laſt ribs, particularly on the right ſide. Upon preſſure, it felt a little unequal, but gave no pain. Nor had he any uneaſineſs, either from its weight, or from its exciting cough. The man's countenance was very pale, and entirely free from yellowneſs; nor was the ſlighteſt yellow tinge to be diſcovered, even in the white of his eyes. He could freely lye on both ſides. He had ſome difficulty of breathing, but it was not conſiderable. He, however, in no long time, died of the affection.

Upon examination of his body after death, the following appearances were detected. The cavity of his abdomen contained a great quantity of effuſed water, which had no bad ſmell, was pellucid, and verging to the colour of oil

of

of almonds. The omentum was retracted towards the left ſide, and was of a browniſh green colour. The ſtomach was very ſmall and contracted. The ſpleen was twice its natural ſize. Externally, it was of a whitiſh caſt, and within it had ſome white parts, but they were not hard. But the liver was ſtill more increaſed, ſo that it weighed about fourteen pounds. The whole of it was hard, and it had on its external ſurface many protuberant ſpots. Theſe were of a yellow colour, but in other parts it was pale. Internally, excepting at a very few parts, where proper hepatic ſubſtance ſeemed to be intermixed, the whole liver conſiſted of a ſubſtance, which had a white colour, with a yellowiſh caſt, and which when preſſed ſeemed every where to give out a purulent ichor. The gall-bladder was very ſmall.

In theſe caſes we have ſtriking examples of variety in the morbid conditions, to which this viſcus is ſubjected.

In the tenth chapter, Dr Sandifort treats of a dropſy of the peritoneum. Though dropſy, he obſerves, be a very common diſeaſe, yet all its ſpecies are not equally frequently obſerved; nor when preſent, are they always attended with

with ſuch ſymptoms, that even the moſt ſkilful practitioner may not be doubtful as to the nature of the diſeaſe. Among the ſpecies of this kind, dropſy of the peritoneum may juſtly be mentioned: a diſeaſe unknown to the ancients, and ſo rarely manifeſting itſelf by obvious ſymptoms, that many have doubted its exiſtence; and ſo ſeldom to be met with, that neither Valſalva nor Morgagni, though indefatigable in inveſtigating the ſeats and cauſes of diſeaſes, have ever diſſected any inſtances of it. From theſe reaſons then, an account of the diſſection of a woman, who, for many years, laboured under this ſpecies of dropſy, will certainly be conſidered as well meriting particular attention.

A woman about fifty years of age, not long after being delivered of her fifth child, became affected with dropſical ſymptoms. No remedies being found capable of diſcharging the water, which gradually increaſed in quantity, recourſe was had to the parancentheſis. By this means a very conſiderable quantity of gelatinous water was drawn away, from which ſhe had great relief. But at the end of two years it was neceſſary to repeat the operation. After this,

this, the water increaſed ſo rapidly, that a ſimilar diſcharge became neceſſary every third or fourth month. Upon carefully examining the abdomen after the operation, various tubercles, in ſome degree moveable, could be perceived. Theſe, while they were hard, uneven, and productive of very conſiderable inconvenience, could not be reſolved by the moſt powerful remedies. But, together with the water, they daily increaſed in ſize; ſo that ſome of them became as large as the head of an infant, and at length as that of an adult.

In the ſpace of eight years the operation had been repeated 17 different times, and by this means more than a thouſand pounds of water had been drawn off, which was always of the ſame gelatinous nature, and of a yellow colour. During the whole of that time, ſhe was hardly affected with any other ſymptoms than the enormous ſwelling, a ſenſe of weight, and ſome degree of difficulty of breathing. All the functions of the primæ viæ continued in the natural ſtate, ſhe was not affected with thirſt, and there was no diminution of the diſcharge of urine. But ſhe became gradually emaciated, and her ſtrength was at laſt ſo far diminiſhed, that ſhe could

could no longer ſuſtain the burden, and fell a victim to her diſeaſe.

As the practitioners who had been conſulted by her huſband were not altogether agreed in opinion with regard to the nature of her affection, Dr Sandifort was requeſted to examine into it by diſſection. With this requeſt he readily complied, from the hopes that he ſhould find ſomething which might throw light upon other caſes. And in the event he was not diſappointed.

Although the ſurgeon who attended her had performed the operation of the paracenteſis only two days before her death, and had at that time drawn off about ſixty pounds of water, yet her abdomen was again remarkably diſtended, and the fluctuation of water could be diſtinctly perceived. But there was eſpecially diſcoverable, in almoſt every part of her belly, tumours of different ſizes. This was remarkably the caſe on the right ſide, which was ſwelled to an enormous degree, from an inequable tumour, which ſeemed to be compoſed of many others. The body being laid upon its back, this tumour tended towards the right ſide. On this account an inciſion was made there, not

far from the criſta of the os ilium, that the water might be evacuated, and the contents of the abdomen more readily examined. The knife could not be made to enter without difficulty, and it had the feeling as if the parts cut were hard, and almoſt cartilaginous. But upon an opening being made, there came out a quantity of a yellow fluid, eſpecially when the abdomen was compreſſed, which however was ſo viſcid and gelatinous, that in falling into the veſſel placed for receiving it, an uninterrupted thread was formed of it; and it was diſcharged to the extent of at leaſt twenty pounds.

The water being thus evacuated, the large hard tumours were more readily diſcovered, and ſeemed to fill the whole cavity of the belly. A ſection being then made from the ſcrobiculus cordis to the pubis, it was found that the common integuments, the muſcles, which were highly extenuated, and their aponeuroſes, could be readily divided. But a thicker and firmer membrane was diſcovered under theſe: This being divided and diſſected from the tumours to which it firmly adhered, theſe could with greater facility be examined.

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The tumours which occupied the greater part of the belly were of different ſizes from that of a wallnut, to the head of an adult They had every where uneven ſurfaces. The largeſt was on the right ſide, and being compoſed of ſeveral others, had different degrees of hardneſs at different places. In ſome it had the conſiſtence of cartilages, in others almoſt of bone. But at ſome places it was ſofter, and theſe being cut into, diſcharged a fluid, either of the ſame gelatinous nature with what was drawn off by the paracenteſis, or much thicker. All theſe tumours adhered to that membrane which was diſcovered immediately under the muſcles, and projected into a cavity, the nature of which could not at firſt be diſcovered.

The tumours being puſhed aſide, ſome of them to the right, others to the left, no abdominal viſcus could be diſcovered. But the oppoſite ſide of this ſac was formed by a membrane extending itſelf downwards to the oſſa ilia and pubis. In this membrane, the courſe and anaſtomoſis of many blood-veſſels exhibited a beautiful ſpectacle. An inciſion being made through its inferior part, the ſmall inteſtines burſt forth, and being drawn out for a

little way, they appeared to be perfectly ſound, adhering to a ſound myſentery. The membrane being completely divided, and turned backwards, the omentum, the liver, the ſtomach, the ſpleen, and, in a word, all the abdominal viſcera, were found of a healthful appearance, and in their natural ſituation, or at leaſt very little diſturbed. And in the cavity of the abdomen itſelf, which was now really opened, a ſmall quantity only of water was found, which was of a very different nature from that filling the hydropic ſac.

The membrane conſtituting the back part of the ſac being now properly examined, there could remain no doubt as to the nature of the diſeaſe. For it appeared that the peritoneum had degenerated into this, and that the water was collected between the peritoneum and that cellular membrane which naturally connects the peritoneum with the abdominal muſcles, now not only changed into a thick compact membrane, but beſet alſo with the tumours which have already been deſcribed, and which might not be improperly compared to atheromata.

But the whole of the peritoneum was not changed

changed in this manner; for about a hand-breath below the ſcrobiculus cordis, or rather the cartilago enſiformis, it was indeed indurated, but not extended into a ſac. And upon its being cut through, the knife immediately went into the cavity of the upper part of the abdomen. Here, therefore, an evident example occurred, of a real hydrops peritonei, where the water was lodged between this membrane and the abdominal muſcles, not in the cavity of the abdomen. This was confirmed by the operation of the paracenteſis, performed two days before the death of the patient. For the aperture made by the inſtrument was found to have penetrated not into the cavity of the abdomen, but into this ſac.

Dr Sandifort concludes this chapter, by taking notice of ſome ſimilar inſtances of the ſame affection. He obſerves, that Jo. Acholzius, a practitioner and profeſſor at Vienna, firſt deſcribed it in 1581. That after this time it had been obſerved by ſeveral other practitioners; but that the moſt full account of it is to be found in a diſſertation *De Hydrope Pæritonei Saccato*, publiſhed by the learned Des Bans, of whoſe labours the medical

world was too ſoon deprived, by his premature death. This diſſertation Dr Sandifort has reprinted in the firſt volume of his Theſaurus; but there can be little doubt that the diſſection above enumerated throws farther light upon the nature of the diſeaſe.

After having given this account of the diſeaſe, we hope we ſhall be excuſed for mentioning to our readers a ſuggeſtion which preſents itſelf, reſpecting a mode of cure, which may, we think, be tried in ſimilar caſes. It is evident, that in this diſeaſe, while the water cannot be evacuated by the natural outlets, its evacuation, at an artificial opening, has no effect in preventing a return of the effuſion. In this reſpect then, it may be conſidered as very much agreeing with the hydrocele. And might not a radical cure be effected, as is done in that complaint, by exciting an adheſive inflammation within the cavity? If this could not be effected by the finger of the operator introduced at the opening, might it not be accompliſhed by the aid of a ſeton paſſing through the ſac?

In the ſeventeenth chapter, Dr Sandifort gives an account of an earwig being diſcharged alive

alive from the noſe. He ſets out with obſerving, that in the writings of different authors there are accounts of various inſects being diſcharged from the noſe, after having produced different diſeaſes. Not long ſince, a caſe of this kind occurred to him, where the diſeaſe was occaſioned by an animal different from what he had before heard of, as producing any ſimilar affection.

A lady had for a long time been affected with violent pain, referred to the inſide of her left noſtril, and to the frontal ſinus of the ſame ſide. With this there was a copious diſcharge of very fœtid matter from the noſtrils, and other ſymptoms, which gave ſtrong preſumption of ozæna affecting the parts to which the pain was referred. After the trial of a variety of other remedies, vapours were directed into the noſe by means of a funnel for cleanſing the parts. She had employed this practice only two or three times, when ſhe became affected with an uncommon itchy ſenſation in the noſtril, and ſoon after, ſhe diſcharged from it an ordinary earwig in a living ſtate.

From the time of this diſcharge the pain was gradually diminiſhed, and at length diſappeared. The ſanious diſcharge, which had form-

erly a very ſtrong ſmell, was by degrees meliorated and the ulcer was healed, after having been highly troubleſome to her for a very long time.

This lady had long been in the habit of ſnuffing up the fragrant odours of flowers with great violence. There could, therefore, Dr Sandifort thinks, be no doubt in what way this animal had got into the noſe. But it was, he thinks, very wonderful that it could live and ſubſiſt there for ſo long a time.

XVII.

XVII.

Obſervations ſur la Maladie vénérienne et le Millet dont les enfans nouveaux-nés ſont attaques, avec de Reflexions ſur la nature & le traitment de ces deux maladies. Par. M. Colombier. Vide Hiſtoire de le Société Royale de Médicine. Tome 3*iem.* Quarto. Paris.

THE venereal diſeaſe is ſo far extended, and the evils of which it is productive are ſo numerous, that it is without doubt one of the moſt dreadful ſcourges to which mankind are ſubjected. It infects as it were the ſources of our exiſtence, and the moſt tender age is by no means exempted from it. Infants conceived in the middle of this contagion have the ſeeds of it communicated to them with their life.

This communication, our author thinks, happens in two ways. Either parents having a venereal taint, produce infants, whoſe fluids are vitiated, and in which the diſeaſe developes itſelf ſome-

ſometimes ſooner, ſometimes later; or the venereal diſeaſe exiſting in the parents with intenſity, their infants ſhew, at the time of birth, unequivocal ſymptoms of their being affected with the diſeaſe. Theſe unfortunate victims, he obſerves, have hitherto almoſt entirely periſhed, and the efforts of art have been found to have had but little influence againſt this calamitous diſeaſe.

This diſtemper being particularly frequent among foundling infants, which fall under the charge of the ſtate, government directed many trials for their preſervation without effect, till about fifteen months before this paper was written, when a mode of treatment was diſcovered more ſucceſsful than had formerly been employed. From theſe trials, there has reſulted, we are told, an hoſpital for the treatment of new-born infants affected with the venereal diſeaſe. M. Le Noir, the magiſtrate to whom the nation is indebted for this bleſſing, has ſpared neither pains nor expence on this ſubject, and is, Mr Colombier obſerves, juſtly entitled to the thanks and gratitude of the public.

Before relating the plan of cure which is followed in this hoſpital, our author thinks it

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neceſſary to mention the particular ſymptoms of the diſeaſe in new-born infants.

The firſt thing obvious upon viewing them, is, that the ſkin both of the face and other parts of the body is ſo withered, that it ſeems to carry the marks of old age. Some of them are reduced to a ſtate of real maraſmus. Others have on their lips, tongue, and pharynx, a number of aphthæ which reſtrain the motion of theſe organs, and prevent them from ſucking; and diſſection ſhews, that the ſame aphthæ are extended through the gullet, and even into the ſtomach itſelf. In ſome the armpits, breaſts, or belly are ulcerated, and diſcharge a great quantity of putrid ſanies. But the moſt common ſymptom is ophthalmia. When the diſeaſe has made great progreſs, the inflammation principally occupies the conjunctiva. But in ſlight caſes it is confined to the palpebræ.

Theſe appearances are uſually accompanied with ſome ſymptoms of the diſeaſe in the organs of generation. Moſt of the infants are affected with diarrhœa, and with diſtreſſing thirſt. And ſometimes the millet, an affection deſcribed in the end of this memoir, is joined to the other ſymptoms, which it aggravates not a little.

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In attempts to cure, it was formerly thought indiſpenſibly neceſſary to give mercury to the infected infants; and not being able to apply it externally, it was given inwardly in ſmall doſes. But this remedy, given thus immediately to the infant, in whatever way it was managed, was found to be too active, and did not ſucceed. Detached obſervations having ſhewn, that a mother affected with the diſeaſe nurſing her infant could be cured herſelf, and could thus even cure her infant, it was preſumed that this mode, employed on a more extended ſcale, might be highly uſeful in the treatment of newborn infants affected with the diſeaſe. Reaſoning and experience having ſhewn, that mercurial frictions are the moſt efficacious means of combating the diſeaſe, and have the leaſt influence upon the general health, it was but natural to give the preference to theſe.

This method being determined upon, women in the ſeventh month of their pregnancy affected with the venereal diſeaſe, were admitted into an hoſpital appropriated to the purpoſe, to be delivered there, and to ſuckle their infants, upon the condition, that, if their ſtrength would permit, they ſhould ſuckle alſo another infant affected with the venereal diſeaſe. Nurſes alſo affected

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with the venereal diſeaſe were admitted upon the ſame condition. Here then it became neceſſary to treat the mother, both before and after delivery, as well as infants ſubjected to the diſeaſe, ſome of whom could could take ſuck, while others were incapable of it. On each of theſe ſubjects we are here preſented with ſome obſervations.

When pregnant women were attacked in ſuch a violent manner as did not admit of delay, recourſe was had to ſuch palliative treatment as the circumſtances required, care being at the ſame time taken to prevent abortion. But the radical cure was reſerved till after delivery. Their drink was a weak decoction of ſarſaparilla, or barley water, and they got ſmall doſes of mercurial panacea at longer or ſhorter intervals, as circumſtances required.

For the three or four firſt days after delivery they were treated in the ſame manner as women who had no other diſeaſe, and the infants were given them to nurſe. By the ſixth or ſeventh day they began the uſe of warm baths, a dozen of which were employed with each. The firſt was directed only for the ſpace of half an hour, the others for a whole hour. After the

the bath had been five or ſix times employed, recourſe was had to mercurial frictions, which did not prevent the reſt of the baths from being uſed. Recourſe was had to the double mercurial ointment, of which about a dram was employed at each of the firſt frictions. The quantity was afterwards increaſed, and employed at intervals proportioned to the effects obſerved to reſult from it. It is, however, to be obſerved, that the infants in general died, when the mercury acted upon the nurſe with great energy. They were then tormented with colic pains, they had looſeneſs, and were conſtantly crying. It became neceſſary, therefore, to uſe mercury with greater moderation in the treatment of nurſes, who ſuckle one or more infants, than in any other caſe. And it was in but rare inſtances, that it was found neceſſary to employ more than three ounces of mercurial ointment. Their ordinary drink was rice water, which was alſo given to the infant. When the ſymptoms were ſevere, they had decoction of ſarſaparilla. Their regimen was watched with very great care, and a freſh-infected infant was never given to a a nurſe about the middle of the treatment, as it was found that this could not be done without

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affecting the health both of the nurſe herſelf and of the child ſhe before ſuckled.

The whole treatment for a complete recovery in general laſted two months, or two months and a half. It was rarely found neceſſary to extend it to three months.

The precautions uſed with reſpect to the infants, were the keeping them clean and dry, the laying them alone, the placing them in a well-aired ſituation, and the waſhing them, after every dejection, in a ſmall bath prepared for the purpoſe, where there was always tepid water.

The aphthæ were touched two or three times every day with a pencil dipt in a ſolution of corroſive ſublimate in water, in the proportion of ſix grains of the corroſive to a pint of water. Ulcers and excoriations were bathed with barley-water, which was alſo applied to the inflammed eye-lids.

The moſt embarraſſing caſes were thoſe where infants could not take the breaſt, either becauſe they were too weak, or becauſe the aphthæ rendered ſucking very painful to them. Attempts were made to nouriſh them, by cows, goats, or aſſes milk, according to their ſtrength. They got alſo rice-water, and they were expo-

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ed to the vapour of mercury, revivified from cinnabar placed in a heated iron-pot. The application of this vapour was continued for a longer or ſhorter time, care being taken not to fatigue them. When their reſpiration became frequent, they were removed from it, and carried to a place where they could breathe free and freſh air.

This practice alone did not cure thoſe children, but it diminiſhed the ſymptoms. it favoured nutrition, and it put them in a condition to take the breaſt of a nurſe with whom the treatment was begun. In other reſpects, the ſame precautions were obſerved with regard to lodging, cleanlineſs, baths, &c.; as with children on the breaſt.

This detail of the practice is finiſhed with an account of the reſult of the trials made in the hoſpital after the plan was adopted.

Between the month of June 1780, in which the hoſpital was founded, and the month of July 1782, the time at which this memoir was written, one hundred and thirty-ſix infected infants were received into it. Of theſe thirty-five were preſerved, and at that time in good health. Seven others, who had been cured

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afterwards died from dentition; the others died of the infection. But it is to be obſerved, 1ſt, That among the number of deaths, there were ſeveral whoſe caſes were totally deſperate before they were ſent to the hoſpital; and ſome of them died even on the ſame day in which they were ſent there: And, 2dly, That the method of treatment not being eſtabliſhed at the beginning, the trials then made were not ſo ſucceſsful as afterwards. It ought alſo, he obſerves, to be remarked, that from calculation it appears, that a greater number of infected infants were cured in this hoſpital, than of foundlings given out to nurſe, though in a ſtate of health; and that, prior to the treatment above deſcribed, no infants were preſerved who at the time of birth had decided ſymptoms of the venereal diſeaſe. Hence there is reaſon to hope, that, in the ſequel, this method may be brought to ſtill greater perfection, and leave a reſult ſtill more favourable.

Another diſeaſe which particularly affects new-born infants, is, the Muguet or Millet; and it is very infectious in thoſe ſituations where a great number are collected. There are but few authors who have written of it,

and what they have ſaid of its nature is neither preciſe nor ſatisfactory. Its chief ſymptoms are ſmall white hard tumours, which appear upon the lips of infants, under the tongue, and upon the pharynx: Theſe have alſo been ſometimes found extended through the alimentary canal. Deglutition becomes at firſt difficult, and at length impoſſible. Diarrhœa intervenes; the countenance becomes pale; and there appear upon the body pimples or ſpots of a violet colour, which may be conſidered as the certain mark of approaching death. Infants that are ſtrong and of good conſtitutions, and thoſe who have good nurſes, or thoſe with whom there occur abſceſſes from the tumours terminating in ſuppuration, are the only ones which eſcape.

The vapours ariſing from a number of infants confined in one place, and which are furniſhed by their breath, perſpiration, and excrements, are the cauſes, our author thinks, to which the rapidity of this contagion is to be attributed; and the new virus is generated in the night in particular, becauſe then all openings being ſhut, the air circulates with greater difficulty. As a proof of the virulence of the

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contagion, he mentions, that of nine infants who remained only twenty-four hours in a place where the millet raged, and who were after that tranſported to another hoſpital that they might be reared on cow's milk, not one eſcaped the contagion, all of them being affected by the millet.

Pure air, ſound nouriſhment, the utmoſt attention to cleanlineſs, gentle tonics, and expoſure to the vapour of mercury for a few minutes every day, are the only means of cure which have been found to be attended with any ſucceſs. From this it will readily be underſtood, that prevention is the ſubject chiefly to be attended to. With this intention, it is of the utmoſt importance to produce general diſinfection in thoſe places which are actually impregnated. Cradles, linen, and furniture of all kinds, ought to be purified, and ſtreams of air are to be directed through the apartments, particularly during the night: No infants ſhould be received into the dormitory till after being bathed, and they muſt be removed as ſoon as they appear to be affected. Never more than ſix or eight ſhould be received into the ſame apartment; and thoſe who are in a

moribund ſtate, who are affected with ſiphylis, with diarrhœa, or with ulcers, are to be ſeparated with care from thoſe in a ſound ſtate.

By taking theſe precautions, there is, we are told, almoſt a certainty that the contagion of this diſeaſe will be deſtroyed; and that a great number of infants may be preſerved, to whom it would otherwiſe prove fatal. And the diſeaſes of infants, it muſt be allowed, merit the greateſt attention in the way of prevention; becauſe, after they have taken place, on the one hand the rapidity of their progreſs, and on the other the remarkable delicacy of the ſyſtem at that time, joined to the great difficulty which there is to get medicines introduced, furniſh very great obſtacles to their recovery.

XVIII.

XVIII.

Memoire ſur quelques moyens auſſi efficaces que prompts et faciles de remedier à des accidens graves qui ſurviennent aſſez frequemment dans les Petites-Veroles et les Rougeoles de mauvais caractère. Par M. de Laſſone. Vide Hiſtoire de la Société Royale de Médecine, Tom. 3*iem*, Quarto, Paris.

THE learned author ſets out with obſerving, that upon a compariſon of the ſimple ſmall-pox with thoſe which are of a confluent and malignant kind, they would appear to be abſolutely two different diſeaſes. The ſymptoms attending the one, through its whole courſe, are ſlight and free from danger; while the accidents occurring in the other, are of the moſt alarming nature. In the one, nature left to herſelf has no need of the aſſiſtance of art to accompliſh a ſalutary criſis, and to complete the cure; the other requires the conſtant attention of the phyſician

to the different accidents which occur, that he may immediately employ the moſt proper remedies for preventing troubleſome conſequences.

