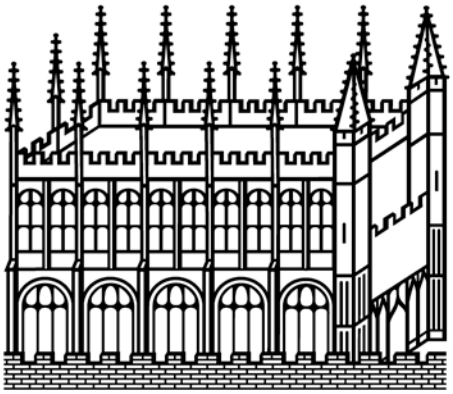


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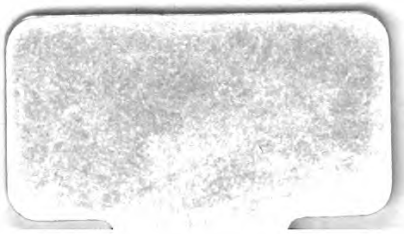
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MEDICAL COMMENTARIES

FOR THE YEAR M.DCC.XC.

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,
PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH,
MEMBER OF THE ROYAL SOCIETIES OF MEDICINE
OF PARIS, COPENHAGEN, EDINBURGH, &c.
AND PROFESSOR OF THE INSTITUTIONS OF MEDICINE
IN THE UNIVERSITY OF EDINBURGH.

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

DECADE SECOND.

VOL. V.

EDINBURGH:

PRINTED FOR G. G. J. & J. ROBINSON, LONDON;
AND
PETER HILL, EDINBURGH.

M,DCC.XCI.


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THIS VOLUME

OF

MEDICAL COMMENTARIES

Is reſpectfully inſcribed

TO

DR RICHARD WARREN, F. R. S. & S. A.

PHYSICIAN to the KING,

And to the PRINCE OF WALES,

As a teſtimony of

Eſteem for a Medical Practitioner

Who unites the character

Of a learned Phyſician

And elegant Scholar,

With that

Of an accompliſhed Gentleman;

And as a mark of regard

from his moſt obedient Servant,

ANDREW DUNCAN.

———*Vobis ſemper, Achivi,*
Profuit ingenium———

OVID.

PREFACE.

IN preſenting this Volume to the Public, we beg leave to return ſincere thanks to thoſe induſtrious and ingenious Correſpondents to whom we have been indebted for the original obſervations contained in the ſecond Section; and we truſt their labours will be received with grateful indulgence by the candid Reader, to whom they cannot fail to convey uſeful information. The ſame motives which have drawn forth former communications, will, we flatter ourſelves, ſecure to us future aſſiſtance. And we have only to obſerve, that in conſequence of the death of our former publiſher Mr Elliot, whoſe ſpirited conduct in trade did honour to his

profeſſion, and whoſe death we ſincerely regret, communications intended for this Work, may be addreſſed to the care of Meſſrs Robinſons, bookſellers, London, by thoſe who have not an opportunity of tranſmitting them directly to Dr Duncan at Edinburgh.

EDINBURGH,
Dec. 1. 1790.

CON-

CONTENTS

OF

VOL. V.

DECADE SECOND.

Sect. I. Account of Books.

PAGE.

I. Ekman, Ol. Jac. Dissertatio medica, descriptionem & casus aliquot Osteomalaciæ sistens - - - - - 16

II. Æjmelæus, Christ. Dissertatio medica de arbore Toxicaria Macassarienſi - 36

III. Hast. Herm. Rud. Dissertatio medica de Caryophylis aromaticis - - 46

IV.

PAGE.

IV. Radloff, Fred. Vil. Diſſertatio medica de Myriſtica - - - 54

V. Segerſtedt, Alb. Jul. Diſſertatio medica de nutrimento corporis ſuperfluo, ut vera Arthritidis cauſa - - 63

VI. Dickſon, Stephen, M. D. Obſervations on the Pemphigus - - - 86

VII. Cleghorn, James, Hiſtory of an ovarium, in which were found teeth, hair, and bones 100

VIII. Hapel, M. de la Chênaie, Profeſſeur attaché à l'Ecole Royale veterinaire de Paris, Obſervations et experiences ſur l'analyſe de la ſalive du cheval - 111

IX. Carrere, d'Aubenton & Mauduyt, M. Rapports ſur les vertus medicales des lézards du royaume de Guatimala - 121

X. Bouſſelin, M. Obſervations ſur la necroſe 134

XI. Lavoiſier, M. Reflexions ſur les effets de l'éther vitriolique, & l'éther nitreux, dans l'économie animale - - 150

XII. Walker, Robert, M. D. An enquiry into the ſmall-pox, medical and political - 157

XIII.

PAGE.

XIII. Bruce, James, Eſq; Select ſpecimens of natural hiſtory, collected in travels to diſcover the ſource of the Nile - 173

XIV. Walker, Joſhua, M. D. Some remarks on the prevalence of the atrophia lactantium - - - - - 193

XV. Fothergill, Anthony, M. D. On the efficacy of the gummi rubrum aſtringens Gambienſe, or gum kino, in intermittent fevers, &c. - - 201

XVI. Sherwen, John, ſurgeon, Obſervations on the effects of tartar emetic, and of arſenic, by external abſorption - 209

XVII. Fearon, Henry, ſurgeon, Obſervations on cancers - - - 225

XVIII. Smellie, William, The philoſophy of natural hiſtory - - - 237

XIX. Balfour, Francis, M. D. A treatiſe on putrid inteſtinal remitting fevers; in which the laws of the febrile ſtate, and ſol-lunar influence, being inveſtigated and defined, are applied to explain the nature of the various forms, criſes, and other

PAGE.

other phænomena of theſe fevers; and thence is deduced and inſtituted, an improved method of curing them - 260

XX. Baillie, Matthew, M. D. An account of a particular change of ſtructure in the human ovarium - - - 271

XXI. Guthrie, Matthew, M. D. A diſſertation on the climate of Ruſſia - - 282

Sect. II.

Sect. II. Medical Observations.

Page.

I. Obſervations on the puerperal fever; more eſpecially as it has occurred in the Lying-in hoſpital of Dublin. By Joſeph Clark, M. D. - - - - 299

II. Obſervations on the influenza, as it lately appeared in the Weſt Indies. By Mr C. Chiſholm, ſurgeon, Grenada - - 325

III. Hiſtory of a caſe, in which remarkable adheſions of the inteſtinal canal terminated fatally. By Andrew Williſon, M. D. Dundee - - - 355

IV. Account of a ſingular fracture of the cranium; and of hæmorrhage from amputation of the penis, ſtopped by ſlight compreſſion for a few minutes. By Thomas Irving, M. D. Liſburne, Ireland - 363

V. Hiſtory of an anomalous caſe, apparently of the rheumatic kind, terminating fatally - - - 367

PAGE.

VI. Hiſtory of a caſe of angina pectoris, cured by the ſolutio arſenici. By Mr E. Alexander, ſurgeon, Halifax, Yorkſhire - 373

VII. Account of the external uſe of camphor, in caſes of glandular indurations and bronchocele. By Peter Copland, ſurgeon, Swayfield, Lincolnſhire - 380

VIII. The hiſtory of an aneuriſm of the aorta deſcendens, appearing under the form of a tumour at the ſcrobiculus cordis. By Thomas Concannen, M. D. phyſician at Dundalk - - - 386

IX. Hiſtory of a ſingular caſe of an intermittent affecting the right temple; and of a remarkable tumour in the abdomen, ſucceſsfully treated. By Samuel Davidſon, ſurgeon at Rothbury in Northumberland - - - 391

X. Hiſtory of a ſingular dropſical affection of the ſcrotum, terminating fatally. By Mr Patrick Maxwell - - 399

Sect. III. Medical News.

PAGE.

1. Account of the progreſs made in rebuilding the Univerſity of Edinburgh - 410
2. Obſervations on irritability, conſidered as a vital principle in organized bodies 420
3. Account of the Anguſtura bark, by Mr Butt - - - 441
4. Account of the uſe of the phyteuma, in the cure of ſyphilis, &c. - 444
5. Account of a caſe of gout cured by a ſtroke of the gymnotus or torporific eel 447
6. Eulogium on Dr Franklin, by the Duke de Rochefoucault - - 450
7. Epitaph on Dr Franklin, by himſelf - 464
8. Account of Sir William Watſon - 465
9. Account of Dr George Cleghorn - 477
10. Account of intended new publications 485

Account of prize-queſtions, &c.——

11. By the Harveian Society of Edinburgh - 488
12. —— Medical Society of London - 489
13. —— Royal Society of London - 490
14. —— Royal Society of Medicine of Paris 491

15. Ac-

PAGE.

15. Account of the reſignation of Dr Cullen, and the honours paid him on that occaſion - - - - - 491

16. Account of the death of ſeveral eminent phyſicians and philoſophers - 496

17. Account of different medical promotions - - - 499

18. Account of new members admitted into the Royal Society, and College of Phyſicians of Edinburgh - - 500

19. Account of the ſtate of the thermometer, barometer, and rain, at London and Edinburgh - - - 503

Sect. IV.—Liſt of new books - 506

MEDI-

MEDICAL COMMENTARIES,

FOR THE YEAR 1790.

VOL. V. DECADE II.

SECT. I.

Account of New Books.

I.

Diſſertatio Medica Deſcriptionem et Caſus aliquot Oſteomalaciæ ſiſtens. Auctore Olao Jacobo Ekman, *Præſide Joh. Guſt. Acrell.* 4to, Upſaliæ.

THE treatiſe before us is introduced with ſome general obſervations on the nature and properties of bones in the healthful ſtate, as poſſeſſing greater ſolidity and ſtrength than other parts, and thus preſerving the length and form of the animal machine. There are, however, Dr Ekman obſerves, melancholy inſtances,

in which they do not acquire a ſufficient degree of firmneſs in the womb itſelf; there are others, in which they have not a due degree of growth in the infant ſtate; and laſtly, there are caſes, in which, after having acquired the proper ſtrength of the adult ſtate, they are ſo affected from internal cauſes, as to be either fractured from the ſlighteſt accident, or ſo ſoftened as to be incapable of reſiſting the action of the muſcles; in conſequence of which, various deformities occur.

This diſeaſe, he obſerves, is deſcribed under various names by different medical writers. The term Rachitis has indeed been moſt frequently employed. But with ſome, the diſeaſe has obtained the names of Atrophia, Oſteoſarcoſis, Oſſium fragilitas, mollitio, incurvatio, contorſio, and the like. As affecting particular parts, it has been termed, Gibboſitas or Scoliaſis; and thoſe labouring under it have been ſtyled Capitones, Valgi, Vari, Combernes, &c. This affection of the bones has alſo, he obſerves, been ſometimes conſidered as conjoined with certain chronic diſeaſes, as ſcrofula, ſcorbutus, and ſyphilis, which were believed to affect the bones in

conſequence

conſequence of a certain acrimony, or peculiar miaſma.

In his inquiries on this ſubject, Dr Ekman thinks it moſt adviſeable, to refer the whole to one genus, of which the proper and diſtinguiſhing characteriſtic is, a weaker, more fragile, or ſofter ſtructure of the bones, from which they either acquire monſtrous figures, in conſequence of the ordinary actions of the muſcles, or are broken by the ſlighteſt violence, or, in fine, are reduced to ſuch a pulp, that all voluntary motion is loſt. He employs the generic name of Oſteomalacia, as none of the others in uſe ſufficiently diſtinguiſh this diſeaſe from other affections of the ſolids. This genus may, he thinks, with propriety be diſtinguiſhed into four ſpecies:

1. Oſteomalacia congenita, vel Hereditaria.
2. Oſteomalacia infantum, ſeu Rachitica.
3. Oſteomalacia adultorum, vel Cachectica.
4. Oſteomalacia partialis.

Of each of theſe ſpecies he next proceeds to make ſome obſervations, illuſtrating them by particular caſes.

In treating of the *firſt* ſpecies, the Oſteomalacia congenita, he obſerves, that an uncommon ſoftneſs of the bones may not only occur from the very time of birth, but that it has even been known to be propagated through different generations, from parents to children. In proof of this, he relates the hiſtory of a family, reſiding at one of the iron mines in Sweden, who for three generations were known to be a race of dwarfs, with a peculiar ſoftneſs and fragility of the bones, giving riſe to monſtrous diſtortions. The great-grandfather of this monſtrous progeny, by name Nicolas Ekroth, was born in the end of the laſt century, and was ſo diſtorted in his figure as to be incapable of walking. But, even in this ſituation, he entered into marriage, and had by his wife four children.

1. Eric, born in 1702, who in the infant ſtate ſhewed no ſigns of deformity. But having arrived at puberty, he loſt all ſtrength of his legs and arms; and being incapable of any work, he was ſupported by begging. He died in 1775.

2. Sophia, born in 1703. Of her, during the infant ſtate, there are no certain accounts.

But,

But, when grown up, ſhe was of a low and crooked ſtature, walked in the manner of a duck, and had her feet turned inwards.

3. Anna, of whom nothing certain is known, and who probably died early in life, or removed to ſome other part of the country.

4. Stephen, well known to all the neighbourhood as a dwarf, incapable of walking, and with remarkable curvatures both in his legs and arms. Notwithſtanding this deformity, however, he married a healthy woman, by whom he had one ſon.

This ſon, named Nicolas Ekroth, who conſtitutes the ſecond generation, was born in the year 1726. From the earlieſt period of his life, both his legs and arms were liable to be broken, even by the ſlighteſt injury; and, like his father and grandfather, he was miſerably diſtorted, and was obliged to remain almoſt conſtantly in a ſedentary ſtate. He alſo was chiefly ſupported by begging, and died in the 56th year of his age. Through the whole courſe of his life, he was affected with flying pains in different parts of his body. But, notwithſtanding theſe circumſtances, he married a ſtout looking woman, by whom he had

two children; which conſtitute the third generation from the elder Nicolas.

The firſt of theſe, Andrew Ekroth, was born in the year 1760. When he was ſcarce a month old, ſuch was the ſoftneſs of the bones of his legs and arms, that a curvature was the conſequence even of the ſlighteſt touch; and, almoſt every year during the infant ſtate, he was three or four times ſubjected to a fracture of ſome bone. When he was grown up, his legs were incapable of ſupporting the weight of his body, although very light; and by various and almoſt innumerable contortions and fractures, both of the inferior and ſuperior extremities, he exhibited a moſt miſerable ſpectacle. The articulations, however, were not affected with any diſeaſe. When he arrived at maturity, though he was not married, yet he was by no means void of the deſire of propagating the ſpecies; and perhaps he might have ſucceeded in obtaining a wife, had he not been accidentally drowned.

The ſecond child of Nicolas Ekroth, named Anna, born in the year 1765, was alive in the year 1788, at which time ſhe was ſeen by our author. Her mother informed him, that eight

days

days after her birth, when they were changing the linens of this infant, her arm was broken without any violence whatever; and during the whole period of infancy, upon the ſlighteſt accident, fractures occurred, not only in the legs and arms, but even in the thigh bones. Theſe were accompanied with ſuch diſtortions in the other bones, that at the age of fourteen ſhe meaſured only nineteen inches and a half in length. But the power of motion at all her joints was very free. In the twenty-third year of her age, at which time Dr Ekman ſaw her, ſhe had never menſtruated, and was very thin. But notwithſtanding the affections of all the other bones, the head retained its natural figure.

It deſerves to be remarked, that the family thus affected, lived in different ſituations; and the greater part of them lived in the ſame manner with other labourers in the neighbourhood, who begot very healthy children.

After this remarkable account of the Oſteomalacia congenita, Dr Ekman next treats of the *ſecond* ſpecies, the Oſteomalacia infantum, ſeu Rachitica. This diſeaſe, peculiar to infants, is, he obſerves, ſo well deſcribed

by practical authors, that any farther hiſtory of it becomes unneceſſary. He admits, that, as well as the former, this alſo may be congenital, or, at leaſt, that prediſpoſition to it may be propagated from parents to children. But he contends, that occaſional cauſes have great influence in producing it. In the beginning, it is often without fever; but in the progreſs of the diſeaſe, febrile ſymptoms ſupervene, and it is often terminated by convulſions. On diſſection after death, the bones are often in ſuch a ſoft ſtate, that they may be cut like wax; the texture of the muſcles, alſo, appears to be very lax and tender; and ſome of the abdominal viſcera, particularly the liver, are not unfrequently found to be very much enlarged.

The *third* ſpecies pointed out by Dr Ekman, is ſtyled the Oſteomalacia adultorum, ſeu Cachectica. This, though mentioned by ſeveral writers, from its ſingular and wonderful appearance, has not however been conſidered as belonging to a genus of diſeaſe by itſelf, but has been viewed as ſymptomatic merely of lues venerea, ſcrofula, ſcorbutus, or the like. This diſeaſe, however, he obſerves, takes its riſe in inſtances where there cannot be

be even the ſlighteſt ſuſpicion of any latent fomes. After enumerating the moſt remarkable caſes of this affection, recorded by Rivinius, Meibomius, Fernellius, Hollerus, Morand, Lambert, Petit, Heriſſant, Waldſchmidt, Thomſon, Cowper and others, he remarks, that before any affection of the bones has been obſerved, the patient is in general excruciated with very ſevere pains, ſuppoſed to be of the athritic, rheumatic, or ſyphilitic kind; but without any good reaſon. With theſe pains, whether more or leſs ſevere, a fever is conjoined; and at the ſame time, a large quantity of earthy or calcareous matter, unqueſtionably furniſhed from the ſubſtance of the bones, is diſcharged with the urine. The longer this excretion continues, the more the bones are ſoftened, not only of the limbs and ſpine, but alſo of the cranium and face. In this ſituation, the bones are broken and diſtorted, not merely by the weight of the body, but even by the ordinary action of the muſcles.

Notwithſtanding the caſes of this diſeaſe recorded by other writers both of ancient and modern date, Dr Ekman thinks, he performs no unacceptable taſk to his readers, by recording

cording another example of it, which, he imagines, throws great light on the nature of this affection. While many of the other caſes occurred with patients in inferior ranks of life, and under ſuſpicious circumſtances, this again occurred with a lady in ſuch opulence as to be furniſhed with every comfort and convenience, and of unimpeachable virtue.

She was a female of a delicate frame, and fine ſkin; but had enjoyed good health till the twenty-ſeventh year of her age, and was the mother of two healthy children. In the year 1773, towards Autumn, ſhe became affected with a ſevere cough, which was even attended with hectic fever, and purulent expectoration: but after the ſpace of five months, in conſequence of the uſe of proper remedies, this alarming affection was completely overcome, leaving, however, in the right mamma a ſcirrhus about the ſize of an almond. During the following year ſhe enjoyed but indifferent health; and the ſcirrhus increaſed to about the ſize of a pigeon's egg, being affected with obtuſe pain, particularly during the night. In the Summer of 1775, ſhe was attacked with a peculiar fever, attended with an eryſipelatous,

or

or ſcarlet eruption, and ſome degree of ſore throat, with difficult deglutition. Theſe yielded to the antiphlogiſtic treatment; but ſhe ſtill complained of diſtreſſing pains in her arms and legs, returning at intervals through the whole year.

In the year 1776, and nearly about the ſame time as in the former year, a fever very ſimilar to that with which ſhe had before been affected, again attacked her. It was attended with an eruption, which however diſappeared in the ſpace of three or four days. But a much greater degree of weakneſs remained, with ſuch an affection of the legs and arms, that ſhe was frequently afraid ſome of them were broken. She now alſo became affected with conſtant pains of the legs and arms, which, conjoined with fever, confined her to bed for the ſpace of three weeks. When, after being a little recovered, ſhe attempted to riſe, ſhe had ſcarcely put her left foot on the floor, before ſhe felt a crackling at the articulation of the thigh bone, and fell back into the arms of an attendant. Upon examination it was found, that the os femoris was fractured at its neck. After this ſhe was confined to bed for near

near three months; and during all that time ſevere pains continued, particularly in the right arm, right ſide of the face, and eye of the ſame ſide.

In the year 1777, the fracture ſeemed to be pretty firmly united; but a new and unuſual mechaniſm had taken place. The right eye was ſubjected to conſtant inflammation, and the antrum maxillare ſo diſtended, as to ſet the face awry. The vertebræ of the neck were rigidly incurvated, ſo that the head was bent towards the thorax. The vertebræ of the back were formed into a hunch, ſo that the body was ſhortened about ten inches. The right tibia was ſo deprived of ſtrength, that upon merely lifting the foot, the leg was evidently bent. The lymphatic glands in different parts of the body, particularly in the neck, mammæ, and axilla, were enlarged and indurated. This year alſo, and about the ſame ſeaſon, ſhe was attacked with her uſual fever, attended with the ordinary exanthematous appearances. Such was the fragility of her limbs, that ſhe durſt not attempt to ſtand, but was obliged either to ly or ſit. A very great quantity of a white coloured calcareous ſediment

ment was conſtantly excreted with the urine; and through the whole of this period ſhe complained of an unuſual ſenſe of heat, which both night and day affected the internal parts of her body. In her bed-chamber, while others complained of cold, ſhe felt pleaſant. Winter was always agreeable to her; and ſhe was highly diſtreſſed by Summer weather.

In the year 1778, to her other affections, and to an increaſe of the diſtortions, was ſuperadded a new diſeaſe of the kidneys, conſiſting in violent pain, attended with the diſcharge of numerous calculi, her urine ſtill continuing to depoſite the ſame calcareous ſediment as before. During this fourth year, alſo, ſhe did not eſcape her uſual fever; and although it ſuffered a remiſſion in a few days, yet it did not entirely leave her. A diarrhœa ſupervened, attended with aphthæ, which proved fatal to her. Various circumſtances prevented an examination of the body after death. Dr Ekman thinks, however, there can be little doubt, that nothing farther would have been detected than was obſerved by Dr Hunter on the diſſection of the patient affected with remarkable ſoftneſs of the bones, whoſe caſe is related by Mr Thomſon,

Thomſon, in the fifth volume of the London Medical Obſervations.

The *fourth* ſpecies of this diſeaſe, deſcribed by Dr Ekman, he ſtyles the Oſteomalacia partialis. Under this title he conſiders that affection, which, either with or without a preceding bad habit of the body, ariſes from a local cauſe, by means of which, ſome one of the bones is deprived of its uſual hardneſs, and degenerates into a ſoft, fleſhy, cartilaginous, or ſteotomatous ſubſtance, or is even rendered ſo fragile, as to break either of its own accord, or in conſequence of the ſlighteſt accident. This, in the writings of practical authors, has been deſcribed under the names of Oſteoſarcoſis, Caries from an internal cauſe, and the like.

From an attentive conſideration of this affection, it will be found, our author thinks, conſtantly to derive its origin from ſome preceding external violence, by which the veſſels leading to the affected part, ſerving for nutrition, are ſo changed, that they cannot convey a ſufficient quantity of properly prepared oſſeous matter; while, at the ſame time, the abſorbents continue to exert their uſual functions,

tions, carrying off the accuſtomed quantity of bony ſubſtance. By this means, the bone is either bent, broken, or diſtended; or changed into a ſoft ſubſtance very different from bone.

Of this affection, Dr Ekman remarks, that ſeveral caſes had occurred to him; and of theſe he relates the following, as illuſtrating the nature of the diſeaſe. A young country man, in a ſtate of perfect health, was by accident thrown from a ſledge upon the ground, when covered with ice and ſnow, and his knee very much hurt. The pain and ſwelling of his thigh and knee, which were thus induced, continued for ſeveral weeks; during which time, different external applications were employed. He at length recovered perfect health, excepting a ſlight weakneſs in the knee, which was apt to be fatigued upon motion; and he continued in this ſtate till the middle of Summer. But at that time, without any new accident, he was ſeized with obtuſe pain in the knee and leg, by which he was confined to bed for ſeveral weeks. The thigh now began to ſwell; but the knee became emaciated, and a very large tumour took place

place on the foot. He became affected alſo with hectic fever.

After he had been thus diſtreſſed for ſome length of time, when he was attempting one night to extend his leg in bed, he broke the tibia, juſt below the epiphyſis at the knee. Upon this, new pain, fever, and ſuppuration enſued; and, upon an opening being made to diſcharge the pus, the fracture of the bone could be evidently diſtinguiſhed. Amputation was now conſidered as the only thing that gave a chance of ſaving his life; but he died in a few days.

After thus deſcribing the different forms under which this diſeaſe appears, Dr Ekman concludes this treatiſe with ſome obſervations on the nature of each. With regard to the *firſt*, or Oſteomalacia congenita, he obſerves, that nothing has more eluded the reſearches of phyſiologiſts than the buſineſs of generation. No one, however, can deny, that chronic affections are often transferred from parents to children; and this, he thinks, certainly depends, not on any peculiar acrimony of the blood, but on a vitiated configuration of the living ſolids. Some learned men have ſuppoſed,

ſuppoſed, that hereditary diſeaſes are propagated only from the mother; but the hiſtories which our author has related of this firſt ſpecies of oſteomalacia, prove that the diſeaſe was propagated by the father through three ſucceſſive generations.

When foreign ſtimuli, acting for a great length of time, excite morbid actions in the body, a due degree of nutrition cannot then take place, and the bones cannot acquire the neceſſary firmneſs, chiefly for two reaſons. In the *firſt* place, Not only is the appetite for food impaired, but the whole buſineſs of digeſtion is diſturbed; and, in the *ſecond* place, from the influence of ſuch ſtimuli, the equable and determinate action of the arterial veſſels, ſo neceſſary for performing due appoſition, is not merely diſturbed, but even ſometimes entirely ſuſpended. But while, in this manner, the aſſimulation and appoſition of nouriſhment is diminiſhed, the buſineſs of abſorption often goes on undiſturbed; and thus, of neceſſity, a greater proportion of the ſolids of the body is carried away than depoſited. At the period, however, during which the oſteomalacia infantum, or rachitica, occurs, ſuch

a condition is the more dangerous, as a large appoſition is neceſſary for the growth of the body. There are, however, Dr Ekman thinks, various ſtimuli of this nature to which the infant body is expoſed; and, as ſuch, he enumerates affections of the alimentary canal, with depraved digeſtion, ariſing from bad milk, large quantities of unfermented farina, and other food of difficult digeſtion, ill fitted to the tender ſtomachs of infants. Such ſtimuli are alſo afforded by want of cleanlineſs on the ſurface, herpetic eruptions, excoriations, and the like. Theſe, he remarks, are generally allowed to be the occaſional cauſes of rachitis; and all of them, he thinks, act upon the body by a long continued ſtimulus, retarding digeſtion.

The oſteomalacia cachectica, ſeu adultorum, is, Dr Ekman thinks, alſo to be explained from the influence of long continued ſtimuli, which appears from its being univerſally preceded by long continued pains, almoſt univerſally extended over the whole body. From the affection of the lymphatic glands, which generally occurs in this diſeaſe, ſome authors have ſuppoſed a ſcrofulous humour to prevail. But this affection of the glands takes place

place only after calcareous matter has been obſerved in the urine. It is therefore, Dr Ekman thinks, clearly to be attributed to the action of this matter on the glands, and is to be conſidered as the conſequence, not the cauſe, of the oſteomalacia. From this view of the diſeaſe, he entertains the hope, that in proceſs of time, ſome ſtimulus may be diſcovered, by which thoſe inducing oſteomalacia may be counteracted, in the ſame manner as the ſyphilitic ſtimulus is known to be extinguiſhed by that of mercury.

That no particular acrimony takes place in the oſteomalacia partialis, clearly appears, our author thinks, from the cartilages never being affected, although the ſubſtance of a neighbouring bone be entirely diſſolved. It is therefore, he thinks, wholly to be referred to the action of a local cauſe, in the manner formerly explained; and, where the ſituation of the part will admit of it, amputation may be conſidered as the moſt effectual cure.

II.

Diſſertatio Medica de Arbore Toxicaria Macaſſarienſi. Auctore Chriſt. Æjmelæo, *Præſide Car. Pet. Thunberg, M. D.* 4*to*, Upſaliæ.

IN the diſſertation before us, the author introduces his ſubject by ſome general remarks on poiſons. He obſerves, that many articles of this kind, deſtroying the human frame by corroſion, or quickly extinguiſhing the vital ſpark, are to be met with in all the three different kingdoms of nature. From the mineral kingdom, we have examples of theſe in arſenical, mercurial, and antimonial preparations, and in the concentrated acids. In the animal kingdom, the poiſon of ſerpents, introduced into the blood in a healthy ſtate, induces fatal ſymptoms with wonderful velocity. And as, among vegetables, many ſalutary remedies are found, ſo alſo various poiſons are to be met with; ſome of which inflame

flame by a corroſive quality, while others corrupt the blood; and a third ſet diſorder the nervous ſyſtem, inducing death, after a longer or ſhorter interval; as, the Curara on the river Orenoque, and the Woorara on the river of the Amazones in South America, and ſeveral others.

Among the ſtrongeſt of theſe may be enumerated that Indian poiſon, which, not without the utmoſt caution, is obtained from a tree, hitherto undeſcribed, but known by the name of Boa upas. Concerning the powers and uſe of this article, various and almoſt incredible particulars have been told, both in ancient and modern times; ſome of them true, others probably founded on ſuperſtition. But, concerning this poiſon, Rumphius teſtifies, that he had not met with any other more dreadful, produced from any vegetable. And he adds, that this poiſon, of which the Indians boaſt, was much more terrible to the Dutch than any warlike inſtrument.

This poiſonous tree has not hitherto, our author obſerves, been deſcribed by any botaniſt; but he thinks it probable, that it is at leaſt of the ſame natural order, if not of the

ſame genus, with the Ceſtrum. He enumerates the different names which have been given to it in the countries in which it grows. The Dutch inhabitants of India name it Giftboom, or Spatenboom. By Rumphius, it is ſtyled Arbor toxicaria; and among the Mallay inhabitants of Malacca, Java, and Sumatra, it has the names of Ipo, Cajo upas, Boa upas, and Lupo matta ju. Two ſpecies of it are mentioned by Rumphius, a male and female; but the flowers and fruit are unknown. The tree is repreſented as having a thick trunk, and ſpreading branches, covered with a rough, dark, aſh-coloured bark. The wood is ſaid to be very ſolid, of a yellowiſh white colour, variegated with black ſpots.

This very poiſonous tree grows in ſeveral of the warmer parts of India, principally in the iſlands of Java, Sumatra, Borneo, Bali, Macaſſer, and Celebes. It is chiefly found in very deſert places, and on bare mountains. It is eaſily diſtinguiſhed at a diſtance, as no other trees grow near it; and the earth under it is barren, and, as it were, burnt up.

The juice of this tree, in which the whole deleterious power reſides, is of a dark brown colour;

colour; and, upon drying, aſſumes the appearance of a reſin. That obtained from the male tree, is ſaid to be the hardeſt and blackeſt, reſembling pitch; and it may be melted by the heat of fire.

The collection of this reſinous juice muſt be performed with great caution, that the collector may not be endangered. His head, feet and hands, therefore, are carefully wrapped round with linen, that the whole body may be defended even from the vapour which it emits. No one dare approach ſo near it as to remove the juice with his hands. In collecting the juice, therefore, they employ long bamboos, pointed like a ſpear at the extremity. Theſe are forcibly thruſt obliquely into the bark of the trunk, that the juice may gradually drop into the hollow of the cane, where it condenſes into a ſubſtance of an obſcure red, or blackiſh colour. The nearer the root that the tree is wounded, the more efficacious is the poiſon. Sometimes upwards of twenty reeds of this kind are left fixed in the tree for three or four days, that the juice may collect, and harden in their cavities. The upper joint of the reed being thus filled, is cut

off from the remaining part. This juice, while yet recent, is formed into ſmall globules, put into the hollow cavities of reeds, and then kept in a dry place, covered with ſeven or eight folds of linen: but it muſt every week be taken out and cleaned, leſt it ſhould become mouldy. By exhalation it loſes its activity, which is much diminiſhed in the ſpace of one year; and in a few years is entirely gone.

The poiſonous quality of this tree is very dreadful. From the mere halitus which it emits, the limbs are as it were congealed, and at the ſame time affected with ſpaſms. If any one ſhall ſtand under it with his head bare, a loſs of hair is the conſequence; and if a drop from the tree falls upon any part, an exceſſive ſwelling ariſes. Even the air about this tree is ſo infected, that birds, from ſitting on its branches, in a ſhort time fall down dead; and they can even with difficulty fly over it. And not only do no vegetables grow under it, but the ground is barren for near a ſtone-caſt around it. The poiſon of the female tree, however, is ſaid to be much weaker; and from that reaſon it is employed for catching

wild

wild beaſts. It is not uſed for poiſoning weapons, unleſs mixed with the ſtronger kind: but by this the power of both is ſuppoſed to be increaſed.

When any perſon is wounded with a dart upon which this poiſon has been rubbed, it very quickly diffuſes itſelf through every part, exciting a violent ſenſe of heat, and great vertigo, to which death ſoon ſucceeds. The poiſoned weapons, in general, preſerve their power for about two years; although, in ſome inſtances, it is entirely gone in a few months. It is chiefly fatal from immediate admiſſion into the blood; and accordingly, Rumphius aſſerts, that the inhabitants of Celebes ſometimes venture to employ it as a remedy internally.