Among thoſe accidents which take place in bad ſmall-pox, one which he conſiders as very frequent, is the occurrence of diarrhœa during the time of the eruption; and that too although, upon the firſt attack of the diſeaſe, care has been taken to cleanſe the primæ viæ. At this period of the diſeaſe the diarrhœa cannot, he thinks, be of any other but the ſymptomatic kind: The nature of the ſtools, which are of the ſerous and bilious kind, their quantity, their fetor, and their frequency, are, he thinks, all of them obſtacles to the regular progreſs of the diſeaſe; and the eruption, he tells us, is ſometimes retarded, ſuſpended, and even ſuppreſſed, ſo as to produce a rapid and fatal metaſtaſis. If after theſe appearances we ſhould judge that it is proper to ſecond nature, by promoting the evacuation, in order to aid her the better to free herſelf from this alleged maſs of putrid matter, we ſhould unqueſtionably follow an erroneous method, as experience, he tells us, has demonſtrated.

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The practice which he conſiders as being in theſe caſes more conformable to the intention of nature, would be to employ tonic and cordial remedies, ſuch as the theraica, diaſcordium, and others of a ſimilar nature: But from experience we learn, that theſe remedies, though more appropriated to the circumſtances, rarely produce the deſired effect in moderating or ſtopping the evacuation: On the contrary, they often act as irritants; the inteſtines become more ſenſible and painful, the diarrhœa is augmented, and the danger becomes imminent.

He aſks, therefore, to what kind of practice, ſufficiently ready and efficacious, can we in ſuch caſes have recourſe? After ſome reaſoning with reſpect to the nature of this ſymptom, as ariſing from the variolous virus, he obſerves, that in ſome of the provinces of France, and in other countries more diſtant, the uſe of milk as a drink during the whole courſe of the ſmall-pox, of whatever kind they be, is generally adopted by the people, and even conſidered by the phyſicians of theſe countries as the moſt ſimple and efficacious treatment, equally adapted to infants and to

adults. He adds, that this practice, though to appearance empirical, is nevertheleſs ſucceſsful; and merits the more attention and confidence, as having been uſed from the moſt remote antiquity. In proof of this he quotes the authority of Rhazes; and it is alſo, he obſerves, recommended as one of the proper drinks in ſmall-pox by Sydenham.

But he was, he tells us, particularly ſtruck with the obſervations contained in three Latin Diſſertations publiſhed on the ſubject of ſmall-pox, by Dr Antony Fiſcher, an Hungarian phyſician, about the middle of the preſent century. That author, we are told, treats profeſſedly, and at conſiderable length, of the remarkable and uniform efficacy of milk employed as drink in ſmall-pox of a bad kind; and particularly during epidemic ſmall-pox, where the puſtules, almoſt as ſoon as they appeared, became ſuddenly dry, and formed a kind of black cruſt upon the ſurface: It was by drinking milk alone that a full and regular eruption was obtained, which gave the diſeaſe its ordinary courſe, and favoured a ſucceſsful termination.

But among the few phyſicians who in their writings

writings have ſpoken advantageouſly of the uſe of milk in ſmall-pox, none of them, not even Dr Fiſcher himſelf, who has entered into ſo full a detail on this ſubject, makes mention of this drink for combating the dangerous and diſtreſſing accidents mentioned above, the ſymptomatic diarrhœa during the eruption. During that epidemic, indeed, which he particularly deſcribes, and during which the drinking of milk produced ſuch good effects, the patients were not ſubject to diarrhœa; on the contrary, there occurred habitual conſtipation.

Dr Fiſcher, however, ſpeaks of this troubleſome ſymptom of diarrhœa in another diſſertation, where he treats of different accidents in the malignant ſmall-pox; and without ſaying a ſingle word of the utility of milk in theſe caſes, he merely adviſes that it ſhould be combated by the ordinary practices, tonics and cordials.

Not having, therefore, the authority of any direct obſervations in its favour, and conſidering that it has been condemned in bilious evacuations, Mr Laſſone would not, he tells us, have ventured to adminiſter it as the princi-

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pal remedy againſt the ſymptomatic diarrhœa; unleſs from induction, drawn from a number of concurring circumſtances, he had reſolved to adopt a method apparently oppoſite to the commonly received principles.

The ready ſucceſs of the practice ſurpaſſed his expectations, in the firſt inſtance in which he employed it, being a caſe of ſmall-pox of the moſt confluent and malignant kind, where a violent ſymptomatic diarrhœa was accompanied with anxiety, great proſtration of ſtrength, and acute pain in the inteſtines, which had ſubſiſted from the commencement of the eruption. Cordials and opiates which were adminiſtered, had the effect only of rendering the evacuations more frequent, painful, and threatening. The patient's ſituation became then more critical, as the ordinary means of practice were thus ineffectual. The firſt doſes of cow's milk, mixed with a ptiſan of the root of parſley, produced ſo favourable a change, that in leſs than twelve hours the evacuations were ſtopt, and all the anxiety removed: The pulſe became more full and ſoft; the puſtules became elevated, and filled with laudable matter; and, by continuing

continuing the uſe of the milk united to the ptiſan, without any other kind of remedy, or any other nutritious fluid, the diſeaſe ran its regular courſe. The recovery was favourable; and there remained no trace of this ſevere diſeaſe, excepting that alteration in the features which uſually reſults from ſmall-pox confluent to the laſt degree.

The caſe here deſcribed, Mr de Laſſone had occaſion to treat about twenty-two years before writing the preſent memoir; and after this ſtriking proof of the efficacy of milk in the ſymptomatic diarrhœa of ſmall-pox, he has uſed the ſame method in every ſimilar caſe which occurred to him in practice. The ſucceſs with which it has been attended has been ſo uniform, that he thinks, without danger of exaggerating, he can almoſt recommend it as a ſpecific.

In obſerving with care the different effects of milk employed as a drink, in the different caſes in which he has preſcribed its uſe in ſmall-pox, he has diſcovered it to be decidedly uſeful againſt another accident very frequent in that diſeaſe; and which, although not ſo dangerous as the ſymptomatic diarrhœa,

rhœa, has ſometimes troubleſome conſequences, and at leaſt occaſions a good deal of anxiety and pain to the patient.

It is well known, that where the ſmall-pox are very confluent, or the eruption is very abundant, the tongue and the whole inſide of the mouth are often covered with a great number of variolous puſtules. A conſiderable ſwelling happens to all theſe parts as the conſequence of the inflammation: Deglutition becomes more and more difficult, painful, and conſtrained; and theſe puſtules ſometimes drying ſuddenly, put on a black and ſuſpicious appearance, and add conſiderably both to the danger of the diſeaſe and the diſtreſs of the patient.

If in proper time recourſe be had to milk by way of drink, or as ſoon as the mouth begins to be thus affected, the puſtules make there but little progreſs, and the inconvenience they occaſion is much more ſupportable. And the effects which Mr de Laſſone has witneſſed in ſuch caſes, ſeem to him to demonſtrate that we may attribute to milk the ſingular property of almoſt enervating the venereal poiſon; or at leaſt of moderating and weakening its dele-

deleterious impreſſion in conſequence of immediate contact.

Having thus formed the moſt favourable opinion of the utility of milk in general in caſes of bad ſmall-pox, and particularly in caſes where ſymptomatic diarrhœa occurred, he preſumed, from very direct analogy, and from a very natural induction, that for a ſimilar accident in meaſles the ſame practice might be adopted with effect. Some phyſicians, indeed, who have written on the treatment of the meaſles recommend milk united with proper infuſions, as one of the drinks beſt ſuited to them: But none of theſe authors preſcribe milk particularly againſt that diarrhœa which ſometimes happens, at a time when the manifeſt danger ariſing from too frequently repeated evacuations requires that they ſhould be ſpeedily reſtrained.

It is by no means a rare thing in meaſles, to obſerve, at the commencement of the eruption, ſpontaneous bilious evacuations. Experienced practitioners are not apprehenſive of them when they are moderate: They do not, in that caſe, derange the ordinary courſe of the diſeaſe; on the contrary, it is remarked

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that they are uſeful: But if they become frequent, painful, and abundant, the countenance turns pale and collapſed; the eruption which has already taken place diſappears, and not a moment is to be loſt to remedy this accident. In ſuch caſes, he tells us, the uſe of milk alone, by way of drink, has always ſucceeded with him equally as in the caſe of the ſmall-pox.

Nothing, he obſerves, appears to him better fitted to confirm the advantages of this method, both in ſmall-pox and meaſles, and to give it greater weight, than to relate ſome obſervations, the authenticity of which is too remarkable to be neglected.

When the late king, Louis XV. was attacked with that contagion, which terminated the life of that good prince, his daughters, attending only to the calls of affection, and deſpiſing the moſt imminent danger, with a degree of courage which juſtly merits the higheſt eulogium, would not ſeparate themſelves from their auguſt father, although none of the three princeſſes had yet had the ſmall-pox. They were not long of experiencing the effects of the contagion. A few days after the death of the king, all the three were

attacked at the ſame time with confluent ſmall-pox at the caſtle of Choiſi, to which the court had retired.

M. de Laſſone, as phyſician to Madame Adelaide, was particularly charged with the treatment of her caſe, in conjunction with three others, Meſſieurs Bourdelin, Lemonnier, and Richard, called at the deſire of the princeſs to aid him with their advice. The eruption began very favourably; but about the end of the firſt day there were ſeveral ſpontaneous evacuations, very abundant, and of a matter the crudity and ſmell of which pointed out its bad tendency. Notwithſtanding theſe firſt evacuations, the eruption made the uſual progreſs; but, during the courſe of the ſecond day, the ſymptomatic diarrhœa increaſed. Abundant evacuations of the ſame kind now returned at very ſhort intervals; and the countenance ſoon became leſs animated, the puſtules ſunk, and nothing could be obſerved either on the face or breaſt but ſpots of a very ſuſpicious colour: The pulſe, loſing its ſpring, became ſmaller, more frequent, and even a little irregular. The patient began to feel a ſort of inquietude and general

general uneaſineſs, for which ſhe could aſſign no particular reaſon; and, to crown her diſtreſs, the menſtrual diſcharge began to appear.

In a ſituation thus alarming, Mr de Laſſone propoſed to his brethren to employ without delay cow's milk, mixed with a ptiſan of the root of parſley, by way of drink. The ptiſan was formed by pouring two pounds of boiling-water upon two ounces of the parſley-root, well waſhed and cut down, and then allowing it to infuſe for ſome time. This advice Mr de Laſſone ſupported, by mentioning the ſucceſs which had attended his practice in former inſtances, and the little dependence that was to be put upon the common practice. This practice was immediately adopted; and the animal-broths, as well as every other medicines which had before been ordered, were given up.

In a ſhort time, appearances underwent a moſt favourable change. Two or three ſmall evacuations, which ſhe now had at longer intervals, were leſs ſerous, and had no remarkable fetor. In a ſhort time the diarrhœa entirely ceaſed. Till the twelfth day of the

diſeaſe, this mixture with milk was adminiſtered alone, every two hours, or leſs frequently, according to the intenſity of the fever. Sometimes it was mixed only with ſimple water, and it was always given to the extent of about five ounces. In the intervals ſhe got nothing but water, a little ſweetened. By ſtrictly following this plan, every thing went on well during the remainder of the diſeaſe; and the puſtules, which appeared in great numbers on the tongue and inſide of the mouth, were evidently ſtopt in their progreſs. The deglutition ſoon ceaſed to be either painful or difficult; and, by means of a few purgatives repeated towards the end of her diſeaſe, the cure was completed.

Nearly about the ſame time, Mr de Laſſone's own daughter was likewiſe ſubjected to ſmall-pox of a very confluent kind. After the uſe of cordial remedies, the eruption went on ſucceſsfully; but before this operation of nature was entirely completed, the inteſtines ſuddenly became affected with pain, and ſeemed diſpoſed to relaxation: The menſes had appeared; there ſupervened a great degree of inquietude, of uneaſineſs, and agitation. He

immediately determined to make uſe only of milk, by way of drink, in the manner already mentioned: Quietneſs was ſuddenly re-eſtabliſhed, and continued; and the diſeaſe terminated happily.

During the ſpring of the year in which this memoir was written, the meaſles became epidemic in Verſailes and the environs. The queen was attacked with them. This was a diſeaſe which her majeſty dreaded very much, as they had been particularly ſevere in the Imperial family, to which ſhe belonged. The cough attending them was ſharp, convulſive, and frequent; and although the eruption went on well, yet the ſame diſtreſſing cough continued. She had already had ſome of thoſe bilious ſpontaneous evacuations, which experience teaches us to conſider as uſeful: but at the end of the ſecond day of the eruption, there ſupervened pains of the inteſtines; there took place a copious diarrhœa, and the menſes appeared. During the night there occurred, one after another, ſerous and fetid evacuations: The countenance became collapſed, and thoſe parts in which the eruption had already taken place became pale: The humour

of

of the meaſles appeared to be almoſt extinguiſhed and repelled: The pulſe was ſmall, ſharp, and contracted: The nervous ſyſtem, naturally delicate, was very much affected; and the agitation and inquietude were extreme.

In the treatment of this caſe, Mr de Laſſone was conjoined with two of his brethren. They agreed to prefer to every other remedy, the uſe of cow's milk, united to a ptiſan of the root of parſley. The conſequence, we are told, was fortunate, and almoſt inſtantaneous; for the ſecond doſe of this drink ſtopt totally the diarrhœa, and quieted the inteſtines. The matter of the meaſles again came outwards in great abundance: Every thing was reeſtabliſhed and meliorated. Next day ſhe had a ſingle ſtool of properly formed and well-digeſted matter: The cough became much leſs frequent; the nervous agitations were diminiſhed; and the ſame drink being continued, no other accident diſturbed the regular progreſs of the diſeaſe, till a complete recovery had taken place.

After this Mr de Laſſone, in the memoir before us, ſpeaks of another kind of accident

very common in the confluent ſmall-pox; and points out the method which has always ſucceeded with him in preventing different troubleſome conſequences which are apt to reſult from it. When the eye-lids, at the time of the eruption, are covered with variolous puſtules, they often affect their edges where the hairs are inſerted; and ſometimes even the ball of the eye itſelf is not free from them. It is well known what evils reſult from theſe puſtules, as the effect of inflammation and ſuppuration.

Being ſatisfied that the moſt certain means of warding off all theſe accidents, would be by preventing the eruption of variolous puſtules on the eye-lids and eye, or at leaſt by ſuſpending and ſtopping their progreſs and making them diſappear, it occurred to him that the diſtilled water of roſes, by its cooling, tonic, and aſtringent virtue, might, when properly applied in a topical manner, anſwer all theſe intentions.

In the moſt remote ages, the Arabian phyſicians, as appears from the writings of Rhazes, made uſe of roſe-water as an excellent preſervative for the eyes in ſmall-pox. It is alſo, he

he obſerves, uſed among modern practitioners, either alone or mixed with ſome other ophthalmic; but only with the intention of cooling the eyes, of hindering the eye-lids from growing together, and of removing the acrid humour, which, lodging about the globe of the eye, might irritate and inflame it. With theſe intentions it has been common to direct, from time to time, ſuch lotions.

The preſervation of the eyes, in ſuch caſes, Mr de Laſſone juſtly conſiders as an object of the greateſt importance. Deſirous of preſerving them by means of roſe-water, he took care that from the commencement of the eruption the eyes and eye-lids ſhould be almoſt continually wetted with it, by means of a pencil of fringed linen. By repeating for ſeveral days together, and at almoſt every quarter of an hour, this lotion, which by no means fatigues the patients ſince they derive from it very great relief, Mr de Laſſone tells us that he has always accompliſhed his intention of preventing the progreſs of thoſe puſtules ſubjected to this ſpecies of habitual bathing; and that he has even ſeen every trace of ſmall-pox diſappear in the affected part,

without any inconvenience whatever reſulting from it.

Among a great number of happy proofs of this method, two in particular gave him not a little ſatisfaction. In the confluent ſmall-pox of Madame Adelaide and his own daughter, there had taken place a very conſiderable eruption on the eye-lids, and ſome puſtules had even begun to appear on the globe of the eye itſelf; but by means of the roſe-water immediately employed in the manner already mentioned, there did not remain the ſlighteſt veſtige of this eruption, which before was very apparent. Since that period their eyes, thus preſerved, have ſuffered no alteration whatever.

Theſe remarks and facts which we find in this memoir, unqueſtionably well deſerve to be made as public as poſſible; ſince their object is to confirm the efficacy of practices little uſed, for remedying dangerous and diſtreſſing accidents, in a manner which, while it is ſaid to be certain, and accommodated to all circumſtances, is equally ſimple and eaſy.

SECT.

SECT. II.

MEDICAL OBSERVATIONS.

I.

The Hiſtory of a Caſe of Univerſal Latent Cancer. *By* Dr Richard Kentiſh phyſician at Huntingdon.

I HAVE lately had a very ſingular caſe of *univerſal latent cancer.* Mrs K——g, a maiden lady, aged 64, had long been troubled with pains in the hip, thighs, back, and other parts of the body. Theſe were treated as nervous ſpaſms. She took immenſe quantities of bark; uſed ſea-bathing; but found her complaints aggravated. She was the patient of an eminent phyſician at Cambridge.

Her pains became ſo violent, and her emaciation ſo great, that ſhe was not expected to live many days, when I was deſired to viſit her. I found her a perfect ſkeleton. She had a great degree of hectic fever, but no one ſymptom of nervous debility. On inquiry, I found that ſhe had ſuffered amputation of a cancerous breaſt about two years before the commencement of her preſent complaints. She had a ſmall tumour on the lower maxilla, which, on examination, appeared to me an exoſtoſis: She had likewiſe ſmall tumours of the ſame nature on the os frontis; and ſhe complained of a ſtiffneſs in the neck, which, ſhe ſaid, certainly aroſe from a ſudden turn of her head in bed: but I found a ſmall glandular tumour in this place. What will appear rather extraordinary, is, that my patient carefully concealed ſeveral other tumours, which, at my future viſits, were obſerved. The inguinal glands were conſiderably enlarged, and the whole occiput filled with exoſtoſes of various ſizes; the maxillary glands were diſeaſed, and above the left clavicle were knotty ſwellings as large as ſmall nutmegs.

No diſeaſe appeared near the ſeat of the extirpated

tirpated mamma: but the ribs on that ſide, together with the ſternum, were protruded; and the glands under the adjoining axilla were enlarged.

I put my patient on a courſe of cicuta, to which I joined merc. calc. to the extent of a quarter of a grain daily.

She appeared to receive benefit: the tumour on the chin leſſened. But one morning, as ſhe was turning round, her thigh-bone cracked, and was one of the completeſt fractures which I ever ſaw. Mr Mackie (the ſurgeon) ſaid the ends felt gritty, like diſeaſed bone.

From this period, my patient grew daily weaker and weaker: She continued her medicines; and took to the amount of eighteen grains or one ſcruple of the extr. cicutæ every night, with an anodyne draught. The merc. calc. was occaſionally omitted and repeated: She had a decoction of Peruvian bark and ſarſaparilla, which was ſeldom omitted; but, at the end of about three months from the time I firſt viſited her, ſhe died.

On examination, almoſt every gland appeared diſeaſed; and I have no doubt that the bones

bones were all affected with cancer. A callus ſeemed to have been imperfectly formed; but ſhe did not live long enough after the fracture for the formation of a proper union.

II.

The Hiſtory of a caſe of Hydrocephalus terminating fatally, after a ſalivation was excited by the uſe of Mercury. *By* Dr William Lee Perkins phyſician at Kingſton upon Thames.

ON Tueſday (Jan. 10. 1786), I was called to ſee Miſs L——, a child two years and a half old. This was the ſixth day of her illneſs, at leaſt of that which ſeemed to require any attention; though ſhe had been obſerved to be drooping, or ſlightly ailing, at times, for near three months before. The ſymptoms were as follow.

Pulſe weak, quick, (140 in a minute); conſiderable heat of the ſkin: Frequent red fluſh-

ings

ings in the face; ſickneſs of the ſtomach, and retching: Slight ſtupor; from which, whenever ſhe was rouſed to take either food or medicine, ſhe took both with great greedineſs. The pupils of the eyes very much dilated, and continued ſo in the ſtrongeſt light: She was likewiſe quite blind, and had been ſo for two days paſt; the blindneſs being preceded by a ſtrabiſmus or ſquinting. Some ſtools were paſſed this and the preceding day, ſometimes of a green, ſometimes of a dark colour. Three teeth were now diſcovered, juſt come through the gums, and another ſeemed very near through: The tongue and mouth were moiſt and clean.

From the principal appearances above-mentioned, I did not heſitate immediately to declare to the parents my opinion, that the diſeaſe was occaſioned by water collected in the ventricles of the brain.

She had been purged ſeveral times; and had bliſters applied about the head and neck, ſome of which now diſcharged copiouſly.

Apprehending the cauſe of the diſeaſe to be as before obſerved, and finding no good effect from what had been hitherto applied, I deter-

determined to make trial of the method recommended in the Medical Commentaries by Dr Dobſon and Dr Percival; regretting the want of an opportunity for an earlier and more ſatisfactory trial. I directed, however, that one grain of calomel ſhould be given once in ſix hours; and that one ſcruple of the ſtrongeſt mercurial ointment ſhould be carefully rubbed into the legs and thighs morning and evening.

Jan. 11th, She had taken four grains of calomel, and had three ſcruples of the ointment rubbed in. All the ſymptoms much the ſame.

12th, She had taken only three grains more of calomel, her mouth being faſt ſhut, ſo that nothing could be got down after yeſterday noon; although ſhe had been once ſenſible in the night, and ſpoken: The ointment was therefore directed to be rubbed in thrice a-day, and a nutritive clyſter to be injected once in four or five hours. The right-eye was this day obſerved to be ſomewhat inflamed, and the fleſh of the face felt rigid.

13th, The pulſe very irregular; ſometimes ſlower, ſometimes quicker, fluctuating between 80 and 160, with frequent red fluſh-

ings

ings of the face: The pupils of the eyes more contracted; but ſtill blind. The other eye was this day inflamed; a difficulty of breathing came on; and the ſymptoms in general were more unfavourable, and indeed ſeemed to indicate a gradual tendency to diſſolution. The ptyaliſm came on this day.

14th, The ptyaliſm copious; reſpiration ſtill laborious. Convulſions had come on laſt night, which laſted two hours; and ſhe moaned much and loud: She had one ſtool: Nothing could be got down by the mouth. The nouriſhing clyſters were continued, and a ſmall quantity of the ointment rubbed in.

15th, The convulſions and moanings came on again this morning about ſix o'clock, and continued till between nine and ten: The ptyaliſm copious: The right-arm was of a blackiſh purple colour; and ſhe died the ſame day.

Throughout the whole of her illneſs, at leaſt that part of it which I ſaw, ſhe lay in a ſtupor, or ſtate of inſenſibility, without any of thoſe ſhriekings which are ſo often obſerved to happen in the laſt ſtage of this diſorder.

After death the head was opened, and upwards

wards of four ounces of water were found to have been collected in the ſuperior ventricles of the brain, which guſhed out with great force on cutting into them.

III.

An Account of two caſes of Inſanity, one of which was cured by the uſe of the Fox-glove: Alſo a caſe of Hemoptyſis, cured by the ſame remedy. In a letter to Dr Withering. By Mr William Jones ſurgeon in Birmingham.

SIR,

THE medical profeſſion is infinitely obliged to Bonetus, Morgagni, and Lieutaud, for the induſtry they exerciſed in inquiring into the ſeats and cauſes of diſeaſes, and the accuracy with which they have in many caſes diſtinguiſhed them.

The deſcriptions given by theſe authors of the ſtate of the encephalon in thoſe who die inſane, correſpond with the obſervations of a

modern

modern phyſician *, and with one of mine. But in theſe deſcriptions they have, in moſt inſtances, omitted to inform us of the ſtate of ſymptoms during the life of the patient.

Theſe circumſtances, added to the ſucceſsful treatment of a caſe of inſanity by the uſe of the fox-glove, have induced me to trouble you with this letter, in order that you might communicate it to the world in whatever mode you might think moſt eligible.

Laſt winter I had an opportunity of examining for morbid appearances in Mrs R——, who died inſane in her 42d year. Her complexion was dark, her eyes and hair black. She was, during the latter part of her life, habitually coſtive; had few hypochondriac ſymptoms, being naturally cheerful, and having great ſpirits.

The approaches of the diſeaſe were gradual. It was preceded by ſlight tranſient pains in the right hypochondrium, which were taken but little notice of; ſome pain in the head; alteration of diſpoſition; and increaſed coſtiveneſs.

The more evident commencement of the diſ-

* See London Medical Journal, Vol. VI. Part ii. for 1785.

diſeaſe was accompanied with the common ſymptoms of fever, together with dejection of ſpirits, and diſquietude of mind. There was alſo a degree of redneſs in the face, and partial ſweats; ſometimes confined to the forehead, at others over the whole face; while the extremities were cold, and generally dry, or elſe covered with ſmall cold ſweats. The urine was high-coloured, ſmall in quantity; and the bowels obſtinately coſtive.

An increaſe of all theſe ſymptoms attended the progreſs of the diſeaſe, which proved fatal in about ten weeks from its firſt appearance.

The menſes appeared at their regular periods; but the quantity diſcharged, towards the laſt, was ſmall.

On examination, after death, I obſerved the blood-veſſels of the brain unuſually turgid; the dura and pia mater thickened, the former uncommonly adherent to the ſkull; and water effuſed between the dura and pia mater, and between the pia mater and the brain: The ventricles were alſo diſtended with water.

The liver was univerſally obſtructed, and of a deep yellow colour; the gall-bladder

nearly two-thirds full of a very viſcid, and almoſt black, bile.

Though Bonetus, Morgagni, and Lieutaud, have not given complete hiſtories of this diſeaſe; yet they unitedly prove theſe morbid appearances to be frequent in the head.

The appearances deſcribed excited my attention, and indicated a method of cure, which I have ſince found ſucceſsful in one caſe of inſanity. But I attribute the facility with which the cure was accompliſhed, to the diuretic properties of the digitalis, which have been ſo fully demonſtrated in your late work upon that ſubject †.

Miss P——, aged 34, of the true atrabilious temperament, was firſt diſcovered to be diſpoſed to inſanity about the middle of Auguſt 1785, by the common ſymptoms. She was free from the delirium, at intervals; and, at thoſe times, was obſerved to complain of pain, giddineſs, and dizzineſs in her head, within a fortnight previous to my ſeeing her. She alſo complained of frequent tremblings,

† See an account of the Foxglove, and ſome of its medical uſes; by W. Withering, M. D.

and of pain in her back, within the ſame period.

A few weeks before this attack, a ſiſter of hers had been ſeized with inſanity; and was put under the care of the maſter of a private mad-houſe.

Her diſorder increaſed; ſo that ſhe became almoſt unmanageable by her friends: And early in the morning of September 2d, ſhe eſcaped from her mother's houſe in the country, and came to Birmingham, to the houſe of a relation of the family, where I firſt ſaw her, on the morning of the next day. She was aſleep in a chair, for ſhe had not ſlept the preceding night. Her face was ſomewhat red, and her pulſe 92 in a minute.

After hearing the above particulars from her brother, I adviſed him to have her conveyed home, which was done; and I ſaw her again in the evening. She was then extremely ſtupid, at intervals, for ſeveral minutes together; and, when out of her reveries, ſeemed diſguſted with her friends, &c. as is uſual under ſuch circumſtances.

I firſt took ſeven ounces of blood from her arm; and, while it flowed, obſerved a ſmall tremor

tremor in the hands, arms, and face: and, afterwards, ſhe ſeemed ſomewhat cataleptic, retaining any poſture in which ſhe was put, though without rigidity of the limbs, or ſyncope. Her face turned rather red ſeveral times in a minute; her pulſe was then 120. I gave her ʒiſs. of a purging mixture (1), and a grain of the fox-glove in pills (2).

Two of theſe pills, and two large ſpoonfuls of the mixture, were directed to be given twice in a day, at any time when they could be got down. Her feet were then bathed in warm water for half an hour; immediately after which ſhe was put to bed.

I ſaw her again the next day (Sept. 4th), and was informed that ſhe ſlept a little, and that her ſkin was moiſt during the night. Her

 urine

(1.) ℞. Salis Glauberi ʒiſs. Solv^{r}. in
Aquæ puræ ʒv. et adde
Olei Olivarum optim.
Mucil. Gum Arab. aa. ʒſs. m.

(2.) ℞. Fol. digital. ſiccat. pulv.
Spec. Aromat. ſing. ϑſs.
Conſ. Roſarum, ʒſs. m.
F. Pil. xx.

urine was ſmall in quantity, high-coloured, and depoſited a browniſh ſediment. No ſtool. The pulſe as on Saturday evening. She kept her bed all day, and appeared to her friends to be ſomewhat more calm than ſhe had been ſince the commencement of the diſeaſe.

The appearance of the blood did not indicate an inflammatory diatheſis, it contained rather a large proportion of ſerum of the uſual colour.

On the 6th, I found her pulſe reduced to 68. She had a coſtive ſtool that day, which was the firſt evacuation of the kind ſince my attendance; though (between the 4th and 6th) ſhe had taken two doſes of the pills and mixture. No increaſe in the quantity of urine. She was in bed, and had a gentle moiſture on the ſkin; but her forehead was much warmer, and more moiſt than her body. *Omittantur pilulæ, et ſumat doſin Miſturæ bis in die.*

She continued better till Thurſday (September 11th), when I found her as bad as ever; her pulſe 120 again, but ſomewhat weaker than at firſt. They had got down only two doſes of the mixture ſince Tueſday.

She

She had two coſtive ſtools, and her urine was ſtill ſmall in quantity. We obliged her to ſwallow ſome of the purging mixture, and attempted to give her three ſeveral doſes of the pills; but I am not ſure that ſhe ſwallowed any of them. I then preſcribed a more draſtic purgative (3). *Sumat ℥i miſturæ infra præſcriptæ, omni vel 2da quaque veſperi, pro re nata; et duas pilulas omni mane.*

Wedneſday (September 14th), I obſerved her face rather red; her forehead too warm and moiſt; and her tongue (ſeen this day for the firſt time) white. She ſwallowed two pills, and about a ſpoonful of the mixture given by force on Monday 12th. She had another ſtool in the courſe of this day; and was then obſerved, for the firſt time, to have made an increaſed quantity of urine. I deſired that her urine might be meaſured every 24 hours, when poſſible. About this time the diſeaſe ſeemed aggravated every ſecond day;

(3.) ℞. Rad. Hellebori nigri ℥ſs. Contunde et macera in Aq. font. q. ſ. per horas ij. ut colentur ℥v. et adde.
Ol. Oliv. Mucil. Gum. Arab. aa. ℥ſs. m.

and a tendency to remiſſions of this kind was obſervable through the whole of her illneſs.

A doſe of the pills and mixture were given her without force, once each day, on the 14th, 15th, and 16th; which purged her pretty much, ſo that her urine could not be meaſured.

On the 18th, her pulſe was reduced to 80. The redneſs and partial ſweats on the face had been diſappearing gradually, and it had looked rather yellow for ſeveral days paſt.

September 21ſt, Her countenance was nearly reſtored to its natural ſtate, and the yellowneſs of the face was gone. She has had no ſtool ſince Saturday morning (17th), but has made plenty of urine. Her pulſe about 90. She was extremely ſtupid and ſullen, about this time, for ſeveral days. Her forehead was moiſt in a very ſmall degree, and not hot. She threw away her medicines on Sunday 18th, ſo that ſhe has had none ſince Friday 16th. Her urine ſettles ſtill of a dark colour, but the ſediment is not ſo copious as formerly. *Sumat doſin* (℥i.) *miſturæ purgantis* (*infra præſcriptæ*) *alternis auroris, et* ℥i. *infuſi digi-*

digitalis (infra præſcripti 4.) omni nocte, et illis auroris cùm miſtura purgans non ſumatur.

About this time I mentioned the caſe to you; and gave the infuſion of fox-glove at your requeſt, with an intention to excite vomiting.

September 25th, She took a doſe of the purging mixture on Thurſday morning (23d), but without effect; and a doſe of the infuſion on Friday morning (24th), and again at night; and the purging mixture on Saturday morning. She had one ſtool each day, on Friday and Saturday; during which laſt day ſhe vomited three times, and complained very much of nauſea afterwards.

It is evident that this vomiting and nauſea were owing to the digitalis; for during its operation in this way, its diuretic powers were ſuſpended, as is not unuſual.

They obſerved the quantity of urine to be about a pint in twenty-four hours, and the ſediment ſomewhat whiter than before. The

(4.) ℞. Folior. Digitalis ſiccator. ʒiſs.
Aq. font. bullientis, q. ſ. ut colentur ℥vi. et adde
Spir. Lavend. C. ʒij. m.

partial ſweats on the forehead ceaſed on the 25th. She has taken her medicines for a few days paſt, without giving any trouble. She had one purging ſtool to-day.

September 30th, I found her better than I had ever ſeen her before; her pulſe 74 in a minute. She had taken the infuſion every night, and every other morning, except one, ſince Sunday; and the purging mixture every ſecond morning, except this morning, when ſhe took the infuſion. The urinary ſecretion is very conſiderable, amounting to three pints in twenty-four hours. The purging mixture has not operated much ſince I ſaw her laſt; but ſhe vomited three times on Monday 26th, and twice on Wedneſday 28th, after taking the purging mixture. This vomiting is, therefore, not to be attributed to the digitalis alone.

The ſtate of the mind is conſiderably better.

October 4th, I found her perfectly rational. Her pulſe from 56 to 58 in a minute. She has only taken the purging mixture once ſince my laſt viſit, viz. on Friday evening; and ſhe vomited all that night, and all day on Saturday. They do not know that it purged her at all that day: She has not taken of either

ther medicine ſince. I then deſired ſhe might be without medicine for a week, and have no reſtraint in diet; except that I wiſhed her not to drink ale, ſpirits, or wine. And,

On October 11th, I ſaw her, for the laſt time, perfectly well.

She recovered the proper uſe of the faculties of her mind, gradually, in proportion as ſhe took the medicine; but the change that took place after September 24th, when ſhe began the uſe of the fox-glove infuſion, was very remarkable. This patient was regular a few days before I attended her. At the following period ſhe was too weak to have the diſcharge.

Inſanity (as I am informed), has not been hereditary in either of the families to which my two patients belong.

Caſe of Hæmoptyſis cured by the uſe of Fox-glove, after other means had failed.

On June 27th, 1785, R. G——, aged 16, applied to Mr Mynors for his advice. He had been ill three or four days, and complained of a pain in the right-ſide of the thorax.

He

He had alſo a cough, quick pulſe, and other uſual ſymptoms of fever, attended with coſtiveneſs. His breath was remarkably fetid, and an acrid vapour was perceptible in it.

Mr M. directed antimonial powders, and an antifebrific julep, to be taken every third hour, with a cooling diet, which were continued to the 29th.

On the 29th the febrile ſymptoms had given way in ſome meaſure, but the cough was frequent and painful; therefore a ſpermaceti mixture was directed to be taken occaſionally, and the powders were continued as before.

On the 30th he was ſeized with hæmoptyſis, and loſt large quantities of blood, which came up in his fits of coughing; for which a ſtyptic acid julep, with the addition of ſmall doſes of the Thebaic tincture, was adminiſtered at firſt.

I ſaw him ſoon after this attack, and took eight ounces of blood from his arm. I then directed nitrous aperient powders to be taken every ſecond hour, mixed in a ſaline julep, and diluted with gruel.

July 1ſt, The powders not having purged him, I directed a cathartic, which operated

ſeveral times; and continued the medicines preſcribed on June 30th. As the febrile heat and diſcharge of blood appeared a little diminiſhed, this method was continued till the 6th, with apparent good effect. He was, however, on that day, again attacked with coughing, and profuſe diſcharge of blood. I therefore bled him again to eight ounces; and, as he was rather coſtive, directed repeated doſes of a purging mixture to be taken every hour till it operated, and a ſtyptic anodyne julep every fourth hour after the operation of the purgative. But the ſpitting of blood continued ſo frequent, with a pulſe never leſs than 120 in a minute, and other febrile ſymptoms, that, on the 7th, by the advice of Mr Mynors *, I directed a grain of the powder of the dried leaf of digitalis to be given morning and night, and a doſe of the ſtyptic anodyne julep every four hours, as before.

When he had taken four doſes of the digitalis, the hemorrhagy was ſo diminiſhed, and the pulſe ſo reduced, beating no more than 70 in

* Mr M. obſerving, that he recommended the above with a view to diminiſh the increaſed action of the heart, and of the whole vaſcular ſyſtem.

in a minute, that I thought proper to diſcontinue the exhibition of the Fox-glove, and to give only the ſtyptic anodyne julep.

On the 8th and 9th, he took each night a grain of opium, on account of reſtleſſneſs. The julep was continued.

On the 10th, a purging mixture was directed, of which he took a doſe once or twice a-day, occaſionally; and the julep was continued till the 13th, when he was well.

In a few days he was able to ride thirty miles into the country, where he ſtaid a fortnight; and returned ſtrong, and recovered in fleſh. He continues very well.

I remain,

SIR,

Your obliged Friend,

And moſt humble Servant,

WILLIAM JONES.

IV.

The Hiſtory of an uncommon Tumour on the Breaſt, which was ſucceſsfully cured by means of a ſeton. *By* Mr James Watſon ſurgeon to the Royal North-Britiſh Dragoons.

IN the month of January 1784, a young healthy ſoldier of the Grey's was attacked with all the uſual ſymptoms of catarrh. Theſe ſoon gave way to medicines then employed, and no complaint ſeemed to remain; excepting that he perſiſted in ſaying, he had an unuſual ſenſation in the left-ſide of his cheſt, and that ſometimes it was attended with violent pain. I was not at that time with the regiment, but ſome means were then uſed to relieve him; without, however, having the deſired effect: And, about a month from the date of his complaints, a fullneſs began to be perceptible on that ſide where he felt the pain. This continued for ſix or ſeven months, gradually increaſing in ſize and hardneſs: But,

from the third month, the principal inconvenience felt was from its bulk, the pain being conſiderably leſſened. About the tenth month, it ſeemed to have acquired its full ſize; being now about ſeven inches in length, and three and a half in diameter, forming a kind of oblong figure, and extending forwards to the edge of the ſternum.

The patient had hitherto enjoyed tolerable health, at leaſt for the laſt ſix months: But, about the 11th month, he was ſeized with a bad cough, attended with very difficult reſpiration. He loſt his appetite; a hectic fever was ſeldom abſent, and that too accompanied with profuſe ſweats. The tumour alſo now gave him much pain.

The regiment being at that time in Manchester, he was admitted a patient of the Infirmary; and, by the advice of Mr White, and other gentlemen of the faculty, he uſed a variety of medicines. External applications, as well as internal remedies, were employed. To all theſe, however, the tumour in no degree gave way: Its hardneſs was rather, indeed, more conſiderable than before; and it ſeemed firmly attached to the ribs and ſternum.

num. Extirpation was thought of; but the ſize as well as ſituation, independent of the patient's general health, rendered that operation out of the queſtion.

I at that time propoſed a ſeton being paſſed through it, of which ſome of the gentlemen ſeemed to approve. But then, as the patient was thought ſo much reduced, and the hectic ſymptoms being at that time rather worſe, it was judged a dangerous attempt, and delayed: In ſhort, it ſeemed to be the general opinion that nothing could be done. A ſuſpicion alſo prevailed, from the length of time the tumour had exiſted, that probably the bones themſelves were affected.

About this time the regiment was to march for Worceſter. The patient himſelf was anxious to go there; and, accordingly, was conveyed upon the baggage-waggon. About the 5th day of the march, he complained that the motion of the carriage produced a very different ſenſation in his breaſt from any he had before felt; the pain was more acute, and the heat conſiderably increaſed. Upon examination, I found an inflammation had commenced upon one ſide of the tumour; which,

which, I thought, was ſofter. However, in about four days more, a ſuppuration had evidently taken place; and, ſoon after our arrival at Worceſter, a fluctuation of matter could be perceived in every part of it.

Recourſe was now had to emollient poultices, in order to complete the ſuppuration: However, I had but little hopes of his recovery. His ſymptoms were all alarming; and I thought it probabe, ſhould an operation take place, or the tumour burſt ſpontaneouſly, that the diſcharge muſt be ſo immenſe as to cut him off.

Upon adviſing with an eminent ſurgeon in Worceſter, he gave me but little hopes of ſucceſs from any attempt to relieve him. His idea of the caſe was, that a communication ſubſiſted betwixt the cavity of the cheſt and tumour. This the violent cough and aſthmatic complaint ſeemed to render probable. However, it appeared to me, that the ſize of the tumour, together with the violent preſſure made upon the intercoſtal muſcles, might account for theſe ſymptoms, independently of any connection with the cavity of the thorax.

The

The miſery of the patient was now ſo very great, that I was daily importuned to open his tumour. And having, on the 23d of April laſt, reſolved to do it, (being 15 months from its firſt appearance), I for many reaſons preferred the ſeton-needle to any other inſtrument. I could regulate thus the diſcharge by it better; at the ſame time, I flattered myſelf the keeping of the cord in, would be of the utmoſt ſervice in the cure.

Having then introduced a common needle about the bottom of the tumour, I carried it in a ſlanting direction upwards, where I brought it out at the extremity. The diſcharge, during the operation, amounted to near three pounds. The pus was good, and without any ſmell; little or no blood was mixed with it.

The patient bore the operation wonderfully well, and expreſſed much ſatisfaction at the inſtantaneous relief he had experienced. The third day I removed the dreſſings, and ſhifted the cord. The diſcharge had been very conſiderable, and rather watery. An opiate was then given, and repeated every night, which ſoon changed the appearance of the diſcharge.

This I attributed to the opiates, having before experienced their good effects in that way. The hectic ſymptoms were getting daily leſs: The continuance of the cough made me heſitate about the propriety of uſing the bark. However, I began by giving ſmall doſes, acidulated with the elixir of vitriol, and continued increaſing them, without any bad effects ariſing to the patient. Indeed, his cough, I found, got better in proportion as the tumour diminiſhed.

The diſcharge, for ſeveral weeks, was very conſiderable. The tumour was now in ſize very trifling. The cord was removed in two months; and ſix weeks more completely healed up the breaſt. Weakneſs (the only one of all his complaints which remained) was alſo removed by the uſe of the cold bath; and he now does his duty in as perfect health as any ſoldier in the regiment.

V. *The*

V.

The Hiſtory of an Uncommon Mortification of the Inferior Extremities, which ſucceeded hard drinking; and which terminated fatally. By Mr James Watſon ſurgeon to the Royal North-Britiſh Dragoons.

ON the evening of the 9th of June 1785, a young healthy ſoldier of the Greys, having been violently intoxicated, went out of his quarters. He was found next morning, and conveyed to bed in a ſtate of inſenſibility. During that day he ſlept much; but, at intervals, when awake, drank immoderately of cold water, and eat nothing. His companions took no notice of this, imputing it to the effects of liquor.

In this way he continued the ſucceeding day, ſtill much diſpoſed to ſleep, and equally anxious for the water; which they allowed him to drink at pleaſure.

On the third morning he was reported to me, and the above circumſtances deſcribed.

Upon viſiting his quarters, I found him crying out violently with pains in his legs; which, he ſaid, he had loſt the uſe of: And, upon examination, I found them perfectly cold, and the circulation ſtopped. No pulſe was perceptible.

Recourſe was immediately had to cordials of various kinds; and, at the ſame time, every means uſed to produce circulation in his limbs, by means of friction, heat, &c.; but without effect. During that day no alteration took place. In the evening he was delirious, and with difficulty kept in bed: Upon which a large bliſter was applied between his ſhoulders.

Next morning I found his legs had made a moſt rapid progreſs towards a ſtate of mortification; and no pulſe was yet to be felt. The bark, conjoined with cordials, was now given in as large doſes as his ſtomach would admit of. Some ſpirituous applications were alſo uſed to his legs.

On the 11th, no alteration took place. I made ſome inciſions, and found the mortification already very deep, in every part, from the toes to both knees.

The

The 12th, they began to form veſicles, which broke and diſcharged a highly offenſive ſerum. Towards this evening, I could (for the firſt time) perceive his pulſe, which was extremely feeble and irregular.

I now carried my friend Dr Johnſton (an eminent phyſician in this place) to ſee him, who approved of what had been done; and ſeemed of opinion, nothing would be of ſervice. Amputation was out of the queſtion; for, independent of the patient's life being ſaved (ſuppoſing it would anſwer), at the expence of both limbs, which I will ever think is a purchaſe too dear, he never, from the beginning, had ſtrength ſufficient to bear an operation.

He continued two days longer in this ſhocking ſtate; his legs, of courſe, getting more and more putrid; when (on the morning of the 15th), death put an end to his ſufferings.

Query. In the foregoing caſe, whether are we to attribute the violent effects produced by the liquor to its quality; and ſuppoſe that, by acting as a poiſon, it had ſo far deſtroyed

the energy of the ſyſtem, that the heart was unable to propel the blood to the extreme parts? Or, that much the ſame conſequences aroſe from its merely acting as any ſtimulant would? But the ſyſtem, being in a highly irritable ſtate, was doubly affected; and, while exhauſted, received nothing to ſupport or reſtore it; on the contrary, the cold produced by the water taken into the ſtomach, muſt have had no ſmall effect in confirming the torpid ſtate already commenced.

What induces me to ſpeak of an irritable habit, is the patient's having had a violent inflammation upon one of his legs, about ſix weeks before, and that brought on by the moſt trifling accident.

VI. Ac-

VI.

Account of ſingular effects from the external application of a ſtrong infuſion of Tobacco, employed for the cure of Pſora. By Mr P. Grant ſurgeon at Stonehaven.