For determining the ſtrength of this poiſon, recourſe is ſaid to be had to the following experiment. A quantity of the expreſſed juice of the root of the Lampujang or Amomum zerumbet, having a portion of water mixed with it, is ſtrained through linen, and to this a ſmall portion of the poiſon is added. Upon this mixture, a ſudden ebullition takes place; and, from its violence, a judgment is formed of the

the ſtrength of the poiſon. This operation is ſaid not to be dangerous, as the experimenter feels only a ſudden increaſe of heat.

This deleterious poiſon in general proves fatal in the ſpace of half an hour, ſometimes even in a quarter of an hour; ſo that antidotes can very rarely be employed. The Macaſſerian kings, with the view of exploring the deleterious power of this poiſon, have directed experiments to be performed on criminals. But, even in theſe caſes, where a finger or thumb wounded with a poiſoned dart was immediately amputated, the patient could not be ſaved by the operation.

It has been aſſerted by ſome, that even fountains have been ſo infected with this tree, as to become fatal; and that the Dutch have ſuffered very much from this cauſe in their wars with the inhabitants of Java. But our author thinks, that this aſſertion requires further confirmation; and, in particular, it deſerves to be examined, whether the juice be of a gummi-reſinous nature. Some experiments, he tells us, clearly prove, that it is not entirely of a gummy nature, ſince it is capable of being diſſolved in arrak.

Among

Among the natives of India, this violent poiſon is employed for the puniſhment of criminals condemned to death, and likewiſe for poiſoning the weapons which they employ in war. But, notwithſtanding this, even in its crude ſtate it is ſaid to be employed as an antidote againſt other poiſons, both when applied externally, and likewiſe when taken internally. It is particularly uſed under the form of plaſter, againſt the bite of poiſonous inſects. It is alleged quickly to allay the pain, and extract the poiſon ſooner than any other remedy. A pill, alſo formed by mixing it with the pulp of ſome fruits, is ſucceſsfully employed in caſes of obſtinate ulcers, and cutaneous eruptions. This poiſon, reduced in ſtrength, is uſed in killing deers and other animals; and their fleſh, when thus killed, is ate without any inconvenience.

When the Dutch firſt carried on war againſt thoſe Indians uſing the Boa upas, they were obliged to guard againſt wounds, by garments which the weapons could not pierce. But, in proceſs of time, ſeveral antidotes, the refuge of the Indians themſelves, were detected. The bulbous root of the Crinus aſiaticus being chewed,

chewed, and the juice ſwallowed, violent vomiting is excited, by which the poiſon is ſaid to be expelled. For extinguiſhing the violent heat, the juice of the Melopepo is poured into the wound, and a portion of it ate. The bark of the Ficus racemoſa, and of the other figs, bruiſed and chewed, is ſucceſsfully applied to the wound. But a ſtill more powerful antidote than any of theſe, is a tree yielding a milky juice, which the Macaſſerians call Pule or Rite; the footſtalks of which applied to the wound are ſaid to extract the whole poiſon. The moſt certain of all the antidotes, however, is the root of the Mungos or Ophiorhiza, uſed either externally or internally. From the conſideration of theſe articles, it appears, that the ſucceſsful remedies are either of an acrid or a refrigerant nature.

Our author concludes with obſerving, that although there be no doubt of the highly poiſonous nature of the tree, to which the Indians give the name of Boa upas, yet that no credit is to be given to various ſuperſtitious opinions propagated with reſpect to it, particularly by ſome of the artful Mahomedan prieſts; ſuch as, that no tree, ſhrub or graſs, will

will grow within ten or twelve miles of it; that for the ſame ſpace round it, neither man, nor any other animal, nor even fiſh in the waters, can live; and finally, that it was produced by the advice of the prophet Mahomet, as a puniſhment for the ſins of mankind.

III.

Diſſertatio Medica de Caryophylis aromaticis. Auctore Herman. Rud. Haſt, *M. D. Præſide Carol. Pet. Thunberg.* 4to, Upſaliæ.

THE article which is the ſubject of the diſſertation now before us, has been long known both in medicine and in cookery. By the elder Linnæus, the plant producing it, was conſidered as conſtituting a particular genus, to which he referred only one ſpecies; and this he diſtinguiſhed by the title of Caryophyllus aromaticus. Upon his authority, the ſame botanical name is given it in the Pharmacopœias both of the London and Edinburgh colleges, and in all the other Pharmacopœias of modern date. But in the treatiſe before us, we are favoured with a more full and accurate deſcription of this plant, than had before, we believe, been communicated to the public.

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In place of referring this plant to the claſs of Polyandria, as Linnæus had formerly done, Dr Haſt deſcribes it as being a ſpecies of the Eugenia, which belongs to the order of Icoſandria. He diſtinguiſhes it from the other ſpecies, ſix in number, which were formerly referred to that order, by the title of Eugenia caryophyllata. And we ſhall here preſent our readers with the deſcription which he gives of it, in his own words.

EUGENIA CARYOPHYLLATA: foliis integris, panicula trichotoma, decompoſita.

ARBOR, elegans magnitudine pruni ceraſi; trunco recto; cortice glabro; ligno duro, cinereo, gravi.

RAMI, virgati, erecti, ramuloſi.

FOLIA, oppoſita, decuſata, petiolata, elliptica, integra; ſupra viridia, nitida; ſubtus pallidiora, parallelo-nervoſa, digitalia.

FLORUM, panicula decompoſita, trichotoma.

CALYX. Perianthium quadripartitum; laciniæ ovatæ, obtuſæ, inflexæ, perſiſtentes.

COROLLA, tetrapetala, caduca; petala ovata, obtuſa, concava; calyce paulo longiora.

STAMI-

STAMINA. Filamenta plurima; corollæ baſi inſerta, filiformia; corolla longiora, cumque illa caduca; antheræ, globoſæ, minutæ.

PISTILLUM. Germen inferum annulo nectareo cinctum; ſtylus unicus, ſimplex, perſiſtens; ſtigmata quatuor, cruciformia.

PERICARPIUM. Drupa oblonga, initio clavata, dein ovata calyce coronata; nux ovato-oblonga.

After this deſcription of the Clove-tree, Dr Haſt next preſents us with the various ſynonimes which have been given it, not only by botaniſts of eminence, and by the different European nations, but alſo among the Aſiatics, particularly in different parts of India.

The ſpecies of Eugenia which produces the cloves, grows ſpontaneouſly in the Molucca or Clove Iſlands, as they have been called, which ly in the Indian Ocean, almoſt under the equator. But they were particularly found in one of thoſe iſlands named Mackian; from whence it is alleged, that the young trees have been tranſplanted into the other neighbouring iſlands, particularly into Amboyna,

boyna, where they are now cultivated with great induſtry and attention. But although it has been ſaid, that this tranſplantation took place only a ſhort time before the Portugueſe firſt viſited thoſe parts of India; yet, from the accounts given of the apparent age of the trees at that time, Dr Haſt concludes, that the clove-tree is a native of Amboyna, as well as of Mackian.

Before the arrival of the Dutch in thoſe parts of India, cloves were the produce of different iſlands; but, ſince their conqueſts, they are now to be met with only in Amboyna, and three ſmall neighbouring iſlands, Oma, Honioma, and Nuſſalauto: For the policy of the Dutch led them to deſtroy the clove-trees in all the other iſlands; and they ſtill carefully, every year, burn and deſtroy thoſe clove-trees which grow up ſpontaneouſly in other places in that neighbourhood. They have not, however, been thus able to prevent the introduction of the clove-tree into other places. For, in the year 1770, the French circumnavigators found plants of this, as well as of the nutmeg-tree, in New Guinea, and in one of the Molucca iſlands named Geubu. From thence

they tranſplanted it to their colony in the Iſle of France, and afterwards to that of the iſland of Cayenne in South America, where it now grows in a very flouriſhing condition.

At a very ancient period, the Chineſe trading to the Molucca iſlands, carried cloves from thence, and ſold them to the Portugueſe, by the intervention of whom they were communicated to the reſt of Europe. But after the year 1652, when the Dutch deſtroyed the trees in the other Molucca iſlands, they obtained a monopoly of this article. They then cultivated the trees with the greateſt attention in the iſland of Amboyna, where they could moſt ſecurely defend them, and collect the fruit with the greateſt eaſe. But beſides this, it was alſo found, that the trees became better by culture; as, while the branches did not riſe ſo high, the fruit acquired a greater aroma. The culture was ſo much attended to, that it has been alleged, that, in the year 1656, there were in Amboyna no leſs than 120,000 of theſe trees.

Where no care is beſtowed in culture, the clove-tree is, as it were, ſpontaneouſly propagated by four ſpecies of birds, particularly by

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a green and white pigeon, who take the ripe fruit as a food, and again diſcharge the ſeeds in the woods.

The flowers begin to appear in June; they are in full flower in Auguſt; and, for ſome months after, they ripen their fruit. At the commencement, the flowers are green; from this they become gradually yellow; and at length red. During this proceſs, the pericarpium ſwells, becomes thick, and ripens its nucleus. The collection of the cloves takes place as ſoon as the flowers acquire a rediſh colour. The earth under the trees is then cleared. Then ſome one, cautiouſly aſcending the tree, draws the tender branches towards him with hooks provided for the purpoſe, and either collects the cloves into a baſket, or throws them to the ground. The cloves thus collected are expoſed to ſmoke for ſome days, to give them a red colour: they are then dried by the heat of the ſun, and thus acquire, on their external ſurface, a blackiſh red. After being dried, they are carefully picked from the foot-ſtalks and other parts, before being weighed. The crop-time extends from October till December; and, in the iſland of Amboyna alone, upwards of two millions of pounds

have been collected in one year. The beſt cloves are thoſe of an acrid and warm taſte, and which, when preſſed, give out a fatty moiſture to the fingers.

The clove-trees give out a very ſtrong ſmell, particularly in the time of efflorescence; ſo that a headach is very apt to be excited by walking in the plantations in the months of October and November. And if any one ſleeps in a chamber in which the collected cloves are kept, ſevere headach and nauſea are the common conſequences.

From their effects upon the human body, they are repreſented as calefacient, tonic, ſtomachic, ſialagogue, and emmenagogue. They attract moiſture with great avidity, as is well known to be the caſe with pepper. On diſtillation with water, they yield a large proportion of eſſential oil; but their diſtilled oil, as imported into Europe from India, is in general mixed with an equal quantity of inſipid expreſſed vegetable oil. Oil is ſometimes diſtilled at Batavia, not only from good cloves, but from thoſe alſo which have been ſomewhat corrupted; and the oil thus obtained is of a very

very acrid and hot taſte, of a brown colour, and thicker conſiſtence.

Cloves are extenſively uſed both in India and Europe, not only in diet, but alſo in medicine. The Indians uſe cloves, mixed up with certain ointments, for rubbing their bodies. They likewiſe mix them with their tobacco for ſmoking; and they rub the diſtilled oil of cloves, weakened by a mixture with other oils, upon paralytic limbs. They exhibit this oil alſo internally, to the extent of a few drops, in caſes of flatulent colic. Among the European nations, they are more frequently uſed, our author obſerves, for dietetic than medical purpoſes. It would here be unneceſſary to mention the various uſes made of them in the former of theſe ways. But, for medical purpoſes, they are chiefly employed in caſes of languor of the ſtomach, and nauſea; and, with theſe intentions, they enter various electuaries and tinctures. In the way of chewing, they are employed to excite ſalivation: and, for allaying the pain of toothach, a ſmall quantity of the eſſential oil, dropt upon cotton, is often introduced into the tooth with advantage.

IV.

Diſſertatio Medica de Myriſtica. *Auctore* Frederico Vilhelm Radloff, *Præſide Car. Pet. Thunberg.* 4to, Upſaliæ.

THIS diſſertation, as well as that which we have juſt conſidered, treats alſo of an article which is in very common uſe. And the author introduces it, by giving the following accurate deſcription of the tree which produces the genuine nutmeg.

MYRISTICA MOSCHATA: foliis lanceolatis, fructu glabro.

ARBOR, magnitudine pyri vel ultra, cortice lævi fuſco-cinereo.

RAMI, patentes, ultimi capillares glabri.

FOLIA, lanceolata, acuminata, integra, alterna, parum nervoſa, glabra, ſupra viridia, ſubtus pallida, digitalia.

FLORES,

FLORES, in ultimis ramulis pedunculati, ſparſi, ſolitarii, monoici.

CALYX. Perianthium uniphyllum, trifidum glabrum. Laciniæ ovatæ, erectæ, breves.

COROLLA, nulla.

STAMINA. Filamentum unicum, filiforme calyce brevius. Anthera ſub apice filamenti, perforata, ſtriata.

PISTILLUM. Germen ſuperum. Stylus craſſus, didymus, brevis. Stigmata duo, acuta, brevia.

PERICARPIUM. Drupa ovata, umbilicata, glabra, unilocularis, lateraliter dehiſcens, in pedunculis reflexis pendula. Caro pallide vireſcens, tandem pallida, aſtringens. Nux maci reticulata, aurantiaca, cincta rugoſa. Nucleus rugoſus.

Beſides this ſpecies of the Myriſtica, from which the genuine nutmeg is produced, another ſpecies is, he tells us, alſo very common in India, and ſometimes uſed there, which he deſcribes under the title of the Myriſtica tomentoſa, and in the following terms.

MYRISTICA TOMENTOSA: foliis ovatis, fructu tomentoſo.

ARBOR, minus, ampla et ramoſa; ramis ramuliſque magis craſſis.

FOLIA, lato-oblonga, obtuſiuſcula, craſſa, nervoſa, ſupra viridia, ſubtus pallida, parum tomentoſa, palmaria uſque pedalia.

FLORES ad baſin ramulorum, pedunculati, ſolitarii, pedunculis brevibus, craſſis, tomentoſis.

FRUCTUS, drupa oblonga, obtuſiſſima, ſubtomentoſa.

Beſides theſe two ſpecies, Dr Radloff obſerves, that Rumphius has deſcribed and delineated ſome other trees nearly reſembling them. But as their parts of fructification are ſtill undetermined, it cannot be poſitively known whether they belong to this genus or not. Among the Indians, the Myriſtica moſchata has the name of Pala, and the Myriſtica tomentoſa, of Pala Lacki; although, in different iſlands, they have different denominations.

The Myriſtica grows ſpontaneouſly in the Molucca iſlands; but it is chiefly cultivated in Banda, and in three ſmall neighbouring iſlands, Neijra, Lontoir, and Pulo Aij. From Neijra

it is alleged that the beſt nutmegs are brought; but in Pulo Aij are the largeſt and moſt beautiful trees. In all the other Molucca iſlands, the Dutch have now deſtroyed and rooted up the trees bearing nutmeg. Dr Radloff, however, tells us, that the induſtrious M. Sonnerat found the Myriſtica growing in New Guinea. The culture of the nutmeg has not ſucceeded in the French African iſlands; but it is found to grow luxuriantly in their American ſettlement of Cayenne.

This valuable tree delights in mountainous ſituations, but requires, in ſome degree, the ſhade of other trees, that it may not be ſcorched by the heat of the ſun. They require likewiſe to be defended againſt ſea-winds with ſaline impregnations. When the trees are five or ſix years old, they begin to bear fruit; but they produce the moſt abundant crop in their eighth or ninth year. They are ſpontaneouſly propagated by the pigeons, who ſwallow the whole fruit, but digeſt only the mace and pulpy part, and diſcharge the nut. The Dutch, however, ſow the whole fruit, and tranſplant the young trees at pleaſure. But the whole care of cultivating and collecting

collecting the fruit, is carried on by their ſlaves.

The Myriſtica may be conſidered as producing fruit through the whole year, as it flowers and ripens its fruit in a ſort of gradation; but the ripe nuts are chiefly collected at three different periods of the year. The greateſt crop is collected about the end of July or Auguſt. At that time, however, the mace is thin. A ſecond crop is obtained in November, and a third in March and April. At this laſt period the thickeſt mace is obtained. The ſign of ripeneſs, is, the exterior covering obtaining a light red colour.

The fruit, when collected, is cut up with knives, and the external fleſhy part left to putrefy in the woods. The nuts, thus far cleared, are brought home, and the mace removed from them by the aid of a knife. It is expoſed to the ſun to be dried; during which proceſs it acquires a yellowiſh colour. The nutmegs alſo are expoſed to the ſun for three or four days, but are taken into a houſe every night, leſt they ſhould be hurt by the dews. The nuts thus dried, are divided into three parcels. The firſt, being the largeſt and beſt,

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are intended for the European market; a ſecond ſort is uſed in India; and the third kind is, in general, only employed for making oil. Before the nutmegs be exported, they are in general infuſed for eight days in lime-water, by which it is thought they are defended from putrefaction and from inſects.

The mace, after being well dried, is put into bags, each containing about one hundred and ſixty pounds. It is, however, in the firſt place, ſprinkled with ſea-water, leſt it ſhould become too brittle, and break into ſmall fragments.