A MIDDLE-aged country man had (by lying in a ſtrange bed) catched the itch. In order to cure this diſeaſe, and prevent his wife from being infected, he prepared a ſtrong infuſion of roll-tobacco in water; with which both he and his wife fomented their bodies. This they did about nine o'clock at night; and, by ten, they felt themſelves as if intoxicated with ſpirituous liquor. They went to bed, thinking that this giddineſs would ſoon go off: but it ſtill continued; and became, now, accompanied with a moſt violent headach, and very dry hot ſkin. In the man, likewiſe, with a violent retching and vomiting: In the wo-

man, with a conſiderable looſeneſs, and pain in the lower part of her abdomen.

In this condition they paſſed the night, without any advice or aſſiſtance. But, in the morning, ſome of their neighbours having gone in and found them in this ſituation, inſiſted on ſending for me: And the man, as well as the ſpectators, thinking that he was juſt dying, readily agreed to the propoſal.

When I went, I found them in an alarming ſituation. They had both a violent headach. Their ſkin was perfectly dry, and remarkably hot. The man's pulſe was hard and quick; the woman's was rather ſoft, but frequent. They had both a great thirſt, but could not drink much at a time. The man continued to have a violent retching to vomit, and ſevere ſpaſmodic contractions in his arms and hands; with dyſpnœa to a very great degree. The woman's looſeneſs had ſtopt before I ſaw her; but ſhe had a great anxiety and ſickneſs, quick breathing, and great oppreſſion at her breaſt.

The concomitant circumſtances of the caſe readily ſuggeſted to me the indication of cure: I mean, the removal of the ſpaſmodic conſtriction

ſtriction from the extreme veſſels on the ſurface of the body, ſo as to allow the ſweat to flow; for this evacuation was totally ſuppreſſed. And, for this purpoſe, (as the ſafeſt and moſt expeditious means), I employed the warm bath, which had the wiſhed-for effect; for, after the application of it for about three quarters of an hour, they were laid to bed in blankets, and got a moſt copious ſweat. This very ſoon relieved every complaint, excepting the headach. The man's ſpaſmodic complaint was totally removed; and his ſtomach, which before retained nothing in it, would now receive plentiful draughts of ſack-whey; which I gave both of them, for the purpoſe of keeping up the ſweating. And this I continued for near twenty-four hours, when they found themſelves very eaſy, and perfectly free of all complaints: And, in four days thereafter, they were able to go about their uſual employment, enjoying as good health as before.

VII. *Re-*

VII.

Remarks on the Hydrophobia, and on the Efficacy of the Ormſkirk Medicine for the Bite of a Mad Dog. Communicated to Dr Duncan, by Dr Houlſton phyſician to the Liverpool Infirmary.

IN conſequence of the obſervations on Canine Madneſs, inſerted in your Medical Commentaries (Vol. VIII.), being republiſhed in my *Obſervations on Poiſons*, I was lately favoured with ſome remarks on the ſubject from an Engliſh phyſician, the public profeſſor of chemiſtry in a foreign univerſity; a man of a moſt ingenious and ſtudious turn, very attentive to whatever may contribute to the extenſion of medical knowledge, and the accuracy of whoſe obſervations may be depended upon. I mean here to ſubjoin what he ſays upon the ſubject, premiſing, 1ſt, That though I do not think (from every thing that I have been

been able to learn reſpecting it), that Hill's, or the Ormſkirk medicine, is poſſeſſed of powers adequate to counteract the effects to be dreaded from the bite of a mad animal; yet, in a matter of ſo very ſerious and important a nature, our opinion of the inefficacy of a remedy ſo much extolled and depended upon, ſhould never prevent our making uſe of it: for, ſuppoſing it totally uſeleſs, yet it may be properly employed without neglecting any of the more powerful means of relief; and, ſhould the event ſtill prove unhappy, the minds of all concerned would be better ſatisfied, from the reflection, that nothing likely to be of ſervice had been omitted. 2dly, That with reſpect to the ſpontaneous hydrophobia, I ſaw an inſtance in which that diſeaſe took place and proved fatal, where not the moſt remote ſuſpicion of its being cauſed by the bite of any animal could be entertained; nor could it be accounted for by any means, unleſs it could be ſuppoſed to have originated from a pretty long expoſure to intenſe cold. But, whatever was the cauſe, death was the event, in two or three days after the firſt appearance of this ſymptom.

" I

"I miſſed a ſingular opportunity of making a rare obſervation on hereditary diſeaſes, and on the communication of the canine madneſs. A dog covered a bitch a few hours before he became quite mad. The bitch was then, and had been kept ſeparate from other dogs, and proved with pup; but the maſter of her had neither patience nor courage to wait the event, and (unknown to me) killed her.

"It is clear that the Ormſkirk powders are not infallible; yet as they do not hinder the uſe of other remedies, nor have been found in any ſenſe noxious, I ſhould be ſorry to ſee them abandoned.

"I think they were of great uſe here to Dr K. who, ſeveral months after the bite, had, with ſome pain and inflammation of the wounded part, convulſive ſpaſms to an alarming degree, and a ſenſible beginning of averſion to water; yet perfectly recovered. He was bled copiouſly, and bathed much; but took no medicine, in which I ſhould place any the leaſt confidence, excepting the Ormſkirk powder.

"Macharini, the ſinger, conſulted me towards the end of laſt ſummer; and, amongſt many

many other complaints, aſſured me, (and the people about her confirmed her ſtory), that ſhe had twice ſuffered a ſpontaneous hydrophobia accompanied with extreme thirſt. Each attack laſted twenty-four hours; and the one happened in June 1784, and the other in June 1785; and, as near as ſhe can recollect, on the ſame day of the month. She is very nervous, ſubject to ſtrong paſſions, and not free from obſtructions in the viſcera of the lower belly."

VIII. *Ac-*

VIII.

Account of an Extra-uterine Conception. Extracted from a letter written by T. Bland, M. D. of Blandford in Virginia, to W. Shippen, M.D. and profeſſor of anatomy in the univerſity of Penſylvania. Communicated to Dr Duncan by Mr B. Smith Barton.

I WAS called to give my opinion on the caſe of a negro woman (between thirty and forty years, as near as I could gueſs), who had for eighteen months been afflicted with a tumour on the right-ſide of the hypogaſtric region. She had from time to time been much troubled with, and exhauſted by a diarrhœa, which only ſtopped for a few days to return with the greater violence. She had alſo ſevere and acute pains, for ſeveral months before I ſaw her, in and about the part where the tumour was. When I ſaw her, which was four or five months before her death, her

pulſe was quick, ſmall, and what is generally denominated hectic.

The tumour ſeemed fixt, and full as large as a man's two fiſts; and I gave it as my opinion that it was a ſcirrhous ovarium, which had acquired gradually that ſize, and formed an adheſion with the peritonæum; that it was, at the time I ſaw her, become ulcerated; and that, from her weak emaciated condition, an extirpation was impracticable, without danger of immediate death, for ſhe was extremely low and emaciated. I had forgot to mention, that ſhe informed me, ſhe had felt a motion in it, about four, five, or ſix months after its firſt appearance; and then thought it was the motion of a child. But, to proceed:

About four months after my giving this opinion, I was informed of her death, and obtained permiſſion to open her; when, on cutting through the parietes abdominis, I thought my prognoſtic confirmed; for I ſaw the ovarium, much enlarged, hanging to the ligament, the tumour with an unequal ſurface of a darkiſh blue, bordering on an aſh-colour, and adhering to the peritonæum, colon, meſo-

colon,

colon, ileum, meſentery. I proceeded to diſſect it from the peritonæum, when the knife plunged into a ſac, from whence iſſued a putrid fetid matter, like what comes from the caries in the ſpina ventoſa; and the knife ſtruck againſt ſomething hard, which I ſoon perceived to be the bones of a fœtus; which, as near as I could judge, were thoſe of one who had attained its fourth month. The right ovarium ſeemed to be loſt in the tumour, and its membranes to have formed this preternatural uterus. The left ovarium and uterus were in their natural unimpregnated ſtate, perfectly ſound and entire; though a gangrene ſeemed to have taken place in the right ovarium and its contents, and where it formed its adheſion before death; for there ſeemed no remains of the carneous parts of the fœtus, nor any remains of the placenta, that I could diſcover, through the orifice made by the knife. But all the bones were entire that I ſaw; particularly the radius and ulna, the tibia, and fibula, which protruded themſelves; and I could feel alſo the cranium with a probe. I extirpated the tumour, and put it into ſpirits; and have ſince ſhown it to many. This

you may depend upon to be the true hiſtory of the caſe.

IX.

Hiſtory of a Caſe in which an Epiſtaxis occurred vicarious to the Menſtrual Diſcharge. By Dr Robert Hamilton phyſician at Ipſwich.

MISS D——s, ætat. 22, the ſubject of this caſe, for theſe laſt four years has had her menſes irregularly. Sometimes they do not appear for four months together; then they break forth, and continue regular for three or four periods; ſtop again, &c. During their interruption, at the ordinary time they ſhould appear, ſhe is regularly ſeized with an epiſtaxis, which continues three or four days (or about the length of time the catamenia uſed to flow) before it completely ſtops. The quantity of blood loſt from her noſe at theſe times is conſiderable, and creates ſome uneaſineſs

ſineſs to herſelf and parents. She is of a ſanguine temperament; ſkin ſoft, yet not looſe; hair extremely red; no marks of œdema about her ancles. She enjoys tolerable health in general, though delicate; unleſs a ſlight uneaſineſs ſhe feels before her times of menſtruation, which is removed either by their appearance, or by an epiſtaxis.

About ten days ago, on the return of theſe uneaſy ſenſations, the family apothecary was ſent for, who adminiſtered ſome rhubarb. This having operated but ſlightly, next day he gave a little more; in the whole, however, according to his account, not more than an ordinary doſe: but it had ſuch an effect on her the ſecond day, that in leſs than eighteen hours, it ſeems, ſhe had upwards of 50 ſtools. This great evacuation threw her into a fever, and ſhe ſeemed to all about her dangerouſly ill; on which I was called. She is now perfectly recovered, chiefly by ſuch medicines as obviate debility, and are in common uſe; therefore it is not neceſſary to repeat them here.

The above account, relative to her menſtruation, I received on my firſt viſit from her mother; who mentioned the epiſtaxis alternating,

ternating, or rather ſupplying menſtruation, in courſe, in anſwering other queſtions I thought it right to put to her on the ſubject of her daughter's caſe. She gave the relation, too, without any kind of concern, or ſeeming to think much of it, excepting from the largeneſs of the loſs of blood from the noſe. I frequently, after this, introduced converſation that led to the ſubject; yet ſo as they might not ſuſpect my intention, (for I was afraid of impoſition, as we are very apt to receive falſe and imaginary accounts from patients or their friends), and have reaſon to rely on it as a poſitive fact. Let the phyſiologiſts find an explication for it.

While I am now writing, Mr Buck, a ſurgeon in this town, has juſt called on me; and, on telling him as above, he informs me of a maid-ſervant he had, ſome years ago, affected almoſt exactly in a ſimilar way. He took notice of her frequently bleeding at the noſe; he mentioned it to Mrs Buck, and had ſome thoughts of parting with her, as it frequently interrupted her buſineſs. She informed him, the girl had not been regular for ſome years paſt; and that always, at the uſual period of

menſtruation, ſhe was ſeized with this effuſion of blood. He immediately bled her at the foot, and repeated venæſection at the next period. Her menſes after this returned, and continued regular, without any other means being uſed, excepting the immerſion of her feet in warm water.

It is wonderful to obſerve what variety of means nature takes to reſtore the animal machine to its wonted functions when diſordered, and to relieve herſelf from cauſes giving morbid irritation. Sometimes ſhe opens preternatural outlets, to throw off an accumulated fluid detained in the ſyſtem by ſome caſual obſtructions in one or other of its excretories. At other times, the diſcharge is thrown on a neighbouring organ, where it finds an exit. Thus we ſee the perſpirable matter ſupplied by an increaſe of urine. We have read of abſceſſes formed in different viſcera, burſting, and diſcharging their contents at a diſtant part of the body; or tranſlated from ſome inacceſſible part where they had formed, perhaps to ſome extremity, and being depoſited there, within the eaſy reach of the ſurgeon's knife.

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The menſes have been ſupplied by a periodical hæmoptyſis, by a monthly diſcharge of blood from an ulcer of the foot, a tumour of the neck, or from the end of the little finger. Beſides thoſe we have taken notice of here, there are on record, many other ſuch anomalous caſes: And I ſhall give you the following alſo as an addition to the number. I learned it while I was a ſtudent under you, and enjoyed your perſonal acquaintance.

It was in the year 1779, I think, a young lady in the neighbourhood of Edinburgh, aged 18, had an ulcer of ſome years ſtanding on her foot, near the courſe of the ſaphæna major. It was large; nor was ſhe eaſily prevailed on to ſhow it, through a modeſty and delicacy ſhe naturally poſſeſſed. Her mother aſſured me, that at the time her menſes ſhould have appeared, it diſcharged blood for a few days. She had no other menſtruation, and this diſcharge was periodical. She was of a very ſedentary life, and appeared to be of a ſcrophulous habit.

Though we ſhould reap little real inſtruc-

tion from caſes ſuch as the above, not being able to draw any general concluſions from them; yet, as curious, they deſerve to be noted. They will, however, no more, perhaps, explain whether menſtruation is to be referred to a general or partial plethora, than arguments drawn from monſtrous productions of nature can be brought as proofs that ſuch is her common courſe: Or, in other words, I think we ought no more to acquieſce in ſuch arguments, either for a general or partial plethora, than we ought in an argument drawn from a child's being born without an umbilical cord, as a poſitive proof that the fœtus is not nouriſhed through that veſſel.

X. *Hiſtory*

X.

Hiſtory of a remarkable Caſe of Noſtalgia affecting a native of Wales, and occurring in Britain. By Dr Robert Hamilton phyſician at Ipſwich.

IN the year 1781, while I lay in barracks at Tinmouth in the north of England, a recruit who had lately joined the regiment (named Edwards), was returned in the ſick liſt, with a meſſage from his captain, requeſting I would take him into the hoſpital. He had only been a few months a ſoldier; was young, handſome, and well-made for the ſervice; but a melancholy hung over his countenance, and wanneſs preyed on his cheeks. He complained of univerſal weakneſs, but no fixed pain; a noiſe in his ears, and giddineſs of his head. Pulſe rather ſlow than frequent; but ſmall, and eaſily compreſſible. His appetite was much impaired. His tongue was

ſufficiently moiſt, and his belly regular; yet he ſlept ill, and ſtarted ſuddenly out of it, with uneaſy dreams. He had little or no thirſt.

As there were little obvious ſymptoms of fever, I did not well know what to make of the caſe. I ſuſpected he might be under an incipient typhus, and ordered what I judged neceſſary to obviate it. Some weeks paſſed with little alteration, either for better or worſe, excepting that he was evidently become more meagre. He ſcarcely took any nouriſhment, yet had hitherto ſat up out of bed ſome hours every day. At length he became indolent; ſeldom ſat up at all; was conſtantly doſing, yet his ſleep never ſo ſound but he could anſwer when ſpoken to: He ſighed deeply and frequently; nor could his attention be directed to any external object. Something, it would ſeem, hung heavy on his mind. He never had any cough; yet, ſince he came into the houſe, had waſted away conſiderably. Exerciſe was recommended, and uſed as far as he could be rouſed to take it, which was never without reluctance. He was put on a courſe of ſtrengthening medicines; wine was allowed him. All proved ineffectual. His pulſe had changed

changed with his appearance, and was now ſmall and quick; an evident fever of the hectic kind, as it ſeemed, with an evening exacerbation, took place. He had now been in the hoſpital near three months, and was quite emaciated, and like one in the laſt ſtage of a conſumption. His eyes were grown hollow; cheeks prominent; nails incurvated; adnata pellucid; and he was ſo weak in his limbs, that he could neither get in nor out of bed without help. Of late, alſo, he had night-ſweats. In ſhort, I looked on him as loſt.

On making my morning viſit, and inquiring, as uſual, of his reſt at the nurſe, ſhe happened to mention the ſtrong notions he had got in his head, ſhe ſaid, of home, and of his friends. What he was able to ſpeak was conſtantly on this topic. This I had never heard of before. The reaſon ſhe gave for not mentioning it, was, that it appeared to her to be the common ravings of ſickneſs and delirium. He had talked in the ſame ſtyle, it ſeems, leſs or more, ever ſince he came into the hoſpital.

I went immediately up to him, and introduced the ſubject; and, from the alacrity with which he reſumed it (yet with a deep ſigh, when

when he mentioned his never more being able to ſee his friends), I found it a theme which much affected him. He aſked me, with earneſtneſs, if I would let him go home. I pointed out to him how unfit he was, from his weakneſs, to undertake ſuch a journey (he was a Welchman) till once he was better; but promiſed him, aſſuredly, without farther heſitation, that as ſoon as he was able he ſhould have ſix weeks to go home. He revived at the very thoughts of it. At this time, however, I made a promiſe which I knew it was not in my power to perform, without the conſent of the commanding officer, who alone can grant furloughs: but, as my hopes of his recovery were very ſlender, my raſh promiſe could give me the leſs uneaſineſs; and my ſcheme was, to animate his hopes, and endeavour thus to take advantage of the change that his mind might undergo by it, to co-operate with me in removing, if poſſible, the malady.

It ſeems he had requeſted leave to viſit his native place ſoon after he joined; but being only a recruit, and but a few months from thence, he was refuſed. This had hung on his ſpirits ever ſince; and from thence I now

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dated the origin of his illneſs. I intreated him to take food to ſtrengthen him for his journey; and, as ſoon as he was able, to go out into the open air a little every forenoon when the weather would permit, that he might be the ſooner able to go home. He liſtened eagerly to every word I ſaid. In ſhort, his appetite ſoon mended; and I ſaw, in leſs than a week, evident ſigns of recovery. He was now lively, though ſo weak that he could not get in or out of bed without aſſiſtance; he ſtrove to ſit up; two men took him between them in the heat of the day, and placed him on a ſeat they had erected for him on the beach, where he had a view of the ſhipping, for it was on the ſea-coaſt. In a little time he was able to walk. Every viſit I paid him he reſumed the ſubject of *the furlow;* which I perſiſted in promiſing, ſeeing the good effects it had already produced; and, in leſs than two months from the time he had received this promiſe, he was able to leave the hoſpital and go to his barrack-room.

I ſet myſelf about endeavouring, as far as in me lay, to accompliſh my promiſe; for he paid me almoſt daily viſits, aſſuring me he

he was able to undertake his journey, if I would allow him, for he firmly relied on my word. I was in ſome dilemma now how to act; yet his ſtory was already known throughout the regiment, and the eſcape he had from imminent death. The deception, however, if I had dropped it here, was tenderneſs, and a regard for his recovery. But I went farther. I made public to all the officers the method I fell on to recover him; and told them, moreover, that if I did not ſucceed in obtaining him a furlow, I was ſure he would relapſe, as ſoon as he underſtood his expectations were to be fruſtrated. I won them over to my intereſt. The ſtory was publicly talked of. The commanding officer was likewiſe acquainted with it; and the requeſt was now made to him, which he obligingly granted.

XI. *Ac-*

XI.

Account of a Caſe in which a very large portion of the Lungs was protruded and ſtrangulated, occaſioned by a wound in the Thorax, which was treated ſucceſsfully. By Mr Robert Bell ſurgeon in Cork. Communicated to Dr Duncan by Sir Thomas Bell, M. D. Dublin.

A Labouring man, on the 7th of May 1780, received a wound with a knife in the left ſide, nearly equidiſtant from the ſpine and ſternum, which touched the ſuperior edge of the tenth rib, and, paſſing obliquely upwards, penetrated the cavity of the thorax.

On viſiting him early the following day, I found him very languid from loſs of blood, and an amazingly large portion of the lungs protruded and ſtrangulated, attended with great pain, and tenſion. This portion of the lungs, from its magnitude, could not be returned, it being

being five inches in length, and five and a half in circumference, when largeſt. I therefore immediately dilated the wound, and very largely, in hopes that by removing the ſtricture the alarming ſymptoms might ſubſide. The inflammation, however, ran ſo high, that, notwithſtanding my utmoſt attention to prevent it, the protruded part gangrened in ſeveral places, and ſeemed diſpoſed entirely to mortify. On the 22d, a conſiderable quantity of pus began to iſſue from the wound; the ſloughs gradually ſeparated, and all tenſion was removed by the beginning of the ſucceeding month. To leave the poor man in ſo deplorable a ſituation was impoſſible: I therefore ventured to apply a ligature on the protruded part, as cloſe to the ribs as I could; and, as it became looſe, from time to time, I applied a freſh one. By theſe he conſtantly ſuffered very acute pain, with this remarkable circumſtance (which to me, I confeſs, is inexplicable), that it was wholly confined to his abdomen, chiefly in the hypogaſtric region; and ſo ſevere on my tightening the ligature, as to occaſion his ſcreaming aloud, and preſſing his hand on that part. On the 14th, he

bled conſiderably from the place where the ligature was applied, not leſs than a pound, as nearly as I could gueſs; and on the 15th, about four ounces: after which there was no hemorrhagy of any conſequence. On the 19th, the whole protruded part ſeparated, with little loſs of blood; and weighed no leſs than ſeven ounces and a half, though much diminiſhed in bulk. During the time of his confinement he was kept as free from motion as poſſible, neceſſarily on his back, in order to ſupport the part more effectually. On the 5th of July the wound was healed; and I ſaw him in a ſhort time after, when he appeared not only in perfect health, but informed me that he found no inconvenience whatſoever from his late dangerous ſituation; though he cannot, as formerly, undertake ſevere labour, ſuch as mowing; but he can do common work as well as ever. It appears worthy of obſervation, and not a little remarkable, that he had no cough or oppreſſion, neither during the whole time of his confinement, nor after it.

At the reduction of Quebec under General Wolfe, we had in the military hoſpital at Point

Point Levi, a grenadier of the 35th regiment of foot, who had a portion of the ſpleen protruded through a wound. This was ſucceſsfully removed by inciſion, of which there have been other inſtances: but not knowing of any caſes where part of the lungs was protruded and removed, I apprehended that this caſe may be a uſeful precedent; and as ſuch tranſmit it to you; to whom the medical world is much indebted for the publication of your valuable and very uſeful Commentaries.

XII. *The*

XII.

The Hiſtory of a ſingular affection of the Liver, which prevailed epidemically in ſome parts of the Weſt Indies. By Mr C. Chiſholm ſurgeon at St George's, Grenada.

THE diſeaſes of the Weſt Indies may be in general divided into the putrid and inflammatory; the firſt prevailing from May till towards the beginning of November; the latter during the months of November, December, January, February, March, and April; but more univerſally from the end of December till the beginning of April. Their appearance and degree of prevalence depend ſo much on the ſtate of the weather during theſe periods, that a variation in the common courſe from warm moiſture to the changeable weather of the later months of winter and thoſe of ſpring, is attended with a proportional change in the appearance, nature, and prevalence of

the diſeaſes. In the month of November inflammatory ſymptoms begin to appear, blended with thoſe of putreſcence; ſuch as coughs, pleuritic ſtitches, rheumatic pains, &c. In January, February, and March, during which the nights, mornings, and evenings, are cold, and the days warm, the thermometer changing generally from 72 to 84, violent pleuriſies, coughs, and rheumatiſms, prevail very much, and ſeldom yield, particularly the former, till very large evacuations of blood are made. This ſtate of weather, and the diſeaſes incident to it, are much more evident on the north and north-eaſt ſides of the iſlands than to leeward; and ſeem to ariſe from their more direct expoſure to the piercing northerly winds, which conſtantly blow during the winter and vernal months.

The hepatitis ſeems to be the only exception to this diviſion of the Weſt India diſeaſes. This diſeaſe, though evidently a violent inflammation of the liver, appears as well in July or Auguſt as January or February, from a cauſe which ſeems ſo obſcure as to elude inveſtigation. It is well known, that of all the viſcera the liver is moſt ſubject to diſeaſe in warm climates.

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The inflammation of this viſcus has for twelve or fourteen years paſt frequently appeared in the Weſt India iſlands; and the later ſettled iſlands, Grenada and Dominica in particular, have been moſt ſubject to it: But till very lately it has not aſſumed the appearance of an epidemic, and differed from its common origin, progreſs, and termination, by putting on ſymptoms and producing changes in the organ it is peculiar to; hitherto, I believe, unobſerved.

This new affection of the liver began to appear on the windward-ſide of the iſland of Grenada about the end of October, when an uncommon changeableneſs in the ſtate of the weather prevailed. The month of September was remarkable for the prodigious falls of rain and great height of the thermometer, which ſucceeded the equally ſurpriſing drought of the preceding month. The months of October and November were not leſs remarkable for the quantity of rain which fell; but the height of the mercury in the thermometer, and conſequently the degree of heat and cold, was extremely obſervable. December was not ſo wet, nor the thermometer ſo variable; but northerly winds began to blow,

which, attended with heavy dews, during the night eſpecially, occaſioned a piercing coldneſs in the air. The ſame ſtate of the weather, with only more boiſterous northerly winds, and a greater chillneſs in the air, continued throughout the months of January and February. The month of March, down to this day, has been dry, cold in the night and morning, warm during the day, and generally calm.

Whether this ſurpriſing change, from exceſſive drought to exceſſive moiſture, from great and uniform heat to a conſiderable degree of cold, was productive of the diſeaſe to be hereafter deſcribed, I ſhall not determine; but, having no other data to infer from, I muſt reſt ſatisfied with attributing it to that as its cauſe: On further obſervation the inveſtigation of this obſcure point muſt depend. It is certain, however, that the diſeaſe did not become very frequent till towards the middle of January, when the degree of cold was the greateſt; that it then aſſumed thoſe appearances, which at that time and ſince have rendered it ſo extremely dangerous; and that it was chiefly prevalent in the diſtricts of the iſland called Scantein and Marquis,

quis, which are by far the moſt expoſed to the influence of the chilling northerly winds. It is to be obſerved, that during the above period, accidental hurts, particularly on the region of the liver or left-ſide, ſeemed to be occaſional cauſes of the diſeaſe; at any rate the uſual ſymptoms were much exaſperated by them.

Although people of all colours, ſexes, and ages, were ſubject to the diſeaſe I am about to deſcribe, yet the blacks and young people from the age of eight to twenty-five years were moſt liable to it. This diſtinction appears to have chiefly ariſen from the greater expoſure of the negroes to the cold dews of the night, and their habitations more readily admitting the cold northerly winds which generally blow at that time. It is alſo remarkable, that it ſeemed to poſſeſs a conſiderable degree of contagion; for on the Hermitage eſtate, and river Antoine in particular, I have ſeen whole families receive the infection from communicating with one of the parents who had been ſome time before affected with the diſeaſe. On the river Antoine the contagious nature of the diſeaſe appeared remarkably in

two inſtances. The firſt was in the caſe of two cooper negroes, who had been hired to work on the eſtate: Their maſters, who lived at Grenville Bay, having occaſion for their labour, recalled them: During the latter part of their ſtay on the eſtate, they lived with the houſekeeper, who was then labouring under a fatal attack of the diſeaſe. Very ſoon after their return to Grenville Bay, they were both violently ſeized, and with the utmoſt difficulty eſcaped. The other is the caſe of the houſe-negroes: From the ſame woman, all the mulatto and negro-ſervants received the infection; and many of the field-negroes, who had occaſion to viſit the houſe during her illneſs, were ſoon after dangerouſly afflicted with it. When patients, in a ſtate of convaleſcence, were unneceſſarily continued in the ſick hoſpital, they were much more liable to returns of the diſeaſe, than others who had been ſent to their huts.

The diſeaſe began, in general, with a conſiderable degree of headach, a pain at the pit of the ſtomach, or ſometimes about the extremity of the cartilago xiphoides, ſome degree of languor and laſſitude, and a conſiderable ſenſe of tightneſs and oppreſ-

oppreſſion at the præcordia, with difficult reſpiration. The ſkin was dry, conſtricted, and cool; the tongue moiſt and foul; the belly natural, and the urine freely diſcharged. There was no thirſt, nor much anorexia; the pulſe was ſoft, about 70 or 80 in a minute, and of a natural fulneſs. But the ſtate of the patient, at the beginning, ſometimes differed from this; the pulſe in particular being hard and frequent, and the ſkin arid and hot: A conſiderable tumefaction of the abdomen was alſo obſerved in ſome, chiefly at the umbilical region. The pain too, in ſome caſes, ſeemed, even in the incipient ſtage, to mark the nature and ſeat of the diſeaſe more clearly. When this happens, the patient often complains of it ſometimes in both ſcapulæ, but oftener in the right; or ſtretching acroſs the abdomen a little above the navel; or fixed in the right hypochondrium, and extending to the ſhoulder of the ſame ſide; or in both hypochondria and the pit of the ſtomach at the ſame time; or ſtretching from the umbilicus to the ſpine, and attended with very laborious breathing. In general, however, it was very remarkable, that when the pain was fixed, it

was felt in the left ſide, under the lower of the falſe ribs.

In about two days the headach increaſed much, but without vertigo; the pain at the pit of the ſtomach became more excruciating; the patient felt ſymptoms at the ſame time ſimilar to thoſe of an ague fit, ſhivering and ſhaking. Soon after, the ſkin communicated, on gentle preſſure, a ſenſation of cold; but when felt for ſome time, and more ſtrongly preſſed, an intenſe penetrating heat; whilſt its ſurface continued exceſſively arid and rugoſe. The tongue was now covered with a thick moiſt fur, of a purpliſh colour towards the edges, and with concretions in the middle: A copper colour began to appear on the upper part of the cheeks, the noſe, and eye-brows, out of which large drops of clammy ſweat frequently iſſued; whilſt a greaſy moiſture was at the ſame time diffuſed over the reſt of the face. The pulſe, from being only 80 in a minute, quickened to 120, and in ſome caſes to 144, and was hard and contracted: When the headach was much complained of, without the preſence of any pain, the pulſe was harder and quicker; on the contrary, if headach and pain in either ſide

were

were felt at the ſame time, the pulſe did not ſeem to be ſo much affected: The ſkin too, in this caſe, was leſs hot and arid. When headach was the only pain complained of, and bloodletting not freely uſed, a pain at the pit of the ſtomach, or in the right or left ſide, ſooner or later ſupervened.

In many caſes, at this period of the diſeaſe, the patients complained of a dry cough, or rather a ſudden quick expiration, proceeding ſeemingly from a violent compreſſion of their lungs. And indeed, at this time, it was not unfrequent for the patients to deſcribe a feeling in the lower part of the thorax, ſimilar to that of a heavy weight preſſing upon their lungs, and almoſt ſuffocating them. About the ſixth day, and ſometimes earlier, if the patient had not the good fortune to eſcape by means of evacuations, to be hereafter mentioned, the pulſe ſuddenly ſunk, ſo as to become almoſt imperceptible; the greaſineſs and coppery colour of the face increaſed very conſiderably; a glaſſineſs appeared on the eyes; a general diſagreeable coldneſs of the ſkin was perceived, with frequently a partial clammineſs on its ſurface; a great increaſe of the weight at the

præcordia, a ſenſe of ſtricture in the pharynx, and an exceſſively difficult deglutition came on; all which were ſoon ſucceeded by coma and death.

In the worſt caſes of the diſeaſe the brain never appeared affected, the mind never being in the ſmalleſt degree diſturbed. Out of about two hundred patients, thirty died; of theſe, three died on the 3d day, nine on the 5th, twelve on the 7th, and ſix on the 11th: Indeed the progreſs of this dreadful diſeaſe was ſuch, that when the patients ſurvived the 7th day, it ſeemed to be entirely owing to bleeding. The only thing like a critical diſcharge that could be obſerved, was a purging, which frequently came on ſpontaneouſly, a conſiderable time after the uſe of mercury had been laid aſide. This purging, though attended with griping, teneſmus, and nauſea, and conſequently extremely painful, ſeemed to abate the violence of the ſymptoms conſiderably; and, in a few caſes, evidently effected a cure.

The diagnoſtic ſymptoms of this diſeaſe were, as muſt be perceived from its hiſtory, extremely uncertain; for, if a pain in the right

right ſide and ſhoulder did not point out its nature and ſeat, the knowledge of it was directed by the pain at the pit of the ſtomach, when accompanied by oppreſſion and tightneſs at the præcordia, the coppery colour of the cheeks, forehead, and noſe, with a greaſy moiſture on the ſurface of the face, and the ſudden ſupervention of the quick hard pulſe about the 3d day. Upon the whole, it was repeated obſervation and diſſections alone, which enabled us to detect the peculiar features of this diſeaſe.

The prognoſtics were more certain. If the blood, when drawn, continued very ſizy, and the mercury did not affect the ſalivary glands ſoon, the recovery of the patient became extremely doubtful: But on the contrary, if the blood became leſs inflammatory, and the mercury affected the mouth in an early ſtage of the diſeaſe, the patient might be pronounced out of danger. Yet ſometimes the appearance of the blood was very deceitful. I have known the firſt blood drawn covered with a thick inflammatory cruſt, the ſecond and third red and fluid, and the fourth again threw up a thicker cruſt than the firſt. If the appear-

ance

ance of the ſecond and third was truſted, the patient inevitably died. When we had recourſe to theſe copious evacuations, if the reſpiration became free and full, and the pains moderated, we could with moſt certainty prognoſticate his recovery.

In all the caſes which terminated fatally, the liver, on diſſection, was found aſtoniſhingly enlarged. On its ſurface, particularly the convex ſide, an irregular intermixture of red, purpliſh, and tallow-coloured ſpots was diſperſed, exhibiting a clouded appearance; yet the peritonæum covering it adhered as cloſely as in a healthy ſtate, to the ſubſtance, and when ſeparated, had no unnatural appearance, being perfectly tranſparent. The texture of the parenchyma, though ſo much enlarged as in eight caſes out of ten to occupy both hypochondria and the epigaſtrium, was otherwiſe in a natural ſtate. It was not ſoft; it could not be eaſily divided without the knife; nor was there in any part of it the ſmalleſt appearance of ſuppuration. The diameters of all its veſſels were proportionally enlarged, but perfectly empty. The inteſtines, excepting in one caſe, the ſtomach, the ſpleen, the pancreas,

creas, the lungs, and the heart, were ſound and in a healthy ſtate. The brain was examined, in one caſe only, and there it was in a healthy ſtate. The duodenum, the jejunum, and ileum, in the caſe alluded to, had ſeveral large livid blotches on their ſurface, which at firſt were thought gangrenous; but, on cutting into them, were found to be occaſioned by extravaſations of blood between the coats of the inteſtines, which, on preſſure, iſſued in a coagulated ſtate.

In two caſes, the veſſels of the gall-bladder were found much diſtended with blood, as were likewiſe thoſe of the diaphragm. In one caſe there was an adheſion of the right lobe of the liver to the right ſide, altho' the pain had been felt in the left; which was the only ſymptom, excepting violent headach, the patient complained of. In another caſe, where the only ſymptoms were headach and pain in the left ſide, on diſſection the liver as uſual was found much enlarged, occupying the right and left hypochondrium and epigaſtrium, and there was a recent adheſion of the edge of the left lobe to the falſe ribs immediately oppoſite to the ſeat of the pain. The liver, however, did not always exhibit

exhibit, on diſſection, the motly appearance I have here deſcribed.

I have already obſerved, that during the convaleſcent ſtate, the patients were exceedingly liable to relapſes. Indeed, during this ſtate, if they were guilty of the ſmalleſt irregularity, or expoſed themſelves to cold, the diſorder returned with more violence than before; and the exceſſive debility of the habit preventing the rigorous uſe of the former means of cure, it proved fatal in twenty-four or forty-eight hours. A remarkable inſtance of this occurred during my reſidence at the Hermitage. A negro wench, about fifteen years of age, had ſome time before been violently afflicted with the diſeaſe; and the mercury acting powerfully on the ſalivary glands, the ſymptoms diſappeared, and ſhe continued in a convaleſcent ſtate for a fortnight. Towards the end of this period ſhe was removed from the hoſpital, and imprudently expoſed to a much cooler air than ſhe had been accuſtomed to. The pain at the pit of the ſtomach, headach, and quick ſmall contracted pulſe, very ſoon after ſupervened; and in thirty hours ſhe died. Her liver was

found to occupy both hypochondria and the epigaſtrium, but the whole of its ſurface had a natural colour. Every other part of her body was in a perfectly ſound ſtate.

In two caſes, the lungs were affected. In one of them, where a violent bruiſe on the left ſide ſeemed to be the occaſional cauſe, and where the progreſs of the diſeaſe was ſo rapid as to terminate fatally in three days, the following were the appearances on diſſection: There was obſerved a very great enlargement of the liver, with a conſiderable degree of hardneſs; but the colour was not very unnatural, further than being more red than common. A quantity of purulent matter was concealed under its left lobe, but no abſceſs could be diſcovered on cutting into it. This lobe adhered to the peritonæum all along the falſe ribs and diaphragm. The ſtomach and other viſcera had a natural appearance, only diſtended with air. The lungs, the left lobe in particular, were in a very inflamed turgid ſtate; but no collection of either ſerous or purulent matter could be found. Upon the ſtricteſt examination, no mark from whence the purulent matter iſſued could be diſcovered.

When

When this diſorder firſt became epidemical, the quickneſs of its progreſs, and its fatal tendency, very much ſurpriſed the medical gentlemen who attended the eſtates it chiefly appeared on; the irregularity of its ſymptoms prevented the detection of its nature and ſeat, and conſequently led only to the uſe of the common means of cure uſed in the febrile diſeaſes to which the negroes are ſubject. The cure was firſt attempted by blooding once or twice, purging gently, and giving a medicine compoſed of nitre and camphor. Theſe, however, proving ineffectual, and obſerving that the diſeaſe was in a conſiderable degree contagious, it was thought to partake more of the putrid than inflammatory diatheſis; and therefore bark and various cordials, with bliſters, and the nitrous and camphorated powders, were given in very large quantities. But theſe were ſoon found rather to exaſperate the ſymptoms of the diſeaſe than abate their violence.

At length, about the end of January, when the diſeaſe became infinitely more alarming, having found there was an abſolute neceſſity for blooding largely, without delay, in order

order to preſerve life; the following method of cure was adopted, which ſeldom failed, not only in young and robuſt people, but even in thoſe of a more advanced age, provided the ſick were ſeen before the end of the third day. The patient was immediately bled, until a faintneſs came on, or the pains abated; neither of which happened till twelve, twenty, thirty, or even forty ounces of blood, were in ſome caſes taken away. After this liberal bleeding, a bliſter was applied to the pained part; or if there was no particular pain between the ſhoulders, and if the patient was coſtive, about an ounce of ſalts was given to him. After the operation of theſe, he was deſired to take, every two hours, a powder compoſed of three parts of nitre and one of camphor, with a very ſmall proportion of tartar emetic. In the evening, if the firſt blood was fizy, the pulſe ſtill quick and hard, and little abatement of the pains took place, the blooding was repeated in the ſame liberal manner. In general, the frequency of the pulſe alone determined the frequency of bleeding, and the quantity to be drawn; for having diſcovered the deceitfulneſs of the blood, we did not

think it prudent to truſt much to it. In this manner, in the courſe of three or four days, I have known from forty ounces to ten pounds of blood drawn. But we did not find it eligible to truſt to this evacuation alone. After the third blooding, we gave from two to ſeven grains of calomel made into a pill, with one-fourth of a grain or a whole grain of opium, three times in the day. This practice, continued for two days, brought on a copious ſalivation. When this was effected, we conſidered the patient out of all danger; and gave him nothing afterwards but a little phyſic, or ſome antiptyalitic medicine to moderate the ſpitting. In weakly patients, however, it was neceſſary, during the ſalivation, to ſupport their ſtrength with wine and various cordials. It is aſtoniſhing how readily caſes of the moſt dangerous tendency were cured by this method in a few days: And it is no leſs remarkable how quickly the ſick recovered their uſual health and ſtrength, notwithſtanding the great loſs of blood they ſuſtained; while many who had been bled more ſparingly, continued in a languid infirm ſtate for months. I have formerly remarked,

marked, that a purging was ſometimes brought on by the calomel, and at other times came on ſpontaneouſly, ſeeming to be a critical diſcharge. In whatever way this evacuation came on, we always found it neceſſary, during its continuance, to ſupport the patient's ſtrength with ſoups, panada, wine, and other cordials; and to moderate it, when too ſevere, by repeated doſes of laudanum, with ipecacuanha, or a powder compoſed of two-thirds of the pulv. è bol. cum opio, and one-third of ipecacuanha, waſhed down with a glaſs of water in which a little laudanum and ſyrup had been mixed. It is remarkable, that all thoſe patients on whom mercury had no evident effect, lingered a conſiderable length of time; recovering chiefly by the free uſe of bark and wine, or elſe died on the 7th or 11th day, although bleeding had been liberally uſed: And in all who died, mercury had not been given, or continued obſtinately inactive.

In the laſt ſtage of the diſeaſe, very little could be done. Bliſters were applied to the arms and thighs, and ſinapiſms to the ankles: Cloths wrung out of boiling-water were laid upon the ſtomach, to relieve the load which

at this period was always felt there. Large doſes of camphor and laudanum were given with the ſame intention, and as cordials, together with bark and wine. Theſe, in a few caſes, recovered the patient; but, in general, were ineffectual.

Upon the whole, bleeding to a degree exceeding all common bounds, and promoting a copious ſalivation as ſpeedily as poſſible, were the only means of cure in which we put confidence; and I can ſafely aver, that in nineteen caſes out of twenty, I have not found them fail, providing they were employed early enough.

SECT.

SECT. III.

MEDICAL NEWS.

* * * *

THE American philoſophical ſociety held at Philadelphia, have lately reſumed their labours, which were for ſome time interrupted by the peculiar circumſtances of America; and have publiſhed a ſecond volume containing many excellent papers, ſome of them from authors of the firſt eminence in philoſophy, particularly the illuſtrious Franklin. To this volume they have prefixed the laws and regulations of the ſociety, a charter of incorporation by the repreſentatives of the freemen of the common-

wealth of Penſylvania, a liſt of the preſent officers of the ſociety, a liſt of the members elected ſince the publication of the firſt volume of their Tranſactions in 1771, and extracts from their minutes reſpecting a donation by Mr J. H. de Magellan of London, and the eſtabliſhment of an annual prize-medal.

As we preſume it may not be diſagreeable to many of our readers to be acquainted with the regulations which they have eſtabliſhed reſpecting their prize-medal, we ſhall here preſent them with this part of the introduction.

"January 1786. Mr J. H. de Magellan of London, having, in a letter dated the 17th of September laſt, and communicated to the ſociety by Mr Vaughan, one of the vice-preſidents, made an offer to the ſociety of *two hundred guineas*, to be veſted in a permanent fund, that the intereſt ariſing therefrom may be diſpoſed of in annual premiums, to the authors of the beſt diſcoveries or moſt uſeful improvements relating to navigation, or to natural philoſophy, mere natural hiſtory only excepted;

excepted: And the ſociety having moſt thankfully accepted the generous offer, appointed a committee to frame rules and conditions for the diſpoſition of the propoſed premiums, agreeable to the intention of the donor, expreſſed in his letter, but more preciſe in the terms; which being done, and approved of by the ſociety, were immediately tranſmitted in a letter to Mr Magellan, for his confirmation or amendment. They are as follow, viz.

"1. The candidate ſhall ſend his diſcovery, invention, or improvement, addreſſed to the preſident or a vice-preſident of the ſociety, free of poſtage or other charges; and ſhall diſtinguiſh his performance by ſome motto, device, or ſignature, at his pleaſure. Together with his diſcovery, invention, or improvement, he ſhall alſo ſend a ſealed letter, containing the ſame motto, device, or ſignature, and ſubſcribed with the real name and place of reſidence of the author.

"2. Perſons of any nation, ſect, or denomination whatever, ſhall be admitted as candidates for this premium.

"3. No diſcovery, invention, or improve-

ment, ſhall be intitled to this premium, which hath been already publiſhed; or for which the author hath been publicly rewarded elſewhere.

" 4. The candidate ſhall communicate his diſcovery, invention, or improvement, either in the Engliſh, French, German, or Latin language.

" 5. All ſuch communications ſhall be publicly read or exhibited to the ſociety, at ſome ſtated meeting, not leſs than one month previous to the day of adjudication; and ſhall at all times be open to the inſpection of ſuch members as ſhall deſire it. But no member ſhall carry home with him the communication, deſcription, or model, except the officer to whom it ſhall be intruſted; nor ſhall ſuch officer part with the ſame out of his cuſtody to any but the judges, who may demand it for conſideration.

" 6. The twelve counſellors, together with the other officers annually elected, according to the charter and laws of the ſociety, ſhall be judges of the merits of the ſeveral communications, and award the premium. Which adjudication ſhall be determined by a majority

rity of judges met; provided that ſuch majority be not leſs than ſeven concurring votes.

"7. And for this purpoſe the counſellors and other officers, or at leaſt ſeven of them, ſhall meet on the ſecond Monday in December, in every year, to form their judgment, and award their premium. After due conſideration had, a vote ſhall firſt be taken on this queſtion, viz. "Whether any of the communications then under inſpection, are worthy of the propoſed premium?" If this ſhall be determined in the *negative*, the whole buſineſs ſhall be deferred till another year; but if in the *affirmative*, the judges ſhall then proceed to determine, by vote, the diſcovery, invention, or improvement, moſt uſeful and worthy. And that diſcovery, invention, or improvement, which ſhall be found to have the greateſt number of concurring votes (being not leſs than ſeven) in its favour, ſhall be ſucceſsful. Whereupon a certificate in writing ſhall be forthwith drawn of this adjudication, and ſigned by thoſe who voted for the crowned ſubject; and then, *and not till then*, the ſealed letter accompanying the crowned performance ſhall be opened, and the name

of

of the author announced: Which certificate ſhall be preſented to the ſociety at their next ſtated meeting, and delivered to the ſecretary to be entered on record, in a bound book provided for this purpoſe.

" 8. A full account of the crowned ſubject ſhall be publiſhed by the ſociety, as ſoon as may be, after the adjudication, either in a ſeparate publication, or in the next ſucceeding volume of their Tranſactions, or in both.