From the nutmegs in India, two kinds of oil are prepared; an expreſſed, and a diſtilled oil. Of theſe, the diſtilled oil is rarely brought to Europe. It is of a pellucid appearance, and poſſeſſes the full aromatic quality of the nut. The expreſſed oil is obtained from an inferior ſort of nuts. The nuts, roaſted and bruiſed, are ſubjected to preſſure, till a thick oil, nearly of the conſiſtence of melted butter, is obtained from them; and it becomes ſtill thicker after being kept for ſome time in the ſquare veſſels into which it is received from the preſs.

From

From the mace, when bruiſed and heated, an oil is alſo obtained, of a rediſh colour, and a fatty and bitteriſh taſte, but without exciting any great ſenſe of heat in the mouth. From about ſeventeen pounds of mace, half a pound of this oil is obtained.

The Dutch in India ſometimes preſerve, under the form of a condiment, with ſugar, the fruit taken from the tree before it be ripe. For this purpoſe, after being picked from the tree, they are boiled in water, then pierced with a needle, and afterwards macerated for eight or ten days in freſh water frequently changed, till the whole bitterneſs be removed from them. After this, they are put into a ſolution of ſugar, which, for eight days, is to be every day poured off from the nuts, heated, and then again added to them. They are then boiled in this ſyrup, and afterwards preſerved in glaſs veſſels properly ſhut.

When it is conſidered that the Myriſtica is a tree yielding a bloody juice, and highly aromatic, it is not wonderful that it is not entirely free from all ſuſpicion of a poiſonous quality, although, when prudently exhibited, it is uſefully employed both for dietetical and medi-

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cal purpoſes. It has however been demonſtrated, by ſome melancholy examples, that the halitus, both of the tree and of the fruit, have not only been hurtful to thoſe imprudently expoſed to them, but have even induced death. Several examples are mentioned by Rumphius, of fatal effects, not only from eating the nuts, but alſo from ſleeping under the tree. From too large a doſe of theſe nuts, there is induced oppreſſion at the breaſt, difficult reſpiration, intenſe thirſt, headach, vertigo, and fatal apoplexy.

With regard to the medical uſe of nutmegs, Dr Radloff obſerves, that they were introduced by the Arabian phyſicians, and are firſt mentioned by Avicenna. They have been long conſidered as uſeful for promoting digeſtion in weak ſtomachs; and, when prudently uſed, are often productive of advantage both in bloody and ſerous diſcharges. In caſes of diarrhœa and dyſenteria, toaſted nutmeg, with red wine, or any ſimilar vehicle, is often uſed with advantage. They have alſo been found uſeful againſt nauſea, vomiting, and cough, particularly with pregnant women.

From

From the external uſe of the nutmeg, or of its oil, the ſame danger is not to be apprehended as from their internal uſe. In India, the expreſſed oil is often employed with advantage, under the form of friction, to paralytic limbs: and in Europe, it is often applied to the umbilical region, to allay violent gripes, or evacuations of the primæ viæ; and, when rubbed upon the temples, it has been ſaid to excite ſleep. The eſſential oil, as well as a tincture from the nutmeg, is often ſerviceable in weakneſs of the ſtomach; and nutmegs, preſerved with ſugar, are alſo uſed with the ſame intention. The wood of the tree is not unfrequently, in India, employed in houſe-building, and for other œconomical purpoſes.

The fruit of the Myriſtica tomentoſa, alſo, although of an inferior quality, is often, our author obſerves, employed for the ſame purpoſes as the genuine nutmeg.

V.

V.

Diſſertatio Medica de Nutrimento Corporis ſuperfluo, ut vera Arthritidis cauſa. *Auctore* Alberto Julio Segerſtedt, *Præſide Joh. Guſt. Acrell.* 4to, Upſaliæ.

THE author of the diſſertation before us, ſets out with obſerving, that if we want to raiſe practical medicine from the errors of empiriciſm to the dignity of philoſophy, we muſt, with aſſiduity, endeavour to inveſtigate the proximate cauſes of diſeaſes, or thoſe ſtates of the animal machine, which, when preſent, give riſe to a particular diſeaſe; when abſent, remove it. As, in other ſciences however, ſo alſo in that of medicine, truth is to be ſought for in a labyrinth of errors; and, from the earlieſt ages to the preſent time, opinions, ſingular and inconſiſtent with the laws of nature, have been adopted even by eminent men.

For

For the truth of this aſſertion, he appeals to the different opinions which, even among the moſt eminent moderns, have been adopted with regard to the proximate cauſe of the gout. The defective knowledge of anatomy and phyſiology among the ancients, may be ſome apology, he obſerves, for the opinions of Hippocrates, referring gout to a putrid bilious humour; of Paracelſus referring it to inflamed ſulphur and the like. But, even with all the knowledge of modern times, the diverſity of hypothetical opinions propoſed by Strack, Penſart, Coſte, Cullen, and others, clearly evince, he thinks, that nothing certain is yet eſtabliſhed upon this ſubject. Whether he himſelf, however, has been more ſucceſsful, the candid reader muſt determine, after an attentive examination of the obſervations and arguments which he here employs, with the view of eſtabliſhing his own hypotheſis.

In endeavouring to unravel ſuch intricate phænomena of nature, as the cauſes of diſeaſe in general are, it is neceſſary, he remarks, to have conſtantly before our eyes the laws of nature; to obſerve, with aſſiduity, the phænomena reſulting from occaſional cauſes; and carefully

carefully to mark thoſe inconveniencies in the animal œconomy which take place. When attempting to inveſtigate the nature of gout, according to theſe rules, it is firſt, he obſerves, neceſſary to conſider the habit of body moſt liable to this diſeaſe, or, in other words, its prediſpoſing cauſes; and then to attend to thoſe particulars which are generally admitted to be occaſional cauſes, and to the effects which they produce in a body prediſpoſed. From reflecting on theſe particulars, a proximate cauſe has occurred to our author, very different from that propoſed by any other writer, and which, he thinks, affords a ready explanation of all the phænomena of the diſeaſe.

His opinion is, that the proximate cauſe of gout is to be ſought for in the ſuperfluous nouriſhment of the body; a greater quantity of nutritious juice being prepared than is neceſſary for its ſupport, and for the ſupply of thoſe parts which are daily loſt, and which, at the ſame time, cannot be conveniently diſcharged. This nutritious juice, however, he is ſo far from conſidering as being in any degree in an acrimonious or depraved ſtate, that he looks upon it as being perfectly homogeneous to our

ſyſtem, and well fitted for nouriſhing it at another time, or with another condition of the body. In attempting to eſtabliſh this new theory, he claims the candid indulgence of the reader; which he rather expects, from the conſciouſneſs that, when he differs from commonly received opinions, he is much more actuated by the deſire and love of truth, than of novelty.

Although the gout has been accurately deſcribed by different writers; yet, as it is often not very eaſy to diſtinguiſh it from other painful diſeaſes, Dr Segerſtedt thinks it may not be improper to premiſe an accurate definition of it. Arthritis, he defines in the following terms: "Morbum febrilem cum dolore inflammatorio juncturas præcipue artuum occupante, per intervalla invadentem, cum ventriculi et internarum partium affectionibus alternantem, et ſine externa cauſa evidenti ortum." By theſe marks, he thinks that it may be eaſily diſtinguiſhed from other painful diſeaſes, and particularly from acute or chronic rheumatiſm, with which it is often confounded; for rheumatiſm very generally

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ariſes from an obvious cauſe, particularly from the action of cold.

When he is here to derive the origin of gout from ſuperfluous nouriſhment, he thinks it neceſſary to begin, by conſidering the increaſe and daily ſupport of the body. When man, beginning from an almoſt inviſible germ, is to arrive at a determined bulk, it is neceſſary that he ſhould obtain particles from thoſe bodies which are placed around him. Nutritious juice, however, is not only neceſſary for the increment of the body, but alſo for repairing the daily waſte, both of the ſolids and of the fluids. There is therefore a daily appetite both for food and drink; and from theſe is prepared a liquor, which is firſt mixed with the blood, and afterwards ſo united with the ſolids of the body, as to partake of life.

Food is taken either from the vegetable or animal kingdom. Vegetables, our author thinks, nouriſh the body, from containing a ſaccharine principle. They do not, however, he imagines, afford ſo much aliment as animal food, which is more homogeneous to our na-

ture, and more readily converted into nutritious humour.

Phyſiology teaches us, that nouriſhment is conveyed by the ultimate arteries to every different part of the body; and there, by a peculiar power of nature, which has been termed the niſus formativus, it inſinuates and coaleſces. But as this action, beginning from the earlieſt periods of life, tends to the increaſe of the body; ſo alſo, both for forming the appearance of the body, and for removing all that matter which, by the law of change, grows old, human nature exerts alſo another action, by which the elementary particles, either rubbed off or ſuperfluous, are removed and expelled from the body. This, again, has been termed abſorption; and, although not unknown to the ancients, yet it has been more fully illuſtrated by phyſiologiſts of modern times. As, however, it is evident that health and life depend on a neceſſary quantity of nouriſhment, a fault, either with reſpect to too ſmall or too great a quantity, muſt neceſſarily induce various affections.

The nouriſhment of the body may be ſtyled ſuperfluous, when that portion is not abſorbed from

from the ſolids, which is either equal to the difference between the appoſition and increaſe while growth continues, or, after the growth is finiſhed, equal to the whole appoſition. But this abundance may ariſe, either where the nutritious juice is prepared in too great quantity, or where the abſorbents fail in the diſcharge of their duty; or, finally, where theſe two cauſes are conjoined, which, our author thinks, is not unfrequently the caſe. That morbid affections may ariſe from thence, any one, he thinks, will readily perceive. But Gout, which is juſtly placed at the head of the painful diſeaſes, which, quickly breaking down the vigour of life, produces troubleſome old age, and renders the better ſort often moſt miſerable, clearly, he thinks, ſprings from this root. To prove this, he firſt proceeds to make ſome obſervations on thoſe cauſes of gout which are univerſally admitted by medical writers, and then to treat of the phænomena of the diſeaſe, and of the explanation of theſe phænomena.

The prediſponent and occaſional cauſes of gout are, he obſerves, ſo nearly connected, that they cannot, with advantage, be diſtin-

guiſhed from each other. He proceeds, therefore, to make a few obſervations on the chief of them.

The *firſt* cauſe, of which he takes notice, is the age at which this diſeaſe occurs. He conſiders it as much in favour of his opinion, that Arthritis rarely attacks any one till the body arrives at full maturity. It commonly begins between the thirty-fifth and fortieth year; and, as he has afterwards occaſion more fully to mention, almoſt only attacks men. The bodies of men, at this period, are much changed; for the growth of the body, both in length and thickneſs, is now finiſhed, and the powers both of mind and body may be conſidered as at their higheſt perfection. The arterial ſyſtem, which till now was tender, lax, and extenſile, becomes more denſe, firm, and narrow. That plethora, therefore, which, in the youthful period of life, oppreſſed the arteries, from their ceaſing to be extended and increaſed, is landed upon the veins, and induces in theſe an atonic ſtate. Hence, in proportion to the quantity of blood, its return to the heart is more ſlow; and thence follow, enlargements of the veins, hæmorrhoids,

affections

affections of the liver, and the like. If, however, at this time, the quantity of food be not diminiſhed, and if the powers of concoction remain entire, the nutritious fluid will be prepared in the ſame quantity as in the youthful period of life; and as no part of it is now expended on growth, it muſt be more abundant than is conſiſtent with health. Hence, he contends, it follows, that at no period is the human body more diſpoſed to Polychylia, or the real cauſe of gout.

The *ſecond* cauſe of gout, which Dr Segerſtedt mentions, is the circumſtance of ſex. Arthritis, he obſerves, chiefly occurs with men. It rarely attacks females, unleſs the make and appearance of their bodies approach ſomewhat to that of men, and after they are ſo far advanced in life, that the menſtrual flux has ceaſed. Women, he obſerves, are not eaſily affected with venous plethora, or thoſe other inconveniencies which reſult from ſuperfluous aliment; and if fulneſs at any time occurs, it is readily carried off by menſtruation, or other functions peculiar to the female ſex. Eunuchs and effeminate men, whoſe bodies approach more to thoſe of females than of

males, are very rarely affected with gout. Men of genius, and of lively parts, are frequently ſubjected to this diſeaſe, which, our author thinks, may be eaſily explained from their company being more courted, and from their being, of courſe, more engaged in entertainments, both in the way of eating and drinking.

The *third* cauſe of gout which he conſiders, is, hereditary prediſpoſition to the diſeaſe: This, he obſerves, may be juſtly conſidered as one of the moſt puzzling parts of pathology. That the diſeaſe, however, is propagated from one generation to another, and thus to lateſt poſterity, is an undeniable fact. To ſuppoſe, however, that this happens from any ſeminium ſui generis, communicated in conception to the embryo, would not be the reaſoning of a philoſopher. It is, he thinks, with much greater probability, to be ſought for in the evident ſimilitude between parents and children, which not only extends to the outward appearance, but alſo to the internal ſtructure of the body, and even to the vigour of the abſorbents. Where, therefore, there is a hereditary diſpoſition to gout, he concludes, that, with an excellent digeſtion, producing abundance of nutritious juice,

juice, a weaker ſyſtem of abſorbents is derived to the children from their parents.

Among the cauſes of gout, a luxurious diet is always enumerated; and particularly a diet of animal food, conjoined with the uſe of wine, ſpirits, and fermented liquors. Theſe liquors, he thinks, in a double way tend to promote abundance of nouriſhment; for, by ſtimulating the ſtomach, they not only excite appetite, but alſo promote digeſtion. But, as all ſtimulants, long applied to the living fibres, at length debilitate; ſo the daily liberal uſe of wine reduces the fibres to an atonic ſtate: whence the vigour of the abſorbents is diminiſhed, and their action retarded. But whatever, on the one hand, increaſes the aliment, and, on the other, debilitates the abſorbent ſyſtem, muſt neceſſarily produce polychylia, eſpecially as, here, by the uſe of ſpirits, the action of the abſorbents is not ſo eaſily excited as that of the ſtomach, on which they immediately act.

The laſt cauſe of Arthritis, of which Dr Segerſtedt treats, is the action of cold. Cold, he obſerves, exerts its ſedative power upon the veſſels, inducing atonia, and thus impeding abſorption. Hence, cooling of the feet is often

en the occaſional cauſe of a paroxyſm of gout. Hence the frequency of the diſeaſe in Spring and Autumn, when the air is cold and moiſt. Arthritic patients are in general beſt in Summer; and heat has often proved a remedy to thoſe who, after being much diſtreſſed with the diſeaſe in cold climates, have gone to India. From the ſame cauſe, alſo, he thinks we are to account for the diſeaſe rarely affecting the inhabitants of warm climates. He thinks it probable, that the action of heat is to be explained, not only from its promoting a conſtant diaphoreſis by its ſtimulant power, but alſo from its exciting the abſorbents to perform their functions.

Of the other cauſes of gout, all of which are leſs certain, he reckons it unneceſſary to make any obſervations. He thinks, however, that almoſt all of them clearly tend, either to increaſe the quantity of the nutritious fluid, or to retard the action of the abſorbent veſſels.

From the obſervations mentioned above, it is, Dr Segerſtedt thinks, demonſtrated, that all the cauſes of gout agree in producing in the body a greater quantity of nutritious matter than

than is neceſſary. And he next proceeds to ſhew, in what manner a fluid, valuable and friendly to the body, exceeding in quantity, ſhould become hurtful. The parts of this fluid being elaborated and fit for appoſition, the blood, of neceſſity, comes to be loaded with them; and ſince the body has now arrived at its full growth, and there is no room for further depoſition, this fluid begins to diſtend the veins, particularly of the ſyſtem of the vena portarum, which eaſily yields to impulſe. Hence various affections firſt take place in the abdomen; ſuch as hæmorrhoidal efforts, and the like. And at this period the foundation is often laid for diſtreſſing, and even fatal diſeaſes; ſuch as indurations of the liver, with their conſequences, jaundice, dropſy, and the like. From theſe, however, the patient is often delivered by the occurrence of gout; the ſuperfluous nouriſhment being determined from organs of importance to the extremities. In this manner, he is affected with pains wandering through almoſt every joint of the body, and known by the general appellation of Arthritis vaga.