" 9. The unſucceſsful performances ſhall lie over for conſideration, and remain as candidates for the premium for *five* ſucceeding years next after their preſentment; unleſs the author or authors ſhall think fit to withdraw them or any of them. And the ſociety ſhall publiſh annually an abſtract of the titles, object, or ſubject-matter, of the communications ſo under conſideration; ſuch only excepted as the counſellors and other officers ſhall, by vote as aforeſaid, have determined not worthy of public notice.

" 10. No counſellor or officer who is a candidate, ſhall ſit in judgment, or give his vote.

" 11. The letters containing the names of authors whoſe performances ſhall be rejected,

or

or ſhall be found unſucceſsful after a trial of five years, ſhall be burnt without breaking the ſeals.

" 12. In caſe there ſhould be a failure, in any year, of any communication worthy of the propoſed premium, there will then be two premiums awarded in the next year: But no accumulation of premiums ſhall intitle an author to more than one premium for any one diſcovery, invention, or improvement.

" 13. The premium ſhall conſiſt of an oval plate of ſolid ſtandard gold, of the value of *ten guineas*. On one ſide thereof ſhall be neatly engraved the following motto, ——— together with theſe words, *The donation of —— of London, eſtabliſhed in the year* 1786. And on the other ſide of the plate ſhall be engraved theſe words, *Awarded by the A. P. S. to —— —— for his diſcovery of —— —— A. D.* 17—. ——— *Preſident.* And the ſeal of the ſociety ſhall be annexed to the ſaid golden plate, by a ribbon paſſing through a ſmall hole near the lower edge thereof."

The

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The following extracts from a letter written by Mr William Jones ſurgeon at Birmingham to Dr Duncan, and dated 30th September 1786, gives ſome account of two caſes related in a former ſection of this volume. This, we preſume, as well as ſome other particulars which it contains, will not be diſagreeable to our readers.

"I HAVE the pleaſure to inform you, that my patient (Miſs P——) who was inſane, remains perfectly well; and muſt add, that ſhe was cured in one-ſixth of the time that her ſiſter was, whom I mentioned as having been placed in a private mad-houſe.

"My patient (Richard Gratton) who recovered of hæmoptyſis, remains in good health.

"I have had the pleaſure of removing the latter complaint by the ſame remedy, in another perſon (a woman); and, on my mentioning it to Dr Withering, he deſired me to communicate it to you. However, I have no reaſon

ſon to expect a permanent cure in this latter caſe; as ſhe neglects a cough, which has now been troubleſome for many months, and which I found eaſy to relieve immediately after the removal of the hæmoptyſis.

"It would be ſuperfluous again to enter into a detail of ſymptoms of a diſeaſe ſo well known; I ſhall therefore only obſerve, that Mrs S—— of this town had had a violent cough during the greateſt part of laſt winter; attended, when I firſt ſaw her, with an alarming degree of hæmoptyſis, plethora, the uſual ſymptoms of fever, and frequent profuſe cold ſweats.

"She was thus circumſtanced on the evening of May 26th 1786, when I took away ſome blood; and, as ſhe was coſtive, preſcribed an opening mixture to be taken at ſtated intervals, till her bowels were opened.

"The next day, I directed a grain of the fox-glove in pills, to be taken every morning and night.

"Four doſes were ſufficient to remove the hæmoptyſis. And ſhe recovered, in a few days, to the degree of health ſhe had before its appearance.

Other

"Other inſtances of ſimilar ſucceſs have occurred, both to my friend Mr Mynors and myſelf, and that without the uſe of venæſection, in certain reduced, ſcrophulous, and leucophlegmatic habits.

"In the attendant ſymptoms of hæmoptyſis, ſuch as quick circulation and fever, venæſection being premiſed in plethoric caſes, the fox-glove occaſionally adminiſtered, may be readily managed, ſo as ſoon to bring down the moſt rapid pulſe to its natural ſtandard, without occaſioning any violent ſymptom whatever. In conſequence of theſe properties, it will perhaps be found capable of preventing that neceſſity for repetitions of bleeding which has frequently occurred in this complaint when urgent.

"When a ſtudent in London, I tried ſeveral ways of taking notes of medical clinical caſes, but was never ſatisfied with any form I could invent. I had, by a good chance, an opportunity of ſeeing that publiſhed in your ſyllabus, which I very much admired, and adopted with the moſt complete ſatisfaction; but as I was ſtill in want of a method ſuited to chirurgical caſes, I made uſe of ſuch parts of

yours

yours as were neceſſary, and adapted the reſt according to my own ideas. The plan has been tried very often, by others as well as myſelf; and copies of it were put into the hands of ſeveral gentlemen, who were my fellow-ſtudents at the time. I have long wiſhed to communicate it to you. If it meet with your approbation, and ſhould be ſuited to your plan, I ſhall be glad to ſee it in print, in hopes that it may be uſeful to others.

"The general heads to be followed in drawing up the hiſtories of chirurgical caſes.

"A. Name of the patient, and period of admiſſion into the hoſpital.

"I. The condition of the patient.

a. Age.

b. Sex.

c. Temperament.

d. Occupation, or condition in life.

"II. An account of the progreſs of the diſeaſe, or of the effects of the hurt.

a. The period of the hurt, or the commencement of the diſeaſe.

b. The nature of the hurt, or the manner of the commencement of the diſeaſe.

III. The

" III. The ſtate of the diſeaſe at the time of taking the hiſtory, or at the time of admiſſion.

a. Evident ſymptoms.

b. Feelings of the patient.

c. State of the principal functions.

1. Pulſe.
2. Heat.
3. Reſpiration.
4. Excretions.

" IV. An account of the treatment.

a. Internal remedies.

b. External remedies.

c. Change of ſymptoms, and conſequent treatment.

" V. An account of operations.

a. Symptoms indicating the neceſſity of them.

b. Period when the operation is performed.

c. Mode of performing the operation.

d. Particular inſtruments uſed.

e. Means uſed for obviating ſymptomatic affections, &c. in conſequence of the operation.

f. Symptoms after the operation.

g. Treatment of ſuch ſymptoms.

h. Treatment to the final event.

" VI. An account of the diſſection of morbid caſes.

a. Preternatural appearances."

The

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The following account of a medicine of an acid quality, and ſaid to be collected from the air in ſome parts of India, which is uſed by the natives againſt bilious complaints, was communicated to Dr Duncan by Mr Brown late ſurgeon to his Majeſty's ſloop of war the Cygnet.

"BETWEEN the 13th and 16th of Auguſt 1785, his Majeſty's ſloop the Cygnet lay off Maſulipatam, on the coaſt of Coromandel in the Eaſt Indies, in latitude 16. 8. north, and longitude 81. 2. eaſt from London. The ſoundings of this place, for a great diſtance, are ſhallow. The land, for ſome way back, is low and flat; and is leſs refreſhed by ſea and land breezes, than thoſe places on that coaſt which are higher ſituated. There are many ſwampy creeks in its neighbourhood, which, at the end of the dry ſeaſon, have not water ſufficient to cover the mud; and, on account of the ſmell, it is diſagreeable to paſs

near them. The earth there abounds with nitre and ſome ſea-ſalt. When we were at this place, Mr Morad, one of the moſt wealthy as well as moſt reſpectable of the Armenian merchants, whoſe wife had been in labour for four days of her firſt child, ſent for me, as Mr Sinclair ſurgeon to the ſettlement was at that time abſent. I found I was too late to be of any material ſervice to my patient. I deſired, however, that ſhe might have a cordial. Upon this a great variety both of Engliſh and French cordials, which they had in the houſe, were brought to me. Moſt of theſe I knew. But there was among them a bottle which I did not know, and Mr Morad ſeemed to be very partial. He told me, that his wife was very ſubject to bile; and that this medicine had been of great uſe to her, and to others troubled with that complaint: And that ſhe had wiſhed much for it, but in her preſent circumſtances they durſt not indulge her without advice.

Theſe circumſtances led me afterwards to make particular inquiry reſpecting it. I found it by the taſte to be a very ſtrong pleaſant acid. He ſaid, he had it from a very intimate

mate friend of his who reſided at Gundore, a village eight or nine miles back; that the dew or fogs which fell at that place in the months of September and October were very heavy; and that his friend collected this fluid at that time by ſpreading a piece of fine muſlin over what they call *gram*, which is a ſpecies of the pea, in the evening: That next morning the dew was wrenched from the cloth, and put into a bottle, without any addition, and that this was the fluid he had preſented to me; that he had a ſmall bottle of it given him every year by his friend; and he added, that if I wanted any farther information, I might eaſily obtain it from the old gentleman himſelf, who was at that time in his houſe. Upon being introduced to him, he informed me, that he had lived at Gundore for upwards of forty years as a manufacturer of ſnuff; and that he annually collected ſome of this fluid, which he gave to his friends, as at that ſeaſon and place bilious diſorders, agues, and fevers, were very frequent; that if given in proper time, it was a cure for theſe; that he never kept it a ſecret; that at the time mentioned any one might collect it; and that he aſcribed its acid

taſte to ſomewhat which eſcaped from the gram.

At Maſulipatam the Engliſh have very little intercourſe, but by way of trade, with the Armenians. I found the Portugueſe to be much more familiar, and better acquainted in the Armenian families; which probably ariſes from two reaſons: The Portugueſe underſtand the language of the country; and, though the Armenians are of the Greek church, yet in this place they join the Portugueſe in worſhip.

A Portugueſe ſurgeon, to whom I was introduced, and who was an aſſiſtant at the Engliſh hoſpital, corroborated the above account. He ſaid, he had often heard of this fluid; and that a friend of his, a Portugueſe gentleman, had from curioſity tried the experiment laſt ſeaſon of collecting ſome of it. He introduced me to this gentleman; who differed from the Armenian only in this particular, that it was immaterial upon what the cloth was ſpread, provided it was expoſed to the fog. He gave me a ſmall phial of the fluid, which I found to be of the very ſame quality with the Armenian's. Both theſe

gentle-

gentlemen offered to accommodate me in their houſes at Gundore, that I might collect the fluid myſelf. But we did not ſtay upon the coaſt till the ſeaſon arrived."

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Dr Thomas Clarke, ſuperintendant of the botanical garden in the iſland of Jamaica, in a letter to Dr Duncan, gives the following account of the introduction of ſeveral valuable articles into that iſland.

"Some of the ſhips captured during the late war, by our preſerver Lord Rodney, have increaſed greatly the ſtock of exotics in our garden: And my catalogue now boaſts the cinnamon, camphor, mango, mangoſtan, ſago, gum arabic, grains of paradiſe, lechee, variety of true ebonies and cottons, ſarſaparilla, vanilla, cochineal cactus, and cheremoya, with a variety of other curious and ornamental plants, too long for a tranſatlantic letter.

Are you a Linnean? If ſo, rejoice; for I, though none, have diſcovered a plant with a cyathiform ſtigma, which ſhuts up after the antheræ burſt, including a quantity of farina. This is not all, I have called it Duncania."

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Dr Robert Hamilton phyſician at Ipſwich, in a letter to Dr Duncan, gives the following account of ſome circumſtances reſpecting the cynanche parotidea, as it lately appeared in that neighbourhood.

"WE have lately, in this neighbourhood, had the cynanche parotidea epidemic among us; and what is curious, it appeared juſt ſeven years ago epidemical alſo in the ſame place, that is, on the ſea-coaſt along the Suffolk-ſide of the river Orwell near Landguard fort, a few miles from Harwich. The teſticle, here, often ſwelled. Neither age nor ſex was exempted. None died. In ſome caſes, one breaſt

breaſt only in the female ſwelled. In the male, the right teſticle almoſt conſtantly: Seldom the left; nay, never in this epidemic, excepting in one patient, whoſe right one was almoſt obliterated from a hurt in infancy."

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In our laſt volume we gave an account of the intended plan of new-modelling the medical faculty in the univerſity of Dublin, and of the advertiſement which had been publiſhed, fixing the election of profeſſors to take place on the 21ſt of March 1786. On that occaſion the electors made choice of the following gentlemen to fill the different chairs which were vacant.

Dr Edward Brereton to the profeſſorſhip of the practice of medicine.

Dr Stephen Dickſon to that of the inſtitutes of medicine. And,

Dr Edmund Cullen to that of the materia medica and pharmacy.

From the footing on which theſe gentlemen are appointed, the medical profeſſorſhips at Dublin can no longer be merely nominal; and it is to be hoped, that by this appointment, the objects which the legiſlature of Ireland had in view will be fully anſwered.

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The following extract of a letter on the uſe of ſulphur-water in gouty caſes, was ſome time ago communicated to a lady of high rank in Edinburgh, by a friend of hers in England. Having thus fallen into the hands of many gouty people at this place, the remedy has been a good deal employed here; and ſeveral of thoſe who have uſed it, think they have derived very great benefit from it. We preſume, therefore, that it may not be unacceptable to our readers.

"ABOUT ten years ago, when at the age of forty-ſix, I was attacked with a ſlight fit of gout

gout in my right hand. The year after, in the month of December, I had a more ſevere attack in both my hands, and in both my feet; and I was laid up for ten weeks. At that ſeaſon of the year the gout conſtantly returned, and with increaſing violence; ſo that the laſt fit, which began in December 1783, laſted me five months: And for much the greater part of that time I had no uſe of my hands, feet, or knees.

"During that fit, a gentleman whom I had not ſeen for ſeveral years, and who I indeed concluded had fallen a martyr to gout, called upon me; and, to my aſtoniſhment, appeared as healthy a man as any in England. He informed me, that he had been thus recovered for three years; and that the ſole purpoſe of his viſit was to communicate to me his remedy, which was brimſtone-water. I had the pleaſure of ſeeing him again laſt week, and he ſtill continues to enjoy perfect health.

"At his firſt viſit he informed me, that a gentleman of his acquaintance, who had been ſo far a cripple as to be confined to his houſe for ſome years, and who was covered with chalk-ſtones, was now, by the regular and con-

tinued uſe of the brimſtone-water, able to walk and ride freely; and that the chalk-ſtones had in a great meaſure ſubſided.

"But, to return to my own caſe: In the month of May 1784, I began the brimſtone-water, after having conſulted many phyſicians on the ſubject; who all agreed in ſaying, that it could not do any harm. I continued it, without omitting one day, for twelve months. During that time, and in cold weather, I had ſome ſlight mementos of the gout; which, however, never confined me, or prevented me from uſing exerciſe, which I did very freely. Upon the approach of the warm weather, viz. about the beginning of June, I thought I might venture to leave off the water for a few months. I accordingly did ſo: But I have begun it again, and will continue it till next ſummer.

"When I firſt began the water, I was ſenſible that it promoted urine and perſpiration, and induced rather a lax habit. After I had uſed it three or four months, a very copious diſcharge came on under my arms, in ſo much as frequently to render it neceſſary for me to put on clean linen a ſecond time in the day;

and this continued full three months. During all that time I was in perfect health and good ſpirits, and have ſtill the happineſs to continue ſo.

"It is proper I ſhould obſerve, that I never made any change in my method of living. Being now, as I flatter myſelf, recovered from ſo horrid a diſorder, and having ſtated every thing I can recollect upon the ſubject, I truſt that others who try this ſimple and innocent remedy, will find from it as much ſucceſs as I have done.

"The brimſtone-water for the gout is prepared in the following manner: Let one pound of ſtone or roll ſulphur, finely powdered, be put into an earthen or ſtone jar, and pour upon it one gallon of boiling-water. Let it ſtand four days, and let the brimſtone be well ſtirred up three or four times a-day. At the end of the fourth day, draw off the water fine for uſe, and drink half a pint every morning, faſting, an hour at leaſt before breakfaſt. The jar ſhould be kept cloſe ſtopped, when you are not ſtirring the brimſtone.

Among

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Among the many advantages which the Royal Infirmary at Edinburgh affords to attentive ſtudents as a ſchool of medicine, the eſtabliſhment of clinical lectures, where caſes falling immediately under the inſpection of the ſtudent become the ſubject of remark, may juſtly be conſidered as none of the leaſt conſiderable. Hitherto, however, theſe lectures have been almoſt entirely confined to medical caſes: But, at the commencement of the preſent winter-ſeſſion, a courſe of clinical lectures on the moſt important caſes which occur in the ſurgeon's ward, was begun by Mr James Ruſſel, one of the members of the Royal College of Surgeons, and of the Royal Society of Edinburgh. Theſe lectures have met with high approbation; and will, we are perſuaded, be continued with ſuch induſtry and ability on the part of the lecturer, as to afford important inſtruction to the attentive ſtudent.

We

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We mentioned in our laſt volume, that the Harveian ſociety of Edinburgh had propoſed as the ſubject of their prize-diſſertation for 1785, an Experimental Inquiry concerning the nature and properties of Opium, concerning its different conſtituent parts, and their effects on the human ſyſtem. After mature conſideration of the different diſſertations on this ſubject, which were tranſmitted to the ſecretaries, it was the unanimous opinion of the judges, that the preference was due to a diſſertation to which was prefixed the following motto:

Phœbus volentem prælia me loqui
Victas et urbes increpuit lyra,
Ne parva Tyrrhenum per æquor
Vela darem.

And upon opening the ſealed letter which accompanied this diſſertation, it was found to be written by Mr John Leigh from Virginia.

To

To him, therefore, the uſual premium was publicly delivered at the anniverſary meeting of the ſociety on the 12th of April 1786.

This diſſertation is now publiſhed. Thoſe, therefore, who wiſh particularly to examine the experiments which it contains, may have ready acceſs to it. We may only obſerve, that it ſeems to have been the invariable object of the author, through the whole, not to ſearch for evidence of any particular theory, but to diſcover and inveſtigate truth. He has been at much pains, not only to aſcertain the different conſtituent parts of opium, but to determine their exact proportions, and their peculiar effects. He has found, that while the reſinous part of opium ſeldom exceeds a ſixth, the gummy in general amounts to nearly one-half of the maſs: And on comparing the effects of theſe two parts, he has found, that while the reſinous, not unfrequently, ſomewhat accelerates the pulſe in a ſhort time after it has been exhibited, the gummy part always renders it ſlower.

After extracting the eſſential oil of opium by diſtillation, he has found that the reſinous part of what remained has not any effect as

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an opiate; but that the gummy part is ſtill capable, both of producing ſleep and ſlowneſs of pulſe. The ſalt of opium, which could not be obtained without the aid of the nitrous acid, he found to reſemble the ſaline matter obtained from ſugar; and therefore, in all probability, it is not the baſis of this active medicine.

He has found, that a ſolution of opium poured into the eye, occaſions a ſlight temporary inflammation: but that it produces no contraction of the living muſcular fibre; though it acts as an aſtringent to a divided artery, and ſhows other marks of aſtringency from the teſt of chalybeates.

His experiments clearly ſhow the effects of acids, as counteracting the power of opium in certain circumſtances; and they demonſtrate, that while the reſinous part of opium acts more expeditiouſly than the gummy, ſo it is alſo more quick in its operation when previouſly heated than when taken in a cold ſtate.

But for a full account of theſe, as well as various other important particulars, we muſt refer thoſe who wiſh for farther information to the work itſelf.

After

After the delivery of the prize-medal to Mr Leigh, an article was propoſed as the ſubject of competition for the preſent year, the powers of which in many reſpects approach to thoſe of opium; the Hyoſciamus Niger, or Henbane. This article, from the earlieſt periods of medicine of which we have any authentic accounts, has been frequently employed for producing the ſedative effects of alleviating pain and inducing ſleep: And after falling into diſuſe, its employment has again been revived, for theſe and other important purpoſes. An experimental inquiry, therefore, concerning its effects on the human ſyſtem, its uſe in the cure of diſeaſes, and the comparative power of its different parts, will be no unimportant inveſtigation.

At this meeting, alſo, an experimental inquiry concerning the chemical and medical effects of thoſe ſubſtances called Lithontriptics, particularly on the human calculus, was announced as the ſubject of the prize-queſtion for 1787. The late experiments of thoſe illuſtrious chemiſts Scheele and Bergman, aſcertaining, with much greater preciſion than had before been done, the real conſtituents of

the human calculus, may conſiderably aid this inveſtigation. The reputed lithontriptics, to which it is wiſhed that candidates ſhould chiefly turn their attention, are the mineral acids, and the alkalis both in their mild and cauſtic ſtate.

Diſſertations on the firſt of theſe ſubjects muſt be tranſmitted to Drs Duncan or Webſter by the 1ſt of January 1787, and on the laſt by the 1ſt of January 1788. Each diſſertation muſt be accompanied with a ſealed letter, incloſing the name of the author, and bearing the ſame motto with the diſſertation itſelf.

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The following prize-queſtion for the year 1786, has been propoſed by the Royal Academy of Sciences at Peterſburgh.

Auſpiciis auguſtæ Catharinæ II. literarum atque artium protectricis maximæ, academia

Petropolitana, dirigente illuſtriſſima principe Daſchkoff, Auguſtæ ab intimis cubiculis, et ordinis Sanctæ Catharinæ equite, problema ſequens ad annum 1786 propoſuit.

Uti nutritio æquabilis omnium punctorum corporis animalis quæ ſingula vaſa non adeunt, imprimis epidermidis, unguium, pilorum, cornuum quæ vaſis careant, aliaque phænomena docent, ſuccos nutritios primo quidem per vaſa ferri vi cordis, deinde vero ultro moveri, quo uſque vaſa non pertingunt vi aliqua peculiari a motu cordis diverſa; uti etiam in plantis, quibus nihil eſt, quod cum corde comparari poſſit, ſimilis prorſus nutritio, ſimiliſque diſtributio humorum efficitur, quæſtio eſt, Qua vi hæc diſtributio humorum in plantis et in partibus dictis corporis animalis peragatur, et quænam ſit ejus vis natura?

Si parum etiam fuerit, quod ad intelligendam hanc naturæ actionem contribuatur, ſolide modo quævis aſſerta ſint evicta. Neque refert noviſne et propriis experimentis, an aliis jam notis veritatibus explicationes ſuperſtruantur.

Diſſertations on this ſubject, written either in the Ruſſian, Latin, German, or French lan-

language, and with the uſual precautions for concealing the name of the author, are directed to be tranſmitted by the 1ſt of July 1786, to John Albert Euler, ſecretary to the Imperial academy of ſciences at Peterſburgh.

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The Royal Society of Medicine at Paris have lately propoſed the following prize-queſtion.

1. A prize of ſix hundred livres for the beſt ſolution of the following queſtion.

Rechercher quelles ſont les maladies dont le ſyſteme des vaiſſeaux lymphatiques eſt le ſiege immediat; c'eſt à dire, dans leſquelles les glandes, les vaiſſeaux lymphatiques, et les fluides qu'ils contiennent, ſont eſſentiellement affectés; quels ſont les ſymptomes qui les caracteriſent, et les indications generales qu'elles offrent à remplir?

Memoirs on this ſubject muſt be tranſmitted

to M. Vicq d'Azyr, Rue des Petits Auguſtins.

2. A prize of ſix hundred livres for the beſt ſolution of the following queſtion:

Rechercher quelles ſont les cauſes de la maladie aphtheuſe connue ſous les noms de muguet, millet, blanchet, à laquelle les enfans ſont ſujets, ſurtout lorſqu'ils ſont reunis dans les hopitaux, depuis le premier juſqu'au troiſieme ou quatrieme mois de leur naiſance; quels en ſont les ſymptomes; qu'elle en eſt la nature; et quel doit en etre le traitment, ſoit preſervatif ſoit curatif?