Theſe

Theſe pains, our author thinks, ariſe from the nutritious juice circulating through the body, exerting, although in vain, an effort to coaleſce with the ſolids. Hence it neceſſarily follows, that the veſſels are diſtended, and the nerves much irritated. This he ſuppoſes to happen in the ſame manner as thoſe pains which occur with infants tending to a ſtate of puberty, which in every reſpect reſemble gout, and which, he thinks, proceed from no other cauſe than abundance of nouriſhment, when the appoſition is diminiſhed. At this period, alſo, the viſcera of the body are not entirely free; for the ſuperfluous nutriment often affects an internal part, before weakened by any accident. Thus, from affecting the head, it gives riſe to Cephalagia, Vertigo, and Hemicrania: In the Breaſt, to Coughs and Aſthma; and in the Abdomen, to Anorexia, Soda, Colica, Vomitus, Diarrhœa, and the like.

In parts of a delicate ſtructure, this fluid is ſometimes obſerved to be depoſited, and to coaleſce, diſturbing the functions, and producing a diſeaſe which cannot be remedied. Not unfrequently, alſo, it is, with remarkable re-

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lief to the patient, diſcharged by ſome evacuation; ſuch as, vomiting, but more frequently diarrhœa: and the patient continues eaſy till a new collection of ſuperfluous nouriſhment produces the ſame inconveniencies as before.

After theſe obſervations on the Arthritis vaga, he next proceeds to conſider that form of Gout, in which the ſuperfluous nouriſhment at one time affects the internal parts, and at another is driven to the external parts, and recurring, as it were, at ſtated times, attacks certain members. This, again, has the name of the Fixed, or Regular Gout, and has had the appellations of Chiragra, Gonagra, or Podagra, according to the place in which it is ſeated. He ſuppoſes the ſuperfluous nouriſhment, in the method already mentioned, to affect the ſtomach and inteſtines; and, by the ſtimulus it occaſions to theſe, not only is the function of digeſtion diſturbed, but eructation, nauſea, vomiting, coſtiveneſs, and the like, often attended with febrile commotion, announce an approaching paroxyſm of gout.

By the continuance of this ſtimulus, febrile commotions take place in the whole ſyſtem, which is followed by a diſtenſion of other parts,

parts, particularly of the venous ſyſtem, which, before a paroxyſm of gout, is always obſerved to be in a turgid and atonic ſtate. But this diſtenſion chiefly exerts its influence on parts remote from the heart; as in theſe, the return of the venous blood, leſs aided by the vis à tergo, and the action of the muſcles, is more difficult, and at the ſame time abſorption is more ſlowly performed. In the extremities of the body, therefore, the ſenſibility of which is now alſo increaſed, a new irritation ariſes, which produces inflammation, and its concomitant, pain. By this, in conſequence of the ordinary law of the ſyſtem, which difficultly admits two morbid actions at the ſame time, the diſtreſs in the abdominal viſcera ceaſes.

While this ſuperfluous nouriſhment is carried to thoſe weak places of the ſyſtem, Dr Segerſtedt ſuppoſes, that its thinner part is either carried off by a critical ſweat, or is abſorbed, leaving in the affected part, eſpecially after different attacks of gout, tophaceous concretions. Such concretions, he alleges, are obſerved in the internal, as well as in the external parts; but they are moſt manifeſt in the ſmall articulations of the feet and hands: and

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they contain a matter ſimilar to the elements of the ſolids. The body, thus freed from ſuperfluous nouriſhment, regains health, till another morbid collection of the nutritious fluid, or an accidental obſtruction of its abſorption, again produces the ſame evils as before.

From this theory, alſo, Dr Segerſtedt thinks, that the Arthritis aberrans, or that modification of it which, with wonderful celerity, paſſes from one member to another, may be readily explained. For the ſuperfluous nouriſhment, equally diffuſed through the whole body, muſt, he thinks, in the firſt place, exert its action on the moſt tender and moſt ſenſible parts. But the inflammatory action of the veſſels in theſe, being diminiſhed by atony, the effects of abundant nutriment will be ſuddenly felt in others next in debility and ſenſibility; and thus parts will be alternately affected, not without great danger.

After thus delivering his own opinion reſpecting the manner in which the different ſymptoms of gout may be explained, he next offers a few remarks on the theory which has hitherto been moſt prevalent; that, to wit, which ſuppoſes a peculiar arthritic matter to contaminate

contaminate the blood, and which is capable of exciting, in any part in which it may fix, the moſt excruciating pains. It is unneceſſary for us to ſtate the various objections which he urges againſt this hypotheſis. We may only obſerve, that he conſiders it as affording a much leſs probable explanation of the ſymptoms, than the theory propoſed above.

After thus endeavouring to eſtabliſh his theory, from the conſideration of the cauſes, and the explanation of the ſymptoms of gout, he next proceeds to make ſome remarks on the cure. If the theory which he has propoſed be well founded, from proper practice very great aſſiſtance may be expected againſt the excruciating torments of this diſeaſe. And here Dr Segerſtedt readily aſſents to the maxim of Petrarch, "Si à podagra liberari cupis, aut "pauper ſis oportet, aut ut pauper vivas." But, ſtill farther to ſhow the practical application of his theory, he proceeds to offer ſome remarks on the remedies which are commonly oppoſed to this diſeaſe.

He firſt treats of different evacuants, which may ſeem well calculated to leſſen ſuperfluous nouriſhment. Emetics, he obſerves, ſerve indeed

deed to promote abſorption from every part of the body, and evacuate from the ſtomach that acid ſaburra which is the attendant of an approaching paroxyſm; but are inadequate to the radical cure of the diſeaſe. Mild laxatives he conſiders as more uſeful, ſince they promote circulation through the viſcera, and at the ſame time evacuate abundant nutriment. Veneſection, which directly diminiſhes the maſs of blood, and of courſe the nutriment of the body, ſerves, he thinks, both to prevent and alleviate paroxyſms; but, though ſucceſsful with the robuſt, yet, with the debilitated and aged, it is hurtful, by diminiſhing the vis vitæ.

All ſudorifics he conſiders as abounding, more or leſs, with a warm ſtimulus, by which ſome degree of fever is excited. He conſiders them, therefore, as accommodated to thoſe caſes only where the pulſe is weak and ſlow; where the powers of nature languiſh, and are inſufficient for promoting the topical tumour. He looks upon thoſe as the beſt, which excite and promote perſpiration in the parts affected with gout; ſuch as, gently-ſtimulating warm fomentations, or, what are perhaps even pre-

ferable, thoſe which ſupport and retain the natural heat of the part, as flannel, furs, or the like.

The tribe of corroborant medicines, he conſiders as chiefly uſeful in conſequence of the paroxyſm ſometimes ariſing from weak abſorption. But ſince theſe articles chiefly exert their force upon the chylopoetic viſcera, and do not affect the remote abſorbents, the nutriment of the body will rather be increaſed than diminiſhed by them; and accordingly, though they may ſometimes remove or retard a paroxyſm, yet he conſiders them as increaſing the cauſe of the diſeaſe, and often, accordingly, driving the gout to the more important parts, the head and breaſt; the ſuperabundant nutriment acting upon theſe.

Among other remedies, in certain caſes, topical irritations have been directed to be applied to parts which are uſually the ſeat of gout. Theſe he conſiders as uſeful, when the languiſhing powers of nature are not ſufficient to drive the ſuperfluous nutriment from the internal parts of the body to the extremities, and when the irritability of theſe parts is ſo diminiſhed, that inflammation cannot be eaſily excited.

excited. With theſe intentions, epiſpaſtics, iſſues, ſetons, actual cautery, and the like, have been employed, and not without advantage.

The laſt particular, reſpecting which Dr Segerſtedt offers any obſervations, is diet. He remarks, that by frugality and temperance alone, this direful diſeaſe has been completely overcome. Vegetable food affords a leſs quantity of nutriment to the body than that which is taken from the animal kingdom; but it is by no means altogether free from inconvenience: for, when the diſeaſe is of long ſtanding, it debilitates too much, and is better accommodated for the prophylaxis than for the cure. Milk diet, which, from authors of the firſt eminence, has obtained the higheſt encomiums, he doubts not, may be highly uſeful to thoſe labouring under the diſeaſe at an early period of life. It is, however, he obſerves, very neceſſary, that after a milk diet is relinquiſhed, the patient ſhould live on a frugal and temperate plan; for, if he gives way to luxurious living, the worſt conſequences will ariſe. But, beſides the neceſſity of frugality with reſpect to eating and drinking,

and of the ſparing employment of thoſe practices which tend to debilitate, bodily exerciſe, and particularly frequent motion of thoſe parts in which the pain of gout is chiefly ſeated, muſt be ſtrongly recommended. Without mentioning other evidence in ſupport of this, he conſiders it as ſufficiently eſtabliſhed from the ſingle caſe of a dancing-maſter, related by Van Swieten, who, for upwards of twenty years, was twice annually affected with gout; but, urged by neceſſity, even when his pain was very ſevere, he was obliged to engage in his uſual occupation. Under this mode of treatment, however, he was much ſooner relieved from the paroxyſm, than is uſually the caſe; nor did he ever ſuffer from rigidity of the joints.

How far, after an attentive examination of this theory, the candid reader will be diſpoſed to adopt it, we cannot pretend to ſay. In our opinion, many well eſtabliſhed phænomena, reſpecting the diſeaſe, might be mentioned as very ſtrong objections to it. And, in the varied forms which this affection puts on, there are a variety of ſymptoms of which it is very difficult to give a rational explanation, either

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on this or any other theory which has yet been propoſed. We may, however, obſerve, that if the preſent hypotheſis be in any degree well founded, it will lead to a more ſimple and rational plan of cure than any other yet propoſed, with which we are acquainted. And we may alſo add, that the plan of treatment, which is at leaſt generally allowed to be moſt advantageous in the prevention and cure of gout, is not adverſe to the ſuppoſition that the diſeaſe depends on ſuperfluous nouriſhment.

VI.

Obſervations on the Pemphigus. *By* Stephen Dickſon, *M. D. Fellow of the College of Phyſicians, and one of the King's Profeſſors of Phyſic in the City of Dublin, M. R. I. A.* &c. Vide *the Tranſactions of the Royal Iriſh Academy for* 1787.

THE ſubject of theſe obſervations, is a diſeaſe which, we need hardly remark, but rarely occurs; and probably, when occurring, it has in ſome inſtances been conſidered, either as an affection entirely of an anomalous nature, or has been confounded with other diſeaſes. An attempt, therefore, to give an accurate delineation of its hiſtory, as well as to point out the moſt ſucceſsful method of cure, may juſtly be conſidered as well meriting the attention of practitioners. We are here preſented with the reſult of Dr Dickſon's obſervation, from having witneſſed ſix different caſes

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of this diſeaſe; three of which occurred in Scotland, one in England, and two in Ireland.

Dr Dickſon ſets out with obſerving, that Dr Cullen, whoſe labours as a noſologiſt have tended in no inconſiderable degree to the improvement of medicine, has claſſed Pemphigus in the order of Exanthemata, and has defined it to be a contagious diſeaſe, in which veſicles, about the ſize of an almond, appearing on the firſt, ſecond, or third day of the diſeaſe, and remaining for many days, at length pour out a thin ichor. Dr Cullen's deſcription, however, is taken from other authors, not from his own obſervation; for, as he himſelf tells us, the diſeaſe never occurred to him in his own practice; and Dr Dickſon conſiders the deſcription as in ſeveral particulars erroneous.

In the *firſt* place, he entertains doubts, whether this diſorder be contagious. He has ſeen veſicles ariſing, not only on the firſt, ſecond, or third day of the diſeaſe, but on every day of it. He has never known them remain for many days. The fluid they have contained has not in general appeared to be an ichor or ſanies, but a bland, inodorous, and inſipid ſe-

rum. And, *laſtly*, inſtead of being poured out, he has found it moſt commonly abſorbed into the ſyſtem. From all theſe conſiderations, then, he propoſes the following as an amended definition of it.

A fever, accompanied with the ſucceſſive eruption from different parts of the body, internal as well as external, of veſicles about the ſize of an almond, which become turgid with a faintly yellowiſh ſerum, and in three or four days ſubſide.

Before relating his own obſervations, Dr Dickſon gives ſome account of authentic and decided inſtances of this diſeaſe which had occurred to others. He has not been able to find any traces of it in the writings of the Greek, Roman, or Arabian phyſicians; and any thing deſcribed by Bontius, in his Medicine of the Egyptians, which can be conſidered as reſembling it, is too vague and general to warrant any concluſion.

Carolus Piſo, he obſerves, has accurately deſcribed the genuine Pemphigus, as it appeared in the caſe of Egmont de Rinach, about an hundred and fifty years ago, at Nantz. He next takes notice of caſes deſcribed by Morton, as occurring

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in London about an hundred years ago; then of thoſe obſerved by Sauvages in the hoſpital at Montpellier, about the year 1725; and laſtly, he takes notice of a caſe treated by the late Dr David Stewart of Aberdeen, an account of which was communicated to the public in the ſixth volume of theſe Commentaries.

Among all theſe hiſtories of the diſeaſe, Dr Dickſon obſerves, that no one has taken notice of an extraordinary peculiarity in this diſorder, which he obſerved in two inſtances; that the veſicles, viz. have taken poſſeſſion of the internal parts of the body, and proceeded in ſucceſſion, from the mouth downwards, through the whole tract of the alimentary canal, ſome riſing, while others decayed. The firſt caſe in which he had an opportunity of obſerving this ſingular and diſtreſſing ſymptom, was that of a woman, treated by Dr Gregory in the Royal Infirmary at Edinburgh in 1783. In this caſe, the menſtrual flux had been obſtructed for an year and a half; during which period, ſhe had been twice before ſubjected to the ſame diſorder, and on each of theſe occaſions it had ſucceeded to a vomiting of blood. Peruvian bark and wine were liberally adminiſtered

niſtered to her; and, under the uſe of theſe, ſhe recovered.

The other caſe, in which veſicles appeared to have been formed internally, occurred to Dr Dickſon in Dublin; and he preſents us with a very full relation of the different particulars which occurred during its courſe. In this caſe, he had an opportunity of examining the progreſs of the diſeaſe from its very commencement. The patient was a married woman, in the 23d year of her age, of a delicate form, and ſanguine temperament. After being for two days ſubjected to ſome febrile ſymptoms, ſhe complained, on the third, of a ſmarting, itching, and, as ſhe expreſſed herſelf, tingling, in her tongue, and through the whole inſide of her mouth. Her tongue was of a bright red colour, but dry and clean. Next day, there appeared on it a pellucid veſicle, of about an inch long, and near half an inch broad, turgid with a ſerous fluid, of a faintly yellowiſh colour. A ſmaller one, of the ſame kind, appeared on the inſide of the left cheek. The ſenſation they occaſioned, ſhe deſcribed as being ſimilar to that which ſhe had experienced before their eruption,

tion, but in a greater degree. Though her febrile ſymptoms were now abated, yet her pulſe was weak, irregular, and about ninety in a minute. In this ſituation, Dr Dickſon directed half a dram of the red Peruvian bark, finely powdered, to be taken every two hours in a goblet of wine and water.

On the fifth day, three veſicles, ſimilar to the former, appeared on her cheſt and right arm. Her other ſymptoms were nearly as before, and her medicines were continued. But, on the ſixth day, her ſtomach rejected the bark. Two veſicles appeared on her neck and cheek; her breath was fœtid; ſhe had ſome low delirium; and her pulſe was very weak. In this ſituation, he preſcribed a decoction of bark. He directed an ounce of it, having half a dram of vegetable alkali diſſolved in it, to be taken every two hours; and, immediately after that, half an ounce of the ſame decoction, mixed with ſix drams of lemon juice. On the ſeventh day, there was little change, and the ſame medicines were continued. On the eighth, the veſicles on the inſide of the mouth, and on the tongue, diſappeared; and the cuticle, which had been elevated, was ſhrivelled, and of a browniſh

browniſh colour. Deglutition was difficult, and, as ſhe ſaid, painful through the whole inſide of her throat. Her pulſe was rather ſtronger. Her medicines were continued.

On the ninth day, the cuticle on the parts formerly occupied by veſicles in the inſide of the cheeks, and on the tongue, had cracked, and was peeling off: the parts below appeared raw and ſore. Deglutition had now become ſo painful, that ſhe refuſed medicine, food, and even drink. She could not bear the ſlighteſt preſſure on the neck. A new veſicle appeared under the right ear; ſome purulent matter appeared on the back of the pharynx, the origin of which, however, was not diſcernible. Her pulſe was eighty-ſix, and nearly of the ſame ſtrength. In this ſituation, Dr Dickſon preſcribed a glyſter of warm water; and, after its operation, another of equal parts of Peruvian bark and new milk, which was ordered to be repeated four hours afterwards. At night, he ordered an anodyne glyſter, with fifty drops of thebaic tincture; and white liniment was directed to be applied to the ſores. By the tenth, the veſicles on the cheſt and right arm had diſappeared; the ſores of the tongue

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and cheek were of a darker colour, and ſeemed to be healing, and her pulſe was not ſo weak; but ſome new veſicles appeared on the abdomen. Her medicines were directed to be continued.

Her ſymptoms, on the eleventh day, continued nearly the ſame as the day before. The veſicles on the neck and cheek had diſappeared, and the cuticle on thoſe parts was ſhrivelled and cracked. And, on the twelfth, ſhe could ſwallow, though not without pain. As the injections were not now retained, they were ordered to be omitted, and the bark, in ſubſtance, to be repeated.

On the thirteenth day of her diſeaſe, ſhe vomited ſome blood along with the firſt doſe of the bark. The veſicles under the ear, and on the abdomen, had diſappeared; but ſeveral ſmall veſicles, not above the ſize of a pea, aroſe on the hypogaſtric region of the abdomen. One was obſerved on the pudendum, and two on the left thigh. As ſome bark was retained on her ſtomach, this medicine was directed to be continued, and an anodyne draught to be taken at night. On the fourteenth, ſhe had ſome looſe ſtools, mixed with blood; and

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as ſhe complained of great ſoreneſs in her belly, the diſcharge was promoted by Caſtor oil. But, on the morning of the fifteenth, ſhe had a natural ſtool, and her menſes appeared. Her medicines were ſtill directed to be continued as before.

From this time ſhe recovered gradually; and, in about a week, had no complaint but weakneſs. Exerciſe and country air ſoon completely reeſtabliſhed her health.

To the caſe thus fully ſtated, Dr Dickſon obſerves, that it would be unneceſſary to add any thing by way of comment. He only remarks, that this, as well as all the other preciſe or well atteſted inſtances which he has enumerated, are ſolitary examples, no two of them having occurred at the ſame time or place. From this, he concludes that it is not a contagious diſeaſe, but that other diſorders have ſometimes been miſtaken for Pemphigus; and that, from thence, or from ſome preconceived theory, the idea of its contagious nature has ariſen.

The nature of this diſorder, Dr Dickſon obſerves, appears to vary conſiderably as to its mildneſs or malignity. In ſome inſtances, as

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in three of the caſes Dr Dickſon has ſeen, the ſymptoms were extremely mild; but in the other three, ſtrong ſymptoms of putreſcency were manifeſted, and the life of the patient was in great danger.

With reſpect to the method of cure, he is of opinion, that the general ſymptoms of weakneſs, and tendency to putrefaction, obviouſly point out the proper treatment. When veſicles appear on internal parts, irritation muſt be guarded againſt, by opiates, demulcents, and gentle laxatives. Nouriſhment muſt be ſupplied, and Peruvian bark and wine carefully adminiſtered.

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Since the publication of the Iriſh Tranſactions, Mr Thomas Chriſtie, Member of the Medical and Antiquarian Societies of Edinburgh, has communicated to the public ſome obſervations on Pemphigus, in a letter addreſſed

dreſſed to Dr Simmons, which is publiſhed in the tenth volume of the London Medical Journal. It may not therefore be improper, here to ſubjoin ſome account of what is contained in that paper.

Mr Chriſtie, after collecting, from different ſources, what is known relative to the hiſtory of this diſeaſe; after comparing different accounts together, and interſperſing theſe with his own obſervations, adds the account of a caſe which occurred at the Weſtminſter General Diſpenſary in May 1788. And, in order to give a clearer idea of the cutaneous appearance than can be conveyed by words, he has annexed to his deſcription, an elegant coloured engraving of the right arm, on which ſeven veſicles, in different ſtages, are repreſented.

The patient whoſe caſe Mr Chriſtie deſcribes, was a ſervant-maid in the thirtieth year of her age, who was admitted to the Weſtminſter Diſpenſary under the care of Dr Simmons, on the 17th of May 1788. She had for three months been occaſionally ſubject to ſickneſs at ſtomach, and headach, attended with a ſenſe of weakneſs and laſſitude. About a fort-

a fortnight before ſhe was admitted at the Diſpenſary, the ſickneſs had increaſed, ſhe had become feveriſh, and ſome puſtules had begun to appear on the fore part of her left arm. At firſt, they had very nearly the appearance of the ſmall-pox. By degrees, they became larger, and were filled with a watery yellowiſh liquid. The exertions ſhe was obliged to make at her work, burſt them. But, after diſcharging their contents, they were often filled again in the courſe of a night: and this proceſs was repeated ſeveral times. New ones alſo appeared; and on the day when Mr Chriſtie firſt ſaw her at the Diſpenſary, ſhe had one veſicle, as large as a nut, on her right ſhoulder; one at the pit of the ſtomach; one near the point of the little finger; and about twelve on the arm. They were very ſore, and the ſkin around them was a good deal inflamed. She thought her other complaints had been a little relieved ſince the eruption began; but ſhe was ſtill weak and feveriſh; her tongue was whitiſh, and her pulſe 120.

Upon this occaſion, three grains of calomel were ordered to be taken at night, and an

ounce of Glauber's ſalt in the morning. She continued her attendance occaſionally at the Diſpenſary, for about a month; during which period, the calomel and Glauber's ſalt, with the addition of a ſmall quantity of emetic tartar, were frequently repeated. Some freſh veſicles at times appeared; but, upon the whole, her diſeaſe continued gradually to diminiſh: and, on the 27th of June, ſhe had an eruption of ſmall pimples, which, Mr Chriſtie thinks, might perhaps be conſidered as a proof of her diſeaſe being cured, as they ſhowed that the ſpecific action of the veſſels of the ſkin was changed. Her pulſe was now reduced to 88, and ſhe was free from complaint; but, at her own requeſt, the calomel and Glauber's ſalt were once more repeated. After this, ſhe took no more medicines; and, on the 4th of Auguſt, when ſhe came to the Diſpenſary to return thanks, ſhe was in a ſtate of perfect health.

As far as Mr Chriſtie could learn, no perſon in the neighbourhood was affected with pemphigus at the ſame time with this patient; nor did ſhe communicate it to any other.

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He therefore agrees with Dr Dickſon, in thinking that, ſometimes, at leaſt, it is not infectious. He obſerves, however, that the Pemphigus Helveticus, deſcribed by Dr Langhans, was extremely infectious. And this circumſtance, he thinks, may lead us to a new diviſion of the diſeaſe, into the two ſpecies of Pemphigus ſimplex, and complicatus; both of which, but eſpecially the laſt, ſeem to vary much with reſpect to mildneſs and malignity.

VII.

The Hiſtory of an Ovarium, wherein were found Teeth, Hair, and Bones. *By* James Cleghorn, *M. B.* Vide *Tranſactions of the Royal Iriſh Academy for* 1787.

GENERATION is a ſubject ſo myſterious in itſelf, that any fact which may ſerve to throw light upon it, cannot be conſidered as unimportant. Dr Cleghorn is of opinion, that no appearances have tended ſo much to elucidate this ſubject, as the formation and growth of fœtuſes without the womb; and he thinks none are ſo deſerving of particular attention as thoſe which have have been formed in the ovarium. He here preſents us with a very ſtriking example of this kind, which exhibits ſeveral particulars, equally curious and intereſting.

Before, however, relating the hiſtory of the caſe, which fell under his own inſpection, he ſtates,

ſtates briefly the moſt remarkable inſtances of the ſame kind which have been related by ſome other authors; particularly ſome inſtances in the Memoirs of the Royal Academy of Sciences of Paris, in the Journal de Medecine, in the Edinburgh Medical Eſſays, in the writings of Ruyſch, Baudeloque, and others. But among all the inſtances that have been recorded, one of the moſt extraordinary caſes is that, of which he here gives us an account. The firſt part of this account, did not, indeed, fall under his own obſervation; but he had it from authority which he had little reaſon to doubt. And, after relating the information he received from others, he gives an accurate deſcription of the parts of generation in his own poſſeſſion, illuſtrated by an elegant engraving.

The woman who is the ſubject of this paper, died in the fiftieth year of her age, about ten days after being tapped for a tumour, which was ſuſpected to be a dropſical collection in ſome part of the abdomen. When in health, ſhe was a tall and well made woman; and ſhe had born a child about twenty-five years before her death. She continued in

good health for ſeveral months after her delivery, and nurſed the child. While on the breaſt, it was ſeized with violent and frequent convulſion fits; but, after ſome time, it recovered ſo as to be perfectly healthy. But, from this period, the woman herſelf was obſerved to decline in her health, and ſhe continued weak and ſickly for a year or more. At laſt, however, ſhe regained her uſual good ſtate of health in every circumſtance, excepting that her menſes never again appeared, and her belly increaſed in ſize as if ſhe had been big with child.

Notwithſtanding this appearance of pregnancy, ſhe was known to walk lightly, to labour hard, and her legs were never obſerved to be œdematous. She appeared, in other reſpects, to be in perfect health, and never once complained of any uneaſineſs, excepting the inconvenience of carrying ſo large a belly. In this ſtate, ſhe remained for upwards of twenty-three years; at which time ſhe was adviſed to be tapped, and ſubmitted to the operation. Upon withdrawing the canula, a conſiderable quantity of viſcid matter flowed out, mixed with hair and bits of fat. But, in

place

place of obtaining any relief, ſhe died ten days after the operation. The gentleman who performed the operation, opened her body after death. Upon cutting into the abdomen, the firſt thing which preſented itſelf to view, under the peritoneum, was a large ſeemingly muſcular ſac, which extended acroſs the abdomen. Upon opening this ſac, it was found to contain balls of a fatty ſubſtance, mixed with hair, and likewiſe with ſeveral bones. The operator, ſtruck with the ſingularity of the appearance, cut out entire the bladder, rectum, and uterus with its appendages, together with ſome portion of the labia pudendi and podex. Theſe parts were given to Dr Cleghorn; and he here preſents us with a very particular and accurate account of the appearances. As the nature of our work does not admit of engravings, we cannot convey to the reader the ſame accurate idea as he would obtain from the original. But we preſume, that from the following account, the intelligent reader will have no difficulty in underſtanding the principal morbid affections which here took place.

The bladder appeared to be of the natural ſize, and, when laid open, ſhewed no morbid

affection. The vagina, os tincæ, and uterus, were in a perfectly natural ſtate. On the left ſide, the Fallopian tube, with the ovarium and other appendages of the uterus, were alſo in a natural condition. On the right ſide, the Fallopian tube and round ligament were very evident at the part next the uterus; but, at the other extremity, they were attached to a large bag or cyſt, which, there could be no doubt in concluding, was the ovarium of that ſide enlarged to an immenſe ſize. To obtain ſome idea of the capacity of this bag, Dr Cleghorn endeavoured to fill it with water, and concluded, that it would, if fully diſtended, hold from ten to twelve quarts. But, upon laying open this cyſt, its internal parts were what chiefly deſerved notice. A conſiderable portion of the internal ſurface was even and ſmooth; but, at its lower part, it was made very irregular and rough, by a great number of ſmall pouches of different ſizes, and ſeveral piles of bone.

The contents of theſe pouches were as various as their ſize was different. Some contained a gelatinous kind of mucus, while others contained a cretaceous matter. In ſome, he

he found a browniſh black ſtuff like bone, which had been melted down, and corrupted by putrefaction. In others, the contents reſembled fat, and felt like it when rubbed between the fingers. In ſome were hairs; in others ſmall fragments of bones. Some were attached by ſmall peduncles; others adhered by their coats. The bones were very irregular; nor could it be ſaid that they reſembled, in every reſpect, any one bone of the ſkeleton, although ſome of them had a good deal the appearance of being portions of the jaws. One in particular reſembled the os maxillare ſuperius, having ſomething like a palate plate, an alveolar proceſs, and having teeth incaſed in it. There were other bones of conſiderable ſize; ſome round, ſome flat; but none of them could be likened to any of the bones of the ſkeleton. They were all covered with a tough, tenſe white membrane, which adhered very firmly to them, and much reſembled the common perioſtium. This was again covered by a production of the internal coat of the cyſt; and, upon feeling the bones through this thick coat, Dr Cleghorn once imagined that the flat ones were ribs, and that the round ones

were

were the ſkeleton of a fœtus's leg and foot, as there was a joint. But, upon laying them bare, he could not diſcover any reſemblance to theſe bones. As to the teeth, they were perfectly regular in all their parts, having caſes and fangs, and being almoſt all of them encaſed in an alveolar proceſs and ſockets. They were forty-four in number, and the greater part were diſtinguiſhable into ſome of the ſpecies. There were eight inciſores, three canini, four bicuſpides, and ſixteen molares; the others were doubtful. Several of them were of the firſt crop of teeth; while the greater number were evidently ſuch as are found in the jaws of perſons of fourteen or fifteen years of age. Sixteen of theſe teeth were encaſed in the bone formerly mentioned, reſembling the maxilla ſuperior; the others were ſcattered without order, excepting that it did not happen that teeth of different ſpecies were cloſe one to another. But ſome of the inciſores were in ſo cloſe contact, that their fangs even grew together. In one part of this ſac, there was a diſtinct cell, in which was contained a quantity of hair, reſembling the hair of the head, and which was matted

matted into a cake by ſome matter, probably ſuch as filled the cavity of the ſac. Some little tubercles which lay in the ſac, were alſo beſet with ſmall hairs.

After giving an accurate account of the particulars of this extraordinary caſe, Dr Cleghorn next lays before the reader, two opinions which have been offered with the view of explaining ſuch phænomena. Ruyſch, in his Adverſaria Anatomica, treating of Atheromata, delivers it decidedly as his opinion, that tumours of this nature, whether found in the ovarium or not, will give riſe to the growth of hair, teeth, and bones. In proof of this, he relates a very uncommon caſe indeed, of a young man whoſe body was examined after death, and in whoſe ſtomach there was found an Atheroma, within which was a bundle of hair like the hair of one's head, and likewiſe a piece of bone, of an irregular ſhape, about the ſize of an almond. There were alſo four real dentes molares, ſuch as are found in the human jaw; two of theſe teeth grew together, while two others were ſeparate. But, what was ſtill more aſtoniſhing, the thigh of a ſmall African deer was found in the ſame

ſac,

ſac, or ſomething exactly reſembling it, excepting that its hoof was not cloven, but covered with a nail at its end, like a human finger. In oppoſition to this caſe, however, Dr Cleghorn obſerves, that it is only related by Ruyſch on the authority of others. And he, with great juſtice, adds, that even granting that hairs and bones were really found in Atheroma's of the ſtomach, it is more probable that theſe ſubſtances were ſwallowed accidentally, and generated the Atheroma, than that they were generated in ſuch a tumour.

In oppoſition to the opinion of Ruyſch, Dr Cleghorn ſtates another, which is ſupported by the authority of the ſagacious Aſtruc. In his treatiſe on the diſeaſes of women, he obſerves, that beſides the common incyſted tumours found in the ovaria, as well as in other parts, there is one peculiar ſpecies formed there by the putrefaction of embryo's, which have been there conceived, and have periſhed. When ſteotomata and atheromata, with bundles of hair in them, are found in the ovaria, he ſuppoſes that they have been parts of a fœtus which has died there, and that the hairs have continued to grow after its death, as

they

they are known to do in dead bodies; and he imagines that teeth may grow in the ſame manner. It is not however, neceſſary, Dr Cleghorn thinks, to give the teeth and bones a kind of vegetable growth, ſuch as hair is ſuppoſed to have, in order that the teeth ſhould grow even to the maturity of adult bones: he imagines that an inoſculation of blood-veſſels may take place between the membrane which covers the bones, and the coats of the ſac. In this manner, he thinks the bones will be ſupplied with blood, and will grow. And he conſiders this opinion as ſupported by the numerous obſervations, which prove, that parts of animals which have been ſeparated one from another, and afterwards brought into contact, do frequently unite, and, by their veſſels inoſculating, have a free circulation of fluids through them.

In the caſe Dr Cleghorn has deſcribed, it would appear that the patient had borne the tumour and its contents for the ſpace of twenty-four years previous to her death. And he thinks it a very curious ſubject of enquiry, How long Nature will preſerve a fœtus in its mother's belly, without creating any other inconvenience

convenience than what ariſes from carrying about the burthen. He quotes ſeveral remarkable inſtances of this kind; particularly one, laid before the Royal Society of London by Dr Middleton, of a woman who carried a child in her belly for ſixteen years, and during that time bore four children, all alive.

VIII.

VIII.

Obſervations et Experiences ſur l'Analyſe de la Salive du Cheval. *Par* M. Hapel de la Chênaie, *Profeſſeur attaché à l'Ecole Royale veterinaire de Paris.* Vide *Hiſtoire de la Société Royale de Médecine, Tome IV.* 4to, Paris.

IN the eſſay before us, the author introduces his ſubject with ſome obſervations on ſaliva in general. Among the animal fluids, there are few, he obſerves, of greater importance in the œconomy. It is ſo immediately uſeful in the function of digeſtion, that organs of a very conſiderable ſize are found for ſecreting it, in quadrupeds the moſt diſtant from the human ſpecies. Theſe organs are of themſelves of ſuch extent, that phyſicians have taken the opportunity of eſtabliſhing evacuations by means of them, which are found to be of great utility.