Diſſertations on this ſubject muſt be tranſmitted to the ſecretary by the 1ſt of May 1787.

3. A prize of ſix hundred livres for the beſt ſolution of the following queſtion:

Determiner quelles ſont les circonſtances les plus favorables au developpement du vice ſcrophuleux; et recherer quels ſont les moyens; ſoit dietetiques ſoit medicinaux, d'en retarder les progres, d'en diminuer l'intenſité, et de prevenir les maladies ſecondaires dont ce vice peut etre la cauſe?

Memoirs

Memoirs on this ſubject muſt be tranſmitted by the 1ſt of January 1788.

4. A prize of four hundred livres for the beſt ſolution of the following queſtion:

Determiner quels ſont, relativement à la temperature de la ſaiſon, et à la nature du climat, les precautions à prendre pour conſerver la ſanté d'une armée vers la fin de l'hiver et dans le premier mois de la campagne; à quelles maladies les troupes ſont les plus expoſées à cette epoque; et quelles ſont les meilleurs moyens de traiter et de prevenir ces maladies.

Diſſertations on this ſubject muſt be tranſmitted by the 1ſt of May 1786.

Each diſſertation muſt be accompanied with a ſealed letter, containing the name of the author, and marked with the ſame motto as the memoir itſelf.

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The Academy of Sciences at Dijon have

propoſed a prize of ſix hundred livres for the beſt ſolution of the following queſtion:

To determine by their reſpective properties the eſſential difference between phlogiſton and the matter of heat.

Diſſertations on this ſubject muſt be tranſmitted to Mr Morveau ſecretary of the academy at Dijon, by the 1ſt of April 1789.

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The Philoſophical Society at Leipſic have propoſed the following queſtion for the year 1786:

Quænam habent ad ſe invicem relationem lux, ignis, et calor? quid noviſſimis in hanc rem inſtitutis diſquiſitionibus detectum, et quid vel certe demonſtratum, vel etiamnum dubium eſt?

The learned of all nations are invited to contend for this prize; and diſſertations reſpecting it muſt be tranſmitted by the 1ſt of January 1787, to profeſſor Hindenburg at Leipſic.

Dr

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Dr Hamilton of Ipſwich has been for ſome time engaged in preparing a work, which will probably ſoon appear. It is intitled, "The duties of a regimental ſurgeon conſidered, with obſervations on his qualifications, and hints relative to a more reſpectable practice and better regulation of that department; wherein are interſperſed many medical anecdotes, and ſubjects diſcuſſed equally intereſting to every practitioner."

That our readers may more eaſily form ſome idea of the author's deſign, we ſhall here preſent them with an account of the particular ſubjects which are conſidered in each chapter, extracted from a ſmall proſpectus of the work which Dr Hamilton has diſtributed among his friends.

Chap. I. Introduction.

II. Of difficulties attending a regimental ſurgeon's ſtation.

III. Of a ſurgeon's qualifications, and of his tenderneſs to the ſick ſoldiery.

IV. Surgeons cautioned from ſpending too much time in amuſements with the officers, leſt they thereby neglect their duty; and of the impropriety of granting them double commiſſions.

V. Of intoxication, of its greater criminality in the ſurgeon than others of the corps.

VI. Of the medicines and their doſes.

VII. Of diſſections.

VIII. Of the neceſſity of good inſtruments, of the uſe of fixable air and of electricity in regimental practice.

IX. Of the peruſal of books, and ſome pointed out which ſhould form part of his library.

X. The utility of cultivating the acquaintance of medical men in the different quarters, and the ſtudy of the nature of the ſoil and qualities of the water in each, recommended.

XI. Surgeons diſſuaded from the uſe of billets in public-houſes. The reaſons. The propriety of keeping a medical regiſter.

XII. Of the puniſhments of the ſoldiery as far as the ſurgeon is concerned.

XIII. The

XIII. The utility of experiments. Of too raſh prognoſtics.

XIV. Of the mate's qualifications.

XV. Surgeon's mates unneceſſary, and the propriety of augmenting the ſurgeon's pay.

XVI. Of extra medicines allowed each regiment when in camp, independent of the medicine-money, and their unneceſſary expenditure.

XVII. The neceſſity of a liberal education to practiſe medicine ſucceſsfully. Regimental practice more the province of the phyſician than the ſurgeon.

No author with whoſe writings we are acquainted, has taken up this ſubject in the light in which it is here ſet forth: And there can be little doubt, that, under the different heads here enumerated, much uſeful information may be communicated to the regimental ſurgeon, particularly when firſt entering upon the duties of that important office. This work, we are told, is alſo everywhere interſperſed and illuſtrated with caſes and anecdotes from actual practice. Hence we may with ſome degree of confidence conclude, that it will not only have the plea of novelty, but alſo of utility,

utility, to recommend it to the attention of the public.

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Mr Smellie, an ingenious member of the Royal and Antiquarian Societies of Edinburgh, already well known to the public by his elegant tranſlation of the Natural Hiſtory of the Count de Buffon, has lately diſtributed the proſpectus of a work intitled, "The Philoſophy of Natural Hiſtory."

It would appear that the firſt idea of this work was ſuggeſted to the author by that truly ingenious and learned philoſopher the late Lord Kames. He propoſed that the productions of nature, which are almoſt infinite, ſhould, inſtead of being treated of individually, be arranged under general heads; that in each of theſe diviſions, the known facts, as well as reaſonings, ſhould be collected and methodized in the form of regular diſcourſes, that as few technical terms as poſſible ſhould be employed, and that all the uſeful and amu-

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ſing views ariſing from the different ſubjects ſhould be exhibited in ſuch a manner as to convey both pleaſure and information.

Mr Smellie, having undertaken this taſk in conſequence of his Lordſhip's recommendation, has now, for the ſpace of about twelve years, been occaſionally employed in collecting and digeſting materials from the moſt reſpectable ſources: And theſe materials he has interſperſed with ſuch obſervations and reflections as occurred. That our readers may form an idea of theſe, we ſhall here preſent them with a ſhort enumeration of the principal contents of his work, extracted from the proſpectus which he has publiſhed.

I. Of the diſtinguiſhing characters of animals, plants, and minerals—The analogies between the plant and animal, ariſing from their ſtructure and organs, their growth and nouriſhment, their diſſemination and decay.

II. Of the organs and general ſtructure of animals—A ſhort account of the external and internal parts of the human body—This ſtructure compared with that of quadrupeds, birds, fiſhes, and inſects—How far peculiarities of

ſtructure

ſtructure are connected with peculiarities of manners and diſpoſitions.

III. Of the reſpiration of animals—Air neceſſary to the exiſtence of all animated beings—The various modifications of the organs employed by nature for the tranſmiſſion of air into animal bodies.

IV. Of the motions of animals—The cauſes and inſtruments of animal motion—Animal compared with mechanical motion.

V. Of the ſenſes—Modifications of feeling, on what they probably depend—The number and ſtrength of the ſenſes in different animals—How animals learn to correct the error ariſing from ſenſation.

VI. Of the infancy of animals—Why ſom arrive ſooner, others later, at a ſtate of maturity—Different modes of managing infants in different countries.

VII. Of the food of animals—Their growth and expanſion—The varieties of food uſed by men and other animals—Effects of their peculiar foods.

VIII. Of the ſexes of animals—The mental and corporeal differences between males and females—Some animals endowed with both

ſexes in the ſame individual—Examination of the ſuppoſed ſexes of plants.

IX. Of puberty—Its ſymptoms and effects in different animals.

X. Of love—Its expreſſions and effects in different animals—Pairing—Seaſons—Parental affection.

XI. Of the transformation of animals—Transformation of the caterpillar tribes—Of frogs—All animals undergo changes in their form and aſpect—What are the probable intentions of nature in changing forms.

XII. Of the habitations of animals—Their different modes of conſtructing abodes for warmth and protection to themſelves and their offspring—The form and manner of their habitations accommodated to the exigencies of the animal.

XIII. Of the hoſtilities of animals—Their ſympathies and antipathies—How theſe may be removed by cuſtom and aſſociation, by neceſſity or force—Why animals prey upon one another, but ſeldom on their own ſpecies—Advantages derived from this ſeemingly deſtructive inſtitution of nature.

XIV. Of the artifices of animals in catching

ing their prey, and eſcaping their enemies—Theſe artifices are in general purely inſtinctive, but ſome animals can vary their mode of attack and defence according to particular circumſtances and ſituations.

XV. Of the ſociety of animals—What are the motives and advantages of it—Gregarious tribes—Whether man belongs to this tribe—Society of two kinds.

XVI. Of the docility of animals—How far improveable by culture—Effects of domeſtication.

XVII. Of the characters and diſpoſitions of animals—Rapacious, mild, timid, bold, generous.

XVIII. Of the migration of animals—More general than commonly believed—The probable motives which induce animals to migrate.

XIX. Of the principle of imitation in animals—Is the neareſt approach to reaſoning and language.

XX. Of the inſtinct of animals—Diviſion of inſtincts—Examples of pure inſtincts—Of ſuch inſtincts as can accommodate themſelves to peculiar circumſtances and ſituations—Of

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inſtincts improveable by obſervation and experience—Some concluſions from this view of inſtinct.

XXI. Of the progreſſive ſcale of animals—ſtops at man, and why—In this world it appears to be impoſſible that a being ſuperior to man could exiſt—Reaſons for this opinion.

XXII. Of the longevity and death of animals—A comparative view of animals with regard to the duration of life, and its conſequences.

From this view of Mr Smellie's intended publication, it is evident, that his work, if properly executed, muſt communicate to the reader a ſpecies of knowledge which cannot fail to be an inexhauſtible ſource of pleaſure; and, from the well-known abilities of the author, we have no doubt that it will be executed in a manner not unworthy of the ſubjects under conſideration. The work is already in the preſs, and will probably be publiſhed during the courſe of the preſent year.

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It is now near forty years ſince the improved edition of the London Pharmacopœia, at preſent followed by all the apothecaries in England as the rule for compounding and preparing their medicines, was firſt publiſhed. It was then very generally conſidered, and probably with juſtice, as being the beſt Pharmacopœia in Europe: But ſince that period many articles which were then frequently employed, are now found to be of very little uſe; many articles have been introduced into practice, in which modern practitioners are diſpoſed to place conſiderable conſequence; and, above all, many important diſcoveries have been made in thoſe principles of chemiſtry, on which the proper compoſition and preparation of medicines, both with reſpect to elegance and activity, muſt depend. Accordingly, within the period we have mentioned, moſt of the colleges of phyſicians in Europe have

have republiſhed their pharmacopœias with many alterations; and it has often been wiſhed that this were alſo done by the college of phyſicians of London. We are happy to learn that this important work is now far advanced, and that a new edition of the London Pharmacopœia may ſoon be expected.

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The Royal Society of Edinburgh, ſome months ago, appointed a committee of their number to ſuperintend the publication of the firſt volume of their Tranſactions. That work is now far advanced, almoſt the whole of the volume being printed off. This publication will conſiſt of three parts: The firſt will contain an account of the ſociety, of the objects to which its attention is to be directed, of its preſent regulations, and circumſtances of a ſimilar nature. The ſecond will conſiſt of a ſelection from thoſe papers which have been read before the phyſical claſs of the ſociety; and

the third of a ſimilar ſelection from thoſe read before the literary claſs. With regard to this volume, we ſhall only at preſent obſerve, that many of the papers already printed off, are the productions of men of diſtinguiſhed eminence; and will, we doubt not, ſerve not only to ſupport, but even to extend, the reputation which they have already acquired.

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In the year 1761, upon the death of Dr Alſton, profeſſor of materia medica in the univerſity of Edinburgh, Dr Cullen, to prevent the injury which the ſtudents would otherwiſe have received, delivered a courſe of lectures on that ſubject. As theſe lectures were very generally admired by his hearers, and as there was but little proſpect that they would ever be delivered again, they were publiſhed about twelve years ago at London, from notes taken by ſome of his pupils. This publication, however, took place without the knowledge or conſent of the author; and, it

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may naturally be ſuppoſed, was in many particulars incorrect. Though this meaſure was by no means agreeable to Dr Cullen, yet upon application being made to him by the editors, he allowed the copies which had been printed, to be ſold off, after having added a few ſheets of emendanda. In conſequence of this publication, however, he formed the reſolution of publiſhing, in a very different form, his ſentiments on the Materia Medica; and, ſince the period mentioned above, he has employed much attention on that ſubject. We are happy to inform our readers, that he has now made ſuch progreſs in this work, that it will probably be put to the preſs in no long time; and we have no doubt that it will anſwer the expectations entertained of it by thoſe who are beſt acquainted with the abilities of the author.

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Some years ago a work was publiſhed at

this place under the title of a *Syſtem of Anatomy*. It was compiled from ſome of the lateſt and beſt authors; and it was arranged, as nearly as the nature of the work would admit, in the order of the lectures delivered by the profeſſor of anatomy in the univerſity of Edinburgh. Though this work might be conſidered as particularly calculated for the ſtudents of anatomy at this place, yet as being a judicious ſelection of the beſt publications on different anatomical ſubjects, it could not fail to be of general utility to thoſe engaged in the ſtudy of that branch of medicine; and it has accordingly met with a very favourable reception from the public. From this circumſtance the editor has been induced to put it again to the preſs, and another edition of it will ſoon appear in an improved form. It is now to be extended to three volumes, and will contain many uſeful anatomical tables. To this edition is added a Syſtem of Phyſiology, ſubjoined to the anatomy of each part; collected and written by a member of the univerſity of Edinburgh, diſtinguiſhed for his induſtry and ingenuity in anatomical ſubjects.

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The fifth volume of the Syſtem of Surgery, which we have frequently mentioned as a truly valuable work, written by Mr Benjamin Bell, is now nearly printed off, and will very ſoon be publiſhed. In this volume Mr Bell treats chiefly of wounds, tumours, and amputation. In the ſixth volume, which will probably be publiſhed about the beginning of the year 1788, and with which he intends to conclude this work, he propoſes to treat of thoſe important ſubjects in ſurgery which have not been conſidered in his former volumes, and particularly of fractures and luxations.

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A new edition of Dr Smellie's plates of Midwifery, with explanations and conſiderable additions, adapting them to the preſent practice, will ſoon be publiſhed at this place.

The publication of this work is conducted under the direction of Dr Alexander Hamilton profeſſor of midwifery in the univerſity of Edinburgh. It is intended that two editions ſhall at preſent be publiſhed; the one in folio from Dr Smellie's original plates; and the other in octavo, of ſuch a ſize that it may conveniently be bound up with Dr Hamilton's different publications on the ſubject of midwifery.

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We mentioned in our laſt volume, that Mr Andrew Bell engraver to his Royal Highneſs the Prince of Wales for Scotland, who lately publiſhed an elegant edition of Albinus's anatomical tables of the muſcles, had engaged in a very extenſive anatomical work, to be ſelected from the beſt plates of Haller, Monro, Walterus, &c. This work is now ſo far advanced, that ſome part of it will probably ſoon be publiſhed.

Dr

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Dr William Niſbet, one of the fellows of the Royal college of ſurgeons at this place, is at preſent engaged in a work intitled, Firſt Lines of the Theory and Practice in Venereal Diſeaſes. A conſiderable part of this work is already printed off, ſo that it will probably be publiſhed in a ſhort time.

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Dr Thomas Houlſton of Liverpool lately publiſhed Obſervations on Poiſons, and on the uſe of mercury in the cure of obſtinate dyſenteries. A new edition of this work, with conſiderable alterations by the author, and an appendix which has never before been publiſhed, is now in the preſs at this place.

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In the 27th volume of the Commentarii de rebus in Scientia Naturali et Medicina geſtis, publiſhed at Leipſic in 1785, ſome account is given of a botanico-zoological work, which may ſoon be expected to be publiſhed by the learned and eminent Jo. Ant. Scopoli, intitled, Deliciæ Floræ et Faunæ Inſubricæ. To exhibit a more diſtinct view of the manner in which he deſcribes both plants and animals, they give an example of each; from which it appears that the deſcriptions are no leſs perſpicuous than accurate.

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During the courſe of the year 1786, the following gentlemen, diſtinguiſhed for their abilities

lities in medicine and medical philoſophy, have died in different parts of Britain:

Mr William Rae ſurgeon in London and dentiſt to his Majeſty, on the 26th of July.

Dr James Spence phyſician at Guildford, and fellow of the Royal college of phyſicians in Edinburgh, on the 24th of September.

Dr James Maddocks phyſician to the London hoſpital, on the 10th of October.

Dr Alexander Wilſon profeſſor of practical aſtronomy in the univerſity of Glaſgow, on the 16th of October.

Sir John Elliot, Baronet, phyſician in ordinary to his Royal Highneſs the Prince of Wales, on the 7th of November.

Dr John Hope preſident of the Royal college of phyſicians in Edinburgh, botaniſt to his Majeſty for Scotland, and Town's profeſſor of botany in the univerſity of Edinburgh, on the 10th of November.

Sir E. Wilmot, Bar^{t}. phyſician in ordinary to the King, and phyſician-general to the army, on the 21ſt of November.

We expected to have been able to preſent to our readers memoirs concerning the life, writings, and diſcoveries of ſome of thoſe gentle-

gentlemen; but we have not been able to obtain the neceſſary materials for that purpoſe ſufficiently early for inſertion in this volume. We flatter ourſelves, however, with the hope, that from this delay we may be enabled to ſupply the defect in a manner more ſatisfactory to our readers in our next volume; and we ſhall hold ourſelves much obliged to thoſe gentlemen who ſhall favour us with any particulars reſpecting them which they think of an intereſting nature.

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Mr Thomas Beddoes, well known to the literary world by his tranſlations of different works of Spallanzani, Bergman, Scheele, and other eminent philoſophers and chemiſts, has been appointed lecturer in chemiſtry in the univerſity of Oxford, in the room of Dr Auſtin who has ſettled in London.

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Sir Clifton Wintringham has been appointed phyſician-general to the army, and Sir Richard Jebb one of the phyſicians in ordinary to his Majeſty; both which offices became vacant by the death of the late Sir E. Wilmot.

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Dr Daniel Rutherford has been appointed profeſſor of botany in the univerſity of Edinburgh, in the room of the late Dr Hope.

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The preſident and council of the Royal Society have adjudged, for the year 1785, the medal on Sir Godfrey Copley's donation to major-general William Roy for his meaſurement of a baſe on Honſlow-heath.

Dr

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Dr Jodrell has been appointed phyſician to the London hoſpital, in the room of the late Dr Maddocks.

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During the courſe of the year 1786, the following gentlemen have been admitted fellows of the Royal college of ſurgeons in Edinburgh.

Dr Alexander M'Dougall on the 24th of April; Dr William Niſbet and Dr John Bell, on the 14th of Auguſt.

The ſurgeons have alſo conferred the rank of honorary fellows of their college, on his Grace the Duke of Buccleugh, the Right Honourable Henry Dundas, and Percival Pott, Eſq; ſurgeon in London.

During

During the year 1786, the following gentlemen have been elected fellows of the Royal college of phyſicians in Edinburgh.

Dr Robert Freer, on the 2d of May; Dr David Morton of Jamaica, on the 2d of Auguſt; and Dr Thomas Stevenſon of Arbroath, on the 7th of November.

Dr Thomas Cochrane was admitted a licentiate at the quarterly meeting of the college in November.

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In former volumes we have frequently had occaſion to mention the progreſs which had been made in building and finiſhing a hall for the uſe of the Medical Society of Edinburgh. We are happy to inform our readers, many of whom are members of this inſtitution, though now ſettled in different parts of the world, that this building is completely fitted up; ſo that the ſociety are now not only provided with an elegant hall for their weekly meetings, and an excellent apartment

for their library, but alſo with ſeveral convenient rooms appropriated for the purpoſes of private diſſection and of chemical experiments. And they have now adopted it as a part of their inſtitution to appoint annually an experimental committee, who are allowed a certain ſum from the funds of the ſociety, for defraying the expence of ſuch experiments as the ſociety ſhall think proper to direct on particular ſubjects. But beſides this, it is alſo intended, that the uſe of theſe rooms ſhall be allowed, under proper regulations, to any of the members who chooſe to conduct experiments at their own expence.

The ſociety have reſolved that a gold medal ſhall be preſented to Dr Duncan, who has held the office of treaſurer from the time that the ſcheme of building a hall was firſt adopted, till it has been thus finiſhed, and the whole expence incurred in fitting it up completely paid.

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The following is the general reſult of obſervations made at the diſtance of about a mile from the city of Edinburgh, on the ſtate of the thermometer and barometer, and on the quantity of rain which has fallen during the year 1786.

Months.	Thermometer.			Barometer.			Rain.
	Higheſt	Loweſt	Med.	Higheſt	Loweſt	Med.	
Jan.	50	11	32.7	30.3	29.0	29.3	1.80
Feb.	46	23	34.4	30.4	29.0	29.5	1.03
Mar.	45	15	30.1	30.6	28.8	29.6	0.37
April	69	40	51.0	30.3	29.2	29.7	0.04
May	68	42	55.6	30.0	29.1	29.3	0.43
June	81	54	60.8	30.2	29.1	29.6	0.15
July	73	53	65.3	30.0	28.9	29.2	0.17
Aug.	68	54	62.2	30.0	29.0	29.5	1.40
Sept.	63	50	55.8	30.1	28.0	29.2	0.98
Oct.	53	26	39.7	30.2	28.2	29.3	0.87
Nov.	46	27	36.3	30.3	29.0	29.6	0.58
Dec.							

As this article muſt go to the preſs before the end of December, we have it not in our power to inſert the ſtate of that month, which we therefore delay till our next volume. We may, how-

however, obſerve, that from comparing the metereological regiſter for 1785 with that for 1786, there appears to be a very remarkable difference with reſpect to the quantity of rain. During 1785, the quantity of rain amounted to more than thirty inches; but from the 1ſt of December 1785 to the 1ſt of December 1786, it amounts to little more than nine inches; which is conſiderably leſs than the quantity which fell in the preceding year during the month of September alone.

SECT.

SECTION IV.

List of New Books.

Experiments and obſervations on a new ſpecies of bark, ſhowing its great efficacy in very ſmall doſes; alſo a comparative view of the powers of the red and quilled bark, being an attempt towards a general analyſis and compendious hiſtory of the valuable genus of Cinchona or the Peruvian bark. By Richard Kentiſh, M. D. Member of the Royal Medical Society at Edinburgh, correſpondent member of the Society of Scottiſh Antiquaries, &c. 8vo, London.

A new experimental inquiry into the nature and qualities of the Cheltenham water, with a conciſe account of the diſeaſes in which it is chiefly indicated, and the diet and regimen neceſſary for its ſucceſsful uſe. By A. Fothergill, M. D. F. R. S. Member of the Royal College of Phyſicians in London, of the Medical Societies of London and Edinburgh, and Phyſician in Bath, 8vo, Bath.