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As it is from large animals only, that a conſiderable quantity of this fluid can be collected, Mr Hapel was induced to undertake ſome experiments with the ſaliva of the Horſe. And he tells us, that Mr Chabert cheerfully agreed to ſacrifice a horſe to the trials which he propoſed to make.

After having laid bare the canal of Steno, he made a longitudinal ſection in it, ſimilar to that which is made in blood-letting. The ſaliva was inſtantly poured forth, even with a jet; but the diſcharge very ſoon ſtopped, and no more could be obtained, but from making the animal eat. On that occaſion, it came out afreſh; ſo that, in the ſpace of twenty-four hours, he eaſily procured twelve ounces. And it was upon ſuch a quantity obtained, for five or ſix days, that he made the experiments of which an account is here given. By this means, he was able to operate upon pure ſaliva; which, he obſerves, is a very different fluid from the ſaliva found in the mouth, which has been mixed with mucus from the glands and membranes lining that cavity. This difference between ſaliva immediately obtained from the parotids, and that had from the mouth, is chiefly,

chiefly, he obſerves, demonſtrated by the preſence of an ammoniacal ſalt in the latter, which is not to be found in the former.

He begins, by giving an account of the phyſical and chemical properties of pure ſaliva. Pure ſaliva has a diſtinctly marked ſaline taſte. To the touch, it has a ſoapy feel. Its ſmell, though weak, is diſagreeable and peculiar. Its colour is a greeniſh yellow. When it comes immediately from the gland of the animal, it appears very fluid; but, when kept for a ſhort time, even in a temperate atmoſphere, it acquires a thicker conſiſtence, by the evaporation of water. From different experiments with the aréomètre, conſtructed on the principles of Mr Baumé, and with the hydroſtatic balance, Mr Hapel concluded, that it was heavier than diſtilled water; but, from finding that a phial, which contained an ounce of diſtilled water, did not weigh ſo much when filled with ſaliva, and that the ſaliva, like oil, ſwimmed upon the ſurface of water, he was led to a different concluſion.

Pure ſaliva, ſubjected to the action of the air-pump, did not ſeem to diſengage any air; but, when agitated in the air, it became very

frothy; and, when afterwards introduced into the receiver of an air-pump, from a very few ſtrokes of the piſton, it loſt the air which it had acquired by agitation.

Pure ſaliva, after being for five days expoſed to the open air, manifeſtly obtained a putrid taint; but, when kept for about ſix weeks, it was found to be completely dried, under the form of a black earthy ſubſtance. Saliva, introduced in a ſmall glaſs veſſel, under the receiver of an air-pump filled with pure air, was not altered for ſeveral weeks; but, at laſt, putrefaction was manifeſt. In theſe experiments, it was never found to ſhew any acid fermentation prior to putrefaction.

His next ſet of obſervations are made on ſaliva expoſed to different degrees of heat, in open and in cloſe veſſels. Saliva expoſed to heat in a water-bath, ſoon loſt its tranſparency. A quantity of light flakes were formed in it. Theſe at firſt ſwimmed on the ſurface, but were afterwards depoſited at the bottom of the veſſel; the liquor above them being then extremely fluid. The heat being continued, diſtillation was produced. The tranſparent water which was thus obtained,

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was neither alkaline nor acid; it, however, had a diſagreeable taſte, and unpleaſant ſmell. But, when it was kept for about fourteen days, it gave out a ſmell ſomewhat reſembling amber; a circumſtance which Mr Fourcroy had obſerved of the water obtained by diſtillation from ſome other animal ſubſtances. From eight ounces of ſaliva which were employed in this diſtillation, Mr Hapel obtained ſeven ounces ſix drams of water; and the matter contained in the retort being collected with care, weighed one dram thirty-ſeven grains. The loſs, thirty-five grains, was attributed to the air which had been diſengaged during the diſtillation. The reſiduum, in this caſe, reſembled mucilage in a dried ſtate; and, when it was expoſed to the air, it attracted humidity.

Having expoſed this reſiduum to the action of a naked fire, in a glaſs retort, provided with a proper apparatus, he obtained a yellowiſh-coloured water, highly alkaline, weighing one dram ſix grains; a yellowiſh oil, to the extent of four grains; ſix grains of cryſtallized volatile alkali; ſix grains of thick empyreumatic oil; ſix grains of inflammable gas

and aerial acid. A charcoal remained in the retort, weighing eight grains, and retaining the ſhape of the dried ſaliva before it was ſubmitted to the action of fire. All theſe weights taken together, amounted to one dram thirty-ſix grains; the complete weight of the matter employed in this diſtillation.

Mr Hapel next treats of the action of water, and of ſaline matters, upon pure ſaliva. When put into diſtilled water, it at firſt ſwimmed on the ſurface, but, by agitation, ſeemed to be diſſolved in the water; upon which it loſt its taſte, colour, and conſiſtence. But this ſolution gave a green colour to tincture of violets. The ſpirit of wine precipitated from it the coagulated ſaliva; but the coagulum thus produced, was found to be ſoluble in water.

The ſaliva, thrown into boiling water was found to be in part coagulated, and this coagulum was not again ſoluble in water. Terra ponderoſa, calcined magneſia, and lime, ſeparately triturated with ſaliva, have not diſengaged any odour marked with volatile alkali. Fixed cauſtic alkali, alſo, produced no ſmell; but the volatile cauſtic alkali augmented the fluidity of ſaliva.

Diluted

Diluted vitriolic acid, poured upon the ſaliva, produced a coagulum, which was precipitated under the form of a thick pellicle. This precipitate, at firſt of a yellowiſh brown, acquired, upon ſtanding, a much deeper colour; and the liquor, filtrated and evaporated, furniſhed ſome cryſtals of Glauber's ſalt. The nitrous acid rendered the ſaliva very mucous. The precipitate, which was ſoon after formed, was of a leſs deep colour than the former, but acquired alſo a darker tinge from reſt. The marine acid thickened the conſiſtence of ſaliva; and ſoon after a quantity of yellowiſh filaments were precipitated. The acid of ſpar, united to ſaliva, rendered it mucous, and produced a browniſh precipitate. A ſolution of the cream of tartar, poured upon ſaliva, altered its conſiſtence a little, but very ſlowly; and diſtilled vinegar produced no ſenſible alteration whatever. The acid of ſugar, poured upon the ſaliva, rendered it more mucous, and produced a ſlight precipitation; and the phoſphoric acid alſo thickened it a little.

All theſe combinations of ſaliva with the different acids, whether mineral, vegetable, or animal, after being filtrated and evaporated,

furniſhed different neutral ſalts, according to the acid employed, but all of them having the foſſile alkali for their baſis. The coagulum obtained upon each of theſe combinations of ſaliva with the acids, furniſhed, upon diſtillation, the ſame principles as the dried ſaliva. Water did not diſſolve them; but the volatile alkali diſſolved them completely.

Spirit of wine and æther ſeem to diſſolve a ſmall quantity of ſaliva; but theſe liquors ſoon allow this fluid to precipitate, under the form of a thick mucilage. This mucilage is ſoluble in water; which ſhews it to be different from that which is produced by the action of acids. Saliva divides oil, and, in conſequence of long agitation, diffuſes it in water, in the ſame manner as mucilage does; a property which fits it for taking out ſpots of greaſe from clothes.

Theſe different experiments which Mr Hapel has made on ſaliva, ſerve, he thinks, to demonſtrate, that it is a mucilaginous watery fluid, formed of a proportion of air, oil, and water, of the fixed mineral alkali of ſea-ſalt, and of an inſoluble ſubſtance, which ſeems to be of the ſame nature with the baſe of the bones. He has not been able to find that

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it contains ſal-ammoniac, the exiſtence of which, in ſaliva, has been aſſerted by different phyſiologiſts; and he believes, that it is only in impure ſaliva that ſuch a ſalt is to be met with.

After theſe obſervations on ſaliva obtained from the glands which immediately ſecrete it, Mr Hapel next relates the experiments which he made on ſaliva obtained from the mouth of a horſe, and mixed with the other fluids of that cavity.

The ſaline taſte of this fluid is very remarkable. It has a more viſcid conſiſtence than pure ſaliva; which, Mr Hapel thinks, is to be attributed to the loſs of part of its water, and to its combination with the mucus of the mouth. The tendency which it has to form into a froth, is, he thinks, eaſily explained, from the ſoapy quality which has been obſerved in it. Divided and agitated by the motion of the cheeks, from contact with the atmoſpheric air, and with the air expired from the lungs, it forms, in the ſame manner as ſoap-water, bubbles containing air. From diſtillations with the water-bath, and on the naked fire, this fluid gives out the ſame pro-

ducts as pure ſaliva; and to air and water, it preſents alſo the ſame phænomena. But quicklime, and cauſtic alkali, diſengaged from it an odour ſtrongly marked with volatile alkali; a circumſtance by which it is peculiarly diſtinguiſhed from pure ſaliva.

This laſt circumſtance, in Mr Hapel's opinion, clearly proves, that the ſal-ammoniac of the ſaliva contained in the mouth, is a conſtituent only of the mucous fluid furniſhed by the glandulæ buccales. He has not, however, been able to determine what particular acid is united with the volatile alkali in this ammoniacal ſalt; but he expreſſes a hope of being able to repeat his experiments, and of completing his inveſtigation of ſaliva. He concludes this eſſay, by acknowledging great obligations to Mr de Fourcroy; and with mentioning, that moſt of his experiments on this ſubject were made in preſence of Mr Chaubert, Director and Inſpector-General of the Royal Veterianarian Schools, and Correſpondent Member of the Royal Society of Medicine.

IX.

IX.

Rapports ſur les Vertus Medicales des Lézards du Royaume de Guatimala. *Par* M. Carrere d'Aubenton, et Mauduyt. Vide *Hiſtoire de la Société Royale de Médecine, Tome IV.* 4to, Paris.

THE Royal Society of Medicine of Paris directed Mr Carrere to give an account of a Spaniſh memoir, concerning a ſpecific diſcovered in the kingdom of Guatimala, for the cure of Cancer and ſome other frequent diſeaſes, written by Dr Joſeph Flores, Member of the Univerſity of Guatimala, and publiſhed at Madrid in 1782.

This Memoir gives an account of the remarkable efficacy of a reptile in the treatment of different diſeaſes, particularly of Cancer. This reptile, the author ſtyles Lagartija; which, in Spaniſh, ſignifies the Lizard, or Female Lizard. He however ſays, that they have

have given it this name on account of its reſemblance to the common lizard; and he diſtinguiſhes this animal, alſo, into male and female. It is chiefly found in the environs of St Criſtoval-Amatitan, a village about eight leagues ſouth from Guatimala, the chief town of the province of the ſame name in South America. The inhabitants of that country, at leaſt, attribute extraordinary medical properties to the reptile found there; although Dr Flores obſerves, that it is a very common animal in the whole province of Guatimala. He does not give a detail, in his memoir, of any facts which have fallen under his own obſervation; but he relates caſes ſeen by others, of which he ſpeaks on the moſt poſitive information.

He gives, particularly, an account of three caſes, in which this remedy was attended with remarkable ſucceſs. The *firſt*, is that of an Indian, whoſe whole body was covered with puſtules and ulcers, and who was completely cured, in a few days, by the uſe of the lizards. This cure was atteſted to him by Joſeph de Eloſo, at that time clergyman of St John-Amatitan, and afterwards of one of the churches in Guatimala.

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The ſubject of the *ſecond* caſe, was Don Joſeph Ferrer, by birth from Catalonia, but an inhabitant of Guatimala. He had been ſubjected, for the ſpace of an year, to a cancer on the upper lip, which gradually extended round one half of the mouth, to the under lip. It had alſo extended inwards to the jaw, in conſequence of which he had loſt four of his teeth. It in time reached the throat, and was very near the carotid; inſomuch, that the ſurgeon who attended, was afraid, every moment, that there would enſue a fatal hæmorrhage. This cancer was highly fœtid, and had reſiſted every remedy that could be thought of. The patient then put himſelf on the uſe of lizards, of which he ate three, one every day, for three ſucceſſive days. On the third day, he felt over his whole body an extraordinary heat, accompanied with a copious ſweat. There took place, at the ſame time, a ſalivation of a thick yellowiſh-coloured fluid. The fœtid ſmell of the ulcers gradually diminiſhed. Theſe circumſtances, however, naturally encouraged him to continue the uſe of the lizards; and, for five days more, he took one daily. In a few days, the ſalivation ceaſed, the wound became

clean,

clean, aſſumed a good colour, and, in no long time, was ſo completely cicatrized, that there hardly remained a veſtige of it. This cure was alſo performed under the inſpection of Don Joſeph de Eloſo, and of Don Nicolas Verdiego, a ſurgeon.

The *third* patient whoſe caſe is mentioned, was, Don Charles Sancier, parſon of the church of St Sebaſtian in Guatimala. This prieſt had been affected, for more than thirty years, with a cancer on his noſe; which, however, for ſome time, had made no progreſs. Three lizards, one of which he ate daily, were found to be ſufficient for accompliſhing a complete cure. He alſo felt the ſame ſymptoms as were mentioned in the preceding caſe, heat, ſweating, and ſalivation.

The author affirms, that the inhabitants of St Criſtoval-Amatitan, and of St John-Amatitan, have for a long time uſed this remedy in ſimilar caſes, with the greateſt ſucceſs. They are ignorant of the origin of this remedy; they only know, by tradition, that it was firſt employed by an inhabitant of Iſaclo, a town in the diſtrict of Sonſonàle, in New Spain.

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The author *next* relates the method in which this remedy is employed by the Indians. This method is very ſimple, but at the ſame time very diſagreeable. They cut off the head and tail of the animal, take out its intrails, ſkin it, chew it, and ſwallow it directly, while ſtill bloody, warm, and in ſome degree alive. They take one in this manner daily. One is ſometimes ſufficient for a cure; and, when this is not the caſe, they go on to three. This method may be imitated in a manner leſs diſagreeable, with equal ſucceſs. The head and tail of the animal being cut off, the bowels taken out, and the ſkin removed, the fleſh and bones are cut down, formed into pills, and incloſed in a wafer. Each lagartija will make two pills about the ſize of a muſket bullet. In this ſtate, they may be ſwallowed without any diſguſt.

After this, the author gives a deſcription of the reptile employed. It is repreſented as being eight or ten inches long, and about half an inch thick. It is covered with triangular ſcales, the points of which are turned to the tail. Some of them are of a changing colour, between yellow and green; others of a clear brown,

brown, with ſpots. The author believes, that the firſt are females, becauſe they have a larger belly than the latter. They are very nimble, and form their neſts in chinks of the earth, of trees, and of rocks. They live chiefly on a ſpecies of ſcarabæus; but they are very fond of flies and of bees, inſomuch, that they will very ſoon thin a ſwarm, by taking the bees one after another. When they are of ſmall ſize, they ſometimes enter into the hives, and ſuck the honey. They are not venomous: when they are irritated they bite the fingers, but no inconvenience is ever obſerved to reſult from this.

The author terminates his work, with ſome reflections, tending to ſhew the ſimilarity between the Lagartijas and Mercury. He thinks he can diſcover, in the effects produced by theſe animals, in the ſweating and ſalivation which they excite, a proof that they are of equal utility with that mineral, without being productive of the ſame inconvenience, or requiring the ſame cautions. He concludes, that theſe animals will probably be found to afford an excellent vermifuge, an antihydrophobic remedy, and a ſpecific againſt the venereal

nereal diſeaſe. And he mentions his intention of making experiments on theſe ſubjects in the hoſpital of Guatimala.

To this treatiſe, is ſubjoined an anonymous letter from Mexico, containing two obſervations of cures performed by means of this animal; and which ſerve to ſhew, that the lagartijas of Mexico have the ſame virtues with thoſe of St Criſtoval-Amatitan. The firſt of theſe, is the caſe of a monk, belonging to the convent of St Diego in Mexico, in the ſixty-third year of his age, who had for a long time been afflicted with a cancerous ulcer on his tongue. It had gradually increaſed to ſuch a degree towards the root of that organ, that he was every moment afraid it would drop off. He was incapable of ſpeaking, being able only to utter ſounds, which it was almoſt impoſſible to comprehend. He could ſwallow no ſolid food; and even milk and broth could not be got over without great difficulty. The wound gave out ſuch a fœtid ſmell, that it was very perceptible as ſoon as any one opened the door of his chamber. His pulſe was very weak; and, in fine, his death was expected every inſtant.