Filices Britannicæ; an hiſtory of the Britiſh proper ferns, with plain and accurate deſcriptions, and new figures of all the ſpecies and varieties, taken from an immediate and careful inſpection of the plants in their natural ſtate, and engraved on thirty-one copper-plates, with the particular place noted where each ſpecies was lately gathered, and is at this time growing, in the North of England, or on the mountains of Wales. By James Bolton of Halifax, 4to, Leeds.

Noſologia methodica oculorum, or a treatiſe on the diſeaſes of the eyes, ſelected and tranſlated from the Latin of Francis Boiſſier de Sauvages, wherein the whole are methodically arranged; to which are alſo added the deſcription and methods of cure recited by thoſe authors who have written profeſſedly on the various ſubjects herein enumerated. By George Wallis, M. D. 8vo, London.

A diſſertation on milk; in which an attempt is made to aſcertain its natural uſe, to inveſtigate experimentally its general nature and properties, and to explain its effects in the cure of various diſeaſes; likewiſe to point out the varieties in the food of the animal from

which it is taken, and the circumſtances in the mode of life and conduct of thoſe women who afford it, which more eſpecially tend to change its appearance, and to impair its ſalutary qualities; and particularly to enforce the cautions and reſtrictions which are neceſſary to be obſerved by thoſe whoſe duty or buſineſs it is to ſuckle an infant race. By Samuel Ferris, M. D. Extraordinary Member and late Preſident of the Royal Medical Society at Edinburgh, 8vo, London.

Directions for impregnating the Buxton water with its own and other gaſſes, and for compoſing artificial Buxton water. By George Pearſon, M. D. Member of the Royal College of Phyſicians, London, 8vo, London.

An eſſay on the virulent gonorrhœa; in which the different opinions reſpecting the treatment of the diſeaſe are carefully examined, and a method of cure deduced from them as founded on the principles of anatomy and phyſiology. By J. Clubbe ſurgeon, 8vo, London.

Aretæus, conſiſting of eight books on the cauſes, ſymptoms, and cure of acute and chro-

nic diſeaſes, tranſlated from the original Greek. By John Moffat, M. D. 8vo, London.

A treatiſe on the gout; in which the primitive cauſe of that diſeaſe, and likewiſe of gravel, is clearly aſcertained, and an eaſy method recommended, by which both may be with certainty prevented, or radically cured, 8vo, London.

An account of an entire new method of curing burns and ſcalds, 8vo, London.

Explanation and index of two mineralogical tables. By Tiberius Cavallo, F. R. S. 8vo, London.

Arbuſtrum Americanum, the American grove; or an alphabetical catalogue of foreſt-trees and ſhrubs, natives of the American united ſtates, arranged according to the Linnæan ſyſtem, containing the particular diſtinguiſhing character of each genus, with plain ſimple and familiar deſcriptions of the manner of growth, appearance, &c. of their ſeveral ſpecies and varieties; alſo ſome hints of their uſes in medicine, dyes, and domeſtic œconomy; compiled from actual knowledge and obſervation, and the aſſiſtance of botanical authors.

thors. By Humphry Marſhall, 8vo, Philadelphia.

Tranſactions of the American Philoſophical Society, Vol. II. 4to, Philadelphia.

An oration delivered before the American Philoſophical Society, held in Philadelphia on the 27th of February 1786, containing an inquiry into the influence of phyſical cauſes upon the moral faculty. By Benjamin Ruſh, M. D. and Profeſſor of Chemiſtry in the Univerſity of Penſylvania, 4to, Philadelphia.

Memoirs of the American Academy of Arts and Sciences, Vol. I. 4to, Boſton.

A ſynopſis of a courſe of lectures on the theory and practice of medicine, in four parts. Part I. By B. Waterhouſe, M. D. Profeſſor of the Theory and Practice of Phyſic in the Univerſity of Cambridge, New England, and of Natural Hiſtory in the College of Rhode Iſland, 8vo, Boſton.

An experimental inquiry into the nature and properties of opium, and its effects on living ſubjects; with obſervations on its hiſtory, preparations, and uſes; being the diſputation which gained the Harveian prize for 1785. By John Leigh, M. D. 8vo, Edinburgh.

Experiments and obſervations relating to various branches of natural philoſophy, with a continuation of obſervations on air. By Joſeph Prieſtley, L. L. D. F. R. S. Vol. III. 8vo, London.

Medical ſketches, in two parts. By John Moore, M. D. 8vo, London.

Medical cautions for the conſideration of invalids, more eſpecially of thoſe who reſort to Bath. By James-Makittrick Adair, M. D. Member of the Royal Medical Society, and Fellow of the College of Phyſicians, Edinburgh. Publiſhed for the benefit of the General Hoſpital at Bath, 8vo, London.

An eſſay on evacuations. By John Anderſon, M. D. 8vo, London.

Experiments and obſervations on quilled and red Peruvian bark; among which are included ſome remarkable effects ariſing from the action of common bark and magneſia upon each other: With remarks on the nature and mode of treatment of fevers, putrid ſore throat, rheumatiſm, ſcrophula, and other diſeaſes, in order to aſcertain the caſes in which bark may be adminiſtered, either alone or combined with other remedies, to the beſt advantage;

vantage; to which is added an Appendix on the Cinchona Caribbæa. By Thomas Skeete, M. D. 8vo, London.

Obſervations on the acute dyſentery, with the deſign of illuſtrating its cauſes and treatment. By John Rollo, M. D. late ſurgeon in the Royal Artillery, 8vo, London.

The preſent practice of ſurgery, containing the deſcription, cauſes, and treatment of each complaint, together with the moſt approved methods of operating. By Robert White, M. D. and practitioner in ſurgery, 8vo, London.

Arctic zoology, Vol. I. 4to, London.

A diſſertation on the ſexes of plants. Tranſlated from the Latin of Linnæus. By J. E. Smith, F. R. S. 8vo, London.

Cautions concerning cold bathing and drinking mineral waters. By William Buchan, M.D. 8vo, London.

Obſervations on antimonial preparations, with a deſcription of a new antimonial powder of peculiar efficacy in fevers and inflammatory diſtempers, and ſingularly ſucceſsful in the febrile diſeaſes of children, 8vo, London.

An eſſay on the waters of Harrowgate and

Thorp-Arch in Yorkſhire. By Joſhua Walker, M. D. Phyſician to the Leeds Infirmary, 8vo, London.

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Gulielmus Whitelaw, Hibernus, A. B. Trin. Col. Dub. *De Rubeola.*

Diſputatio Medica Inauguralis quam in comitiis Univerſitatis Andreanæ, pro Gradu Doc-

torali, eruditorum examini ſubjecit Jacobus Ramſay, Virginienſis, *De Intermittentibus.*

From an accidental circumſtance, the following article, which ought to have been inſerted in the account of intended publications, was omitted in its proper place; and likewiſe the title of the French tranſlation of Dr Haygarth's treatiſe on the ſmall-pox.

* * * *

Dr Monro has been for ſome time engaged in preparing for the preſs, a work on the Burſæ Mucoſæ. It is to be intitled, A Deſcription of the Burſæ Mucoſæ in the Human Body, their ſtructure explained, and compared with that of the capſular ligaments of the joints, and of thoſe ſacs which line the thorax and abdomen; with remarks on the accidents and diſeaſes which affect thoſe ſeveral ſacs, and the operations neceſſary for their cure;

cure; illuſtrated with ten tables, which repreſent the parts of their natural ſize.

To thoſe who are acquainted with Dr Monro's lectures and demonſtrations, we need hardly obſerve, that this is a ſubject on which he has beſtowed very particular attention; nor need we add, that it is not merely a matter of curioſity in ſpeculative anatomy, but of utility in practical ſurgery.

* * * *

Recherches ſur les moyens de prevenir la Petite-Verole naturelle; (et procedés d'une Societé à Cheſter pour cet object, et pour rendre l'Inoculation generale). Traduits de l'Anglois de M. Haygarth, D.M. par M. de la Roche, Medecin de Monſeigneur le Duc d' Orleans, et du regiment des Gardes-Suiſſes, Membre du College des Medecins de Geneve, et de la Societé Royale de Medecine d' Edinbourg; à Paris, 1786.

INDEX.

A.

Page

ACID collected from the air, employed by the Armenians in medicine, - 385
Ague drop, taſteleſs, account of, - 114
Air, want of circulation of, cauſe of typhus fever, 196
American Philoſophical Society, account of, - 373
Armenians, account of an acid employed by them in the practice of medicine, - 385
Arnold, Dr, obſervations on the arſenical ſolution, 128
Arſenic, obſervations on its uſe in medicine, - 113
——— uſed ſucceſsfully in ſome cancers, - 179
——— means of detecting its preſence in any mixture, - - 179
Arſenical ſolution, practical concluſions reſpecting its uſe, - - 126

B.

BAROMETER, ſtate of at Edinburgh during the year 1786, - - 431
Barton, Mr B. Smith, account of an extra-uterine conception, communicated by, - 334

Page

Beddoes, Mr Thomas, appointed lecturer in chemiſtry at Oxford, - - 427
Bell, Mr Andrew, intended publication of anatomical plates, - - 423
Bell, Mr Benjamin, publication of the fifth volume of his ſyſtem of ſurgery, - 421
Bell, Dr John, admitted a member of the college of ſurgeons of Edinburgh, - 428
Bell, Mr Robert, hiſtory of a wound of the thorax, 349
Belly-ach, dry, ſucceſsfully treated by a mixture of vegetable acid and ſea-ſalt, - 192
Bilious fevers, cauſe of their increaſe in Penſylvania, 170
Blood-letting, advantage derived from it in an epidemic affection of the liver, - 368
Breaſt, uncommon tumour in, - 317
Brereton, Dr Edward, appointed a profeſſor in the univerſity of Dublin, - 391
Brown, Mr, his account of an acid employed by the Armenians in the practice of medicine, - 385
Bryant, William, Eſq; account of the electrical eel, 158
Buboes, venereal, obſervations on the treatment of, 92
Buccleugh, duke of, elected an honorary member of the college of ſurgeons of Edinburgh, - 428

C.

Campbell, Dr D. conjecture reſpecting the cauſe of typhus fever, - 214
——————— obſervations on the typhus, 195
Cancer, latent, hiſtory of a caſe of, - 295

Page
Cancer-powder, Dr Martin's, account of, - 176
Carminati, Mr, his reſearches reſpecting the uſe of the gaſtric juice, - - 19
Cauſtic, how uſed in the removal of ſtrictures of the urethra, - - 77
Chancres, obſervations on the treatment of, - 87
Cheſter, account of the ſociety there for the prevention of ſmall-pox, - 234
Chiſholm, Mr C. hiſtory of a ſingular affection of the liver, - - 353
Cinnamon, growing in Jamaica, - 389
Clarke, Dr Thomas, account of new ſpiceries introduced into Jamaica, - 389
Cochrane, Dr Thomas, admitted a member of the Royal college of phyſicians, Edinburgh, - 429
College of phyſicians in London, intended new edition of their Pharmacopœia, - 216
Collin, Joſeph, account of the lactuca ſylveſtris, 37
Colombier, M. obſervations on the venereal diſeaſe and millet, - - 265
Conſtipation in fevers, remarks on Dr Campbell's opinion reſpecting it, - 200
——— ——— means of obviating eſſential to cleanlineſs, - - 201
Contagion of fever, how prevented and eradicated, 197
Cotton-works at Backbarrow, account of the fever which raged there, - 199
Cullen, Dr Edmund, appointed a profeſſor in the univerſity of Dublin, - 391

Page

Cullen, Dr William, intended publication on the materia medica, - 420
Cynanche parotidea prevailing epidemically, account of, 390

D.

Debility, obſervations on its influence in inducing fever, - - 214
Diarrhœa in ſmall-pox, how to be treated, - 279
Dickſon, Dr Stephen, appointed a profeſſor in the univerſity of Dublin, - 391
Digeſtion, experiments on, - 31
Dijon academy of ſciences, their prize-queſtion, 405
Dropſy of the peritonæum, account of, - 254
—— radical cure propoſed, - 262
—— ſucceſsfully treated by the lactuca ſylveſtris, 37
Dublin, new profeſſors appointed in the univerſity, 391
Dundas, the Hon. Henry, admitted an honorary member of the college of ſurgeons of Edinburgh, 428
Dyſentery, ſucceſsfully treated by a combination of ſea-ſalt with vegetable acid, - 190

E.

Ear-wig, effects of one in the noſe, - 263
Eel, electrical, account of, - 158
Elliot, Sir John, M. D. death of, - 425
Epiſtaxis, vicarious to the menſtrual diſcharge, 337
Extra-uterine conception, account of, - 334
Eye-lids, how to be treated when covered with variolous puſtules, - - 292

F.

Page
Fever, contagious, ſimple and ſucceſsful method of treating, - - 229
Flagg, Henry Collins, account of the numb-fiſh, 163
Fœcundation, artificial, obſervations on, - 145
Fowler, Dr Thomas, obſervations on the uſe of arſenic in the cure of diſeaſes, - 113
Fox-glove, ſucceſsfully employed in the cure of inſanity, 302
——— ——— in hæmoptyſis, 313
Freer, Dr Robert, admitted a fellow of the royal college of phyſicians in Edinburgh, - 429
Frogs, experiments on the generation of, - 131

G.

Gastric juice, its uſe in ſurgery, - 1
Gonorrhœa, obſervations on, - - 65
Gout, relieved by the uſe of ſulphur-water, - 392
Gilchriſt, Dr, his recommendation of opium in the typhus or low fever, - 205
Grant, Mr P. account of ſingular effects from the external application of tobacco, - 327
Green frog, experiments on the generation of, 132

H.

Hæmoptysis, cured by the uſe of fox-glove, - 313
Hamilton, Dr Robert, hiſtory of epiſtaxis vicarious to the menſtrual diſcharge, - 337
——— ——— hiſtory of a caſe of noſtalgia, 343
——— ——— account of an epidemic cynanche parotidea, - - 390

Page

Hamilton, Dr Robert, account of his intended publication on the duties of a regimental ſurgeon, - 407
Harveian ſociety, their prize-medal on opium adjudged to Mr Leigh, - - 397
——— —— their prize-queſtions for 1786 and 1787, 400
Haygarth, Dr, inquiry on the prevention of ſmall-pox, 233
Headachs, periodical, cured by the ſolution of arſenic, 120
Hope, Dr John, death of, - 425
Hopkinſon, T. Eſq; account of a worm in a horſe's eye, 166
Horſe, account of a worm in the eye of one, - 166
Horſes liable to tetanus, - 188
Houlſton, Dr Thomas, new edition of his obſervations on poiſons, - - 424
Hunter, Mr John, obſervations on the venereal diſeaſe, 57
Hydrocephalus terminating fatally after ſalivation from mercury, - - 298
Hydrophobia, uſe of the Ormſkirk medicine in, 330

I.

Inferior extremities, mortified after violent intoxication, 323
Inſanity, caſes of, cured by fox-glove, - 302
Intermittents cured by the arſenical mineral ſolution, 116
Intermittent fevers, cauſe of their increaſe in Penſylvania, 170
Intoxication violent, followed by a mortification of the inferior extremities, - 323
Jebb, Sir Richard, appointed phyſician in ordinary to his Majeſty, - - 427
Joddrell, Dr, appointed phyſician to the London hoſpital, 429
Jones, Mr William, his plan for drawing hiſtories of caſes in ſurgery, - 383

Page

Jones, Mr William, hiſtory of caſes of infanity cured by fox-glove, - - 302

Jurine, Mr, caſes ſucceſsfully treated by him by the uſe of the gaſtric juice, - 9

K.

KENTISH, Dr Richard, hiſtory of a caſe of latent cancer, 295

Kerr, Mr, his ſucceſsful treatment of a contagious fever in the orphan-hoſpital at Edinburgh, - 229

L.

Lactuca ſylveſtris, obſervations on its uſe in dropſy, 37

Laſſone, M. de, obſervations on the means of removing troubleſome accidents in ſmall-pox, - 277

Leigh, Mr John, obtains a prize-medal on the ſubject of opium, - - 397

Leipſic philoſophical ſociety, their prize-queſtion for 1786, - - 406

Le Noir, M. his eſtabliſhment of an hoſpital for the treatment of infants ſubjected to ſyphilis, - 266

Liver, hiſtory of a ſingular affection of, - 353

—— remarkable affection of, - 248

Liquid laudanum, taken in one caſe to the extent of twelve ounces in the day, - 209

Lues venerea, obſervations on, - 96

—— —— in new-born infants, how cured, - 269

Lungs protruded at a wound, ſucceſsfully treated, 349

M.

M.

Page

M'Dougall, Dr Alexander, admitted a member of the college of ſurgeons in Edinburgh, - 429
Maddocks, Dr James, death of, - 426
Magellan, Mr J. H. account of the prize-medal eſtabliſhed by him in the American philoſophical ſociety, 374
Martin, Dr H. account of his cancer-powder, - 176
Meaſles, uſe of milk in combating the diarrhœa with which they are ſometimes attended, - 285
Medical ſociety at Edinburgh, account of late additions to their hall, - - 429
Mercurial frictions with nurſes, ſucceſsfully employed in curing ſyphilis in infants, - 270
Milk, its uſe in combating diarrhœa in ſmall-pox, 281
——— in meaſles, - 285
Millet in new-born infants, obſervations on, - 268
Mineral ſolution, formula for preparing, - 114
Morton, Dr David, admitted a fellow of the Royal college of phyſicians of Edinburgh, - 429
Muguet, a diſeaſe of infants, account of, - 275

N.

Newt-water, experiments on the generation of, 139
Niſbet, Dr William, admitted a member of the college of ſurgeons of Edinburgh, - 428
——— ——— intended publication on the venereal diſeaſe, - - 423
Noſe, ulcer in, from an ear-wig, - 263
Noſtalgia, hiſtory of a caſe of, - 343
Numb-fiſh, account of, 163

O.

Page
Opium, authorities for its uſe in caſes of proper fever, 205
——— ſtrongly recommended in fevers by Dr Gilchriſt about forty years ago, - 205
——— in low fevers, obſervations on by Dr Wall, 216
——— its beneficial effects in typhus fever, - 206
——— prize-medal on, adjudged to Mr Leigh of Virginia, - - 397
——— to what extent taken in one caſe, - 209
Ormſkirk medicine, remarks on its uſe in hydrophobia, 330
Orphan-hoſpital at Edinburgh, account of a contagious fever prevailing there, - 228
Oxford, account of the contagious fever there, 218

P.

Paris, Royal ſociety of medicine, their prize-queſtions, 403
Penſylvania, cauſes of the increaſe of intermittent fevers in, - - 170
Peritonæum, dropſy of, - 254
——— propoſal for a radical cure, - 261
Perkins, Dr William, hiſtory of a caſe of hydrocephalus, 298
Peterſburgh, Royal Academy of Sciences, their prize-queſtion for 1786, - 401
Peruvian bark, its uſe in tetanus, - 183
Pharmacopœia of the college of phyſicians in London, new edition of, - - 216
Pott, Percival, Eſq; admitted an honorary member of the college of ſurgeons of Edinburgh, - 428
Prevention of bilious and intermittent fevers in Penſylvania, means of, - 172

Page
Preventive of the venereal diſeaſe, obſervations on, 109
Putrid ſore throat, ſucceſsfully treated by a mixture of ſea-ſalt and vegetable acid, 193

Q.

QUADRUPED artificially fecundated, 153

R.

RAE, Mr William, death of, 425
Rain, quantity of at Edinburgh during the year 1786, 431
Remittent fever, ſucceſsfully treated by a mixture of vegetable acid with ſea-ſalt, 192
——————— cured by the ſolution of arſenic, 119
Rodney, Lord, new trees introduced by him into the botanical garden at Jamaica, 389
Roy, major-general, obtains the Royal Society's prize-medal for 1785, 418
Royal ſociety of Edinburgh, intended publication of their tranſactions, 417
Ruſh, Dr Benjamin, inquiry into the increaſe of intermitting fevers in Penſylvania, 170
——————— obſervations on the cauſe and cure of tetanus, 182
——————— his account of Dr Martin's cancer-powder, 176
Ruſſel, Mr James, clinical lectures on ſurgical caſes in the Royal Infirmary at Edinburgh, 396
Rutherford, Dr Daniel, appointed profeſſor of botany in the univerſity of Edinburgh, 427

S.

Page
Salamander-water, experiments on the generation of, 139
Salt, the effects of its application to freſh wounds in caſes of tetanus, 187
Sandifort, Ed. M. D. exercitationes anatomicæ, 246
Scopoli, Dr A. new botanico-zoological work, 424
Sea-ſalt combined with vegetable acid, its antiſeptic power, - - - 189
Senebier, M. Jean, obſervations on the uſe of the gaſtric juice in ſurgery, - - - - 1
Small-pox, inquiry on the prevention of, - 233
—— —— obſervations on the removal of troubleſome accidents in, - - - 277
Smellie, Mr William, account of his intended publication on the philoſophy of natural hiſtory, - 410
—— Dr, new edition of his plates of midwifery, 422
Spallanzani, Abbé, diſſertations relative to the natural hiſtory of animals and vegetables, - - 131
Spaniel bitch, artificial fœcundation of, - 132
Spence, Dr James, death of, - 425
Stevenſon, Dr Thomas, admitted a fellow of the Royal College of Phyſicians of Edinburgh, - 429
Strictures in the urethra removed by cauſtic, - 77
Succus gaſtricus, ſucceſsfully employed in different caſes, 20
—— —— its antiſeptic power, - 29
Sulphur-water, account of its uſe in gout, - 392
Surgery, clinical lectures on, at Edinburgh, - 396
Synochus, obſervations on opium in, by Dr Wall, 216

T.

T.

Page
Tetanus, obſervations on the cauſe and cure of, 182
Thermometer, ſtate of at Edinburgh during the year 1786, - - 431
Toads, experiments on the generation of, - 137
Tobacco, ſingular effects from its external application, 327
Toggia, Mr, obſervations on the uſe of the gaſtric juice in the diſeaſes of animals, - 17
Tonics, their uſe in tetanus, - 183
Tree-frog, experiments on the generation of, - 136
Typhus fever, obſervations on, - 195
—— ——— opium recommended for the cure by Dr Gilchriſt, - 205
—— ——— how affected by opium, - 206

U.

Ulcers, cured by the application of the ſuccus gaſtricus, - - 26

V.

Variolous poiſon, remarks on the contagion of, 234
——— ——— directions to be followed in the prevention of its action, - 239
Vegetable acid, its antiſeptic powers when combined with ſea-ſalt, - 189
Venereal diſeaſe, treatiſe on by Mr Hunter, - 57

W.

Wall, Dr Martin, obſervations on opium in low fevers, - - - 216

Page

Watſon, Mr James, hiſtory of an uncommon mortification of the inferior extremities, - 323

—— ——— hiſtory of an uncommon tumour in the breaſt, - - 317

Wilmot, Sir E. M.D. death of, - 426

Wilſon, Dr Alexander, death of, - 425

Wine, its uſe in tetanus, - 183

Wintringham, Sir Clifton, M.D. appointed phyſician-general to the army, - - 427

Withering, Dr, his obſervations on arſenic, - 136

Worm in the eye of a horſe, account of, - 166

Wright, Dr William, obſervations on the antiſeptic power of vegetable acid combined with ſea-ſalt, - 189

FINIS.