When

When in this ſituation, he took one lagartija in two pills, which he had very great difficulty in getting over. He continued them for the four following days ſucceſſively. From the firſt day, he felt an extraordinary heat in his whole body, and experienced ſuch a change in his ſituation, that the next day he ſwallowed the pills without any uneaſineſs, and ſpoke with much leſs difficulty. A ſalivation then began in ſmall quantity, but of a yellow colour; and the ſweating did not commence till the fourth day. At the time this letter was written, which was on the fifth day of the treatment, the fœtid ſmell was gone, the ulcer had a much more beautiful appearance, and was leſs extended; the ſwelling was diſcuſſed, the pulſe was ſtronger, the patient ſpoke with eaſe, and ſwallowed, without difficulty, ſolid aliments. He had regained his cheerfulneſs and ſtrength. He was in a condition to walk about in the infirmary, and was even deſirous of walking in the garden.

The ſecond caſe, is that of a poor woman, whoſe face had become hideous, by a great number of ſcabs and ſcales with which it was covered. She took one lagartija for three days

days ſucceſſively; and, at the end of that time, this letter was written. Her face had then recovered almoſt its natural colour; the ſcabs had all fallen off, excepting one upon her noſe. She had experienced, like the other patients, a great degree of heat, but neither ſweating nor ſalivation. She had, however, an abundant evacuation of very acrid and fœtid urine.

Mr Carrere, after giving the above account of the memoir of Dr Flores, ſubjoins to it a few remarks. He obſerves, that the method of exhibiting this remedy, ſeems to render it impracticable to try it in Europe, as the animal was to be ſwallowed while yet warm, and almoſt alive. It would therefore be, he thinks, deſirable, if ſome particular preparation could be found of this animal, which might be tranſported into other climates. And he alſo thinks, that this remedy ſhould, without delay, be tried in many other diſeaſes.

To this report by Mr Carrere, there is ſubjoined another by Meſſ. d'Aubenton and Mauduyt. The Spaniſh phyſicians, in Europe, having uſed lizards in the treatment of diſeaſes of the ſkin, and of cancers, and deriv-

ed from them ſome good effects, the Royal Society of Paris were themſelves deſirous of making ſome experiments for determining the efficacy of this remedy. They wiſhed, therefore, particularly to know the preciſe ſpecies of lizard which had been, in Spain, ſubſtituted to the lagartijas of Guatimala. The Count de Vergennes, who joined to many other qualities a lively zeal for the progreſs of ſcience, procured ſome of theſe lizards from Spain, which were put into the hands of Meſſ. d'Aubenton and Mauduyt.

Upon comparing theſe with the ordinary lizards of the gardens of Paris, and which lurk in holes and rents of the walls, they could find only a very ſlight difference in the ſpots upon their backs; and this difference, they think, is owing probably to the influence of a more warm climate. It may alſo, perhaps, they obſerve, depend on the age and circumſtances under which the lizards were found. But they cannot poſitively determine, whether the lizards uſed at Madrid be preciſely the ſame with thoſe about Paris, or whether there be a ſlight variety. This laſt opinion ſeems to them the moſt probable; ſince a country, ſo different as Spain is from France, is ſufficient

cient to produce all the variety diſcoverable. They therefore recommend a trial of the lizards found in France, for the cure of thoſe diſeaſes in which they have been uſed at Guatimala and Madrid; remarking only, that the animal, produced in a leſs warm climate, will probably require to be given in larger doſes, and continued for a longer time.

How far the experience of others will confirm thoſe advantages ſaid to be derived from the uſe of lizards, either in South America or in Spain, we will not take it upon us to affirm. If, however, the caſes above alluded to be fairly repreſented, there can, we think, be hardly any room for deception, as the cure ſucceeded the remedy in ſo very ſhort a ſpace of time, and in diſeaſes, too, before, of very long ſtanding, which, when admitting of a natural cure, diſappear only in a very gradual manner. But we muſt alſo confeſs, that the ſuddenneſs with which cures are ſaid to have been performed, leads us to entertain ſome doubt with regard to the truth of the relation. Our readers may remember, that in a former volume of theſe Commentaries, (Vol. IX. p. 478.), we gave an account of the efficacy

of the lizard in the Weſt Indies, employed for the cure of cancer, venereal eruptions, &c. That account was extracted from the St Chriſtopher's Gazette; but we have not heard from any practitioner, either in that, or any of the neighbouring iſlands, that this remedy has, ſince that time, been employed there with advantage.

Dr Cullen, in his late valuable treatiſe on the Materia Medica, has not indeed taken any notice of the medical properties which have lately been attributed to the Lizard; but, in treating of aliments, of which, in our opinion, he has given by much the moſt complete and ſcientific view which is any where to be met with, he has arranged the lizard, among the other aliments taken from the claſs of Amphibia, with the tortoiſe, the frog, and the ſerpent. And he obſerves, that although the lizard be employed in the Weſt Indies, we are here little acquainted with its medical qualities. But he thinks we may reaſonably ſuppoſe, that its qualities will be much the ſame with thoſe of the other reptiles. It is, however, well known, that the ſerpent tribe has been highly recommended by even the earlieſt medical writers,

writers, as a moſt efficacious remedy againſt obſtinate ulcers, and inveterate cutaneous diſeaſes. We have the authority of Pliny, for their being ſucceſsfully employed by Antonius Muſa, the phyſician to Auguſtus, in the cure of obſtinate ulcers, which had reſiſted every other remedy. They were employed under the form of viper broth; and, under this form, they are ſtill highly recommended by ſome modern practitioners, eſpecially in affections of the leprous kind.

X.

Obſervations ſur la Necroſe. *Par* M. Bouſſelin, *Docteur en Médecine, Chirurgien-Major des Armées de ſa Majeſté le Roi de Pologne, Correſpondant de la Société à Kaminiec en Podolie.* Vide *Hiſtoire de la Société Royale de Médecine, Tome IV.* 4to, Paris.

THE diſeaſe which is the ſubject of this memoir, is repreſented as one of the moſt curious and important points which has occupied the attention of modern ſurgeons. It is alleged, that in the different bones of the human body, particularly in the long bones, ſuch as the tibia, the femur, and the humerus, a portion more or leſs conſiderable of the bony cylinder, may become dead, as is obſerved in ſoft parts, affected with what is called the dry gangrene.

In theſe caſes, nature brings about a ſeparation of the dead from the living part. The whole

whole portion of the bony cylinder, deprived of vital motion, detaches itſelf to a larger or ſmaller extent; ſo that, in ſome caſes, there remain only the epiphyſes and articular extremities: and, at the ſame time, there is regenerated, by the effuſion of a real oſſeous juice, for which the perioſtium ſerves as a mould, a ſubſtance truly of a bony nature, which, taking the ſame form with the dead bone, and detaching it, envelopes it on all parts, and retains it looſe in its cavity. In theſe caſes, the regenerated bone unites in ſuch a manner with the extremities of the primitive bone, that the limb loſes nothing of its ordinary form, length, or ſolidity. The muſcles and tendons loſe nothing of their inſertion and ſupport; and, in fine, the functions of the membrane are in no degree affected, but continue as entire and perfect as ever.

This diſeaſe, Mr Bouſſelin thinks, has been known only ſince the days of Ruyſch, who deſcribes it in his Obſervations d'Anatomie et Chirurgie, publiſhed in 1691. Since that time, different publications have taken place with reſpect to it, in the Memoirs of the Royal Academy of Surgery, in the Edinburgh

Medical Eſſays, and in the writings of Meckren, Chopart, David, and others. But, attention more particularly excited to this ſubject, has given place, during a more recent period, to new diſcoveries, and to the collection of practical knowledge with reſpect to this affection. Mr Troja has taught us, by ingenious experiments, that we may, at pleaſure, produce this diſeaſe in the long bones, by deſtroying the medullary membrane. This deſtruction may be accompliſhed, by introducing into it a flexible ſtylet, at an opening made through any part of a bone that we wiſh to deſtroy. And theſe obſervations afford a more deciſive proof, becauſe we can deſtroy one portion only of the bony cylinder, by acting upon that portion of the medullary membrane which correſponds to it.

Although theſe facts demonſtrate clearly, that it is the perioſtium itſelf which becomes bone, when the medullary membrane has been deſtroyed; yet they do not confirm, as might at firſt be imagined, the ſentiments of Mr Duhamel, who alleges that this membrane is the ſource of oſſification, by means of its internal layers. In the beginning

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of this diſeaſe, the new bone formed by the perioſtium is very ſoft, and may be cut with the greateſt eaſe; but, in the end, it acquires a hardneſs even more conſiderable than the other bones: a matter of conſequence in the cure.

Nature herſelf often produces the ſame diſeaſe which Mr Troja has produced at pleaſure; and, in all probability, ſhe likewiſe effects this by the deſtruction of the medullary membrane. Our author thinks he may aſſert, that this is often the caſe; ſince, during his ſtay at the hoſpital of Lyons for two years, he had an opportunity of ſeeing at leaſt a dozen of patients affected with this diſeaſe: and Mr David has made the ſame obſervation.

Of the twelve caſes which have occurred to Mr Bouſſelin, eight were in the tibia, and four in the femur. And, what may be repreſented as ſingular, all the patients were between the thirteenth and twentieth year of their age, excepting two, who had paſſed their thirtieth year; from which it may be preſumed, that this diſeaſe is moſt common with young people; and that the inferior extremities, particularly the tibia, are moſt frequently affected

affected with it. The diſeaſe being thus common, it ſeems to our author ſurpriſing, that it has not more claimed the attention of medical practitioners: And he is of opinion, that the practice in this diſeaſe has not made an equal progreſs with the theory. He here preſents us with ſeveral caſes of this affection; which confirm the experiments of Mr Troja; which point out the proper mode of treatment; and which mark thoſe inſtances of the affection which ought to be left to the courſe of nature.

The firſt caſe here related, is that of a young man in the eighteenth year of his age, who was admitted into the hoſpital of Lyons in April 1781, for ſeveral ulcers in his leg. Theſe were accompanied with a very itchy feeling, and with a ſwelling through the whole length of the leg; which, however, was confined to the courſe of the tibia. Reſt, diet, and regular dreſſing, ſoon procured the removal of the eſcars. When theſe had fallen off, a fiſtulous paſſage was perceived, about the upper third of the tibia, and which led to the centre of the bone.

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From the queſtions which were put to the patient, it was found that his diſeaſe was of eighteen months ſtanding; that it had begun with ſevere pain in the limb, which was followed by a ſwelling of the ſoft parts. Redneſs came on a few days after this ſwelling; and ſeveral abſceſſes were formed, which ſoon paſſed into the ſtate of ulcers, diſcharging a conſiderable quantity of pus, by which the pain was relieved, and the ſwelling diminiſhed. Some of theſe ulcers, after having diſcharged a white pus, with ſmall pieces of bone, for five or ſix months, were cicatrized; while others, at a different part of the leg, remained open. And theſe new ulcers alſo gave opportunity to a diſcharge of pus, and of ſmall bits of bone, which preſented themſelves at the fiſtulous openings.

The limb, at the commencement of this diſeaſe, was very weak, and could not ſupport the weight of the body; but, in proportion to the continuance of the diſeaſe, the ſwelling augmented ſolely in the courſe of the tibia, and the limb acquired more ſtrength. The patient, however, had paſſed four months without being able to uſe it. But, from that time,

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he was gradually able to walk better; and, when he came to the hoſpital, he could uſe it almoſt as well as the other.

After the patient came to be in a proper condition, Mr Bouchet, the chief ſurgeon, operated upon this limb. He began, by removing an oval flap, about three inches and a half in length, and about an inch and a half in breadth. This flap comprehended ſeveral ulcers, which exiſted about the upper third of the tibia, and at its anterior part. He then, with a ſmall convex ſaw, cut into the inferior and ſuperior parts of the bone, which was laid bare to the depth of five or ſix lines; and afterwards, with a gouge and mallet, he raiſed the interval between the two ſawings; which was not accompliſhed without great difficulty, on account of the remarkable hardneſs of the bone. This piece being removed, no cavity could be diſcovered below, excepting at the place where the fiſtulous cavity was, which penetrated ſtill deeper.

The operator now determined to remove a farther portion of bone at the place of this paſſage, that he might come more ſpeedily at the ſeat of the diſeaſe. This, however, he did

he did not accompliſh without a great deal of trouble, notwithſtanding his remarkable dexterity. After having reached the cavity of the bone, however, he found that it contained a ſeparate piece of bone; which, when removed, meaſured three quarters of an inch in length, and four lines in breadth. It was ſo thin as to be tranſparent. This, our author thinks, was clearly a ſmall portion of the tibia, which had reſiſted the ſolvent power of pus.

About the third or fourth day after this operation, the patient had a ſlight fever, which however yielded to antiphlogiſtic regimen. The firſt dreſſings were removed on the fifth day; and as the ulcer was then very ſenſible, with ſome degree of inflammation, it was dreſſed for ſome days with a mild digeſtive; but, after that, it was dreſſed with dry charpie, covered with a pledgit of ointment: and it was touched every three or four days, according to the appearance of the fleſh, with cauſtic.

After continuing this treatment for the ſpace of fifteen days, and finding that the cavity which had incloſed the looſe bone was not diminiſhed, he was led to examine that cavity with a ſound; and finding a looſe portion,

tion, he drew it out with pincers, and diſcovered it to be a compact piece of the old bone. After this, the progreſs to recovery was rapid; and, at the end of ſix months after his admiſſion into the hoſpital, it was almoſt completely heal. But, as he became tired of the hoſpital, he left it before he had a complete recovery. In this caſe, from the extent of the ſwelling of the bone, and from the ulcers which were manifeſt above it, Mr Bouſſelin conjectures, that the Necroſis had here extended through one half of the tibia, from its upper to its under quarter.

The ſecond caſe which our author deſcribes, is that of a girl about thirteen years old, treated at the ſame hoſpital. At the time of her admiſſion, ſhe had, after formerly enjoying good health, been affected for a year with ſeveral ulcers on the left leg, and with fiſtulous paſſages to the tibia, which was larger than its natural ſize. He could not learn, by any inquiries, how her diſeaſe began. The ulcers, to the number of five, were ſituated on the fore part of the limb, nearer the top than the bottom. Upon ſounding them, he could not find any paſſage into the cavity of the

the bone; and they diſcharged pus, apparently of a good quality. Several ſcars were perceptible on the leg, which had formerly been ulcers, and from which, according to the account of the patient, bones had been diſcharged. The extent of the diſeaſe, in this caſe, prevented an operation; but, in conſequence of the attention beſtowed for two months, during which t me ſhe remained in the hoſpital, two ulcers were cicatrized, after which ſhe was ſent out; and ſhe could then uſe her limb much more eaſily than formerly. Although Mr Bouſſelin could not here penetrate into the centre of the bone, yet he thinks there can be little doubt that it was a real Necroſis; and he is perſuaded, that, in time, it would admit of a complete natural recovery.

Beſides theſe, ſix other caſes of the ſame diſeaſe are related; which, although differing from the others in ſome particulars, it is perhaps unneceſſary for us to detail. It is ſufficient to obſerve, that all of them were diſtinctly marked inſtances of this affection; and that ſome of them admitted of a natural, others of an artificial cure. After relating theſe, Mr Bouſſelin concludes this memoir with

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ſome practical concluſions, which he imagines may be drawn from them.

Three eſſential points are here, he thinks, to be conſidered; the diagnoſtic, the prognoſtic, and the cure. The diagnoſtic is, in his opinion, to be eſtabliſhed from the following particulars: From the information which is obtained by a probe introduced into the cavity of the bone, where a looſe and moveable part is felt; from the age of the patient; from the ſituation of the fiſtulous ulcers; from the diſcharge of pus, the quantity of which cannot be augmented by compreſſion of the parts in the neighbourhood of the ulcers; from the diſcharge of ſplinters of bone at theſe ulcers, which happens when they are ſmall, and light enough to be carried out by ſuppuration; from a knowledge of the cauſe of the diſeaſe; from the ſeat of the pain; from the tumefaction of the limb; and laſtly, from the continuance of the diſeaſe, without, in general, producing great weakneſs.

Mr Bouſſelin obſerves, that in moſt inſtances of this diſeaſe, one is aſtoniſhed to ſee the pus of ſo good a quality, and that the quantity of the diſcharge does not weaken the patient. Theſe

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circumſtances, he thinks, tend to prove, that nature, in time, will triumph over the diſeaſe, which is not uſually the caſe in inſtances of caries; for that diſeaſe almoſt always requires the aſſiſtance of art; whereas, in the necroſis, the efforts of nature are often ſufficient.

If the piece of bone ſeparated, be very large, either in length or breadth, the recovery, when it is left to nature, will be more tedious. The ſame will alſo be the caſe when the diſeaſe occurs with thoſe advanced in life; as, from the greater hardneſs of the bones, they will require a longer time for being diſſolved. The longer the diſeaſe has laſted, other circumſtances being equal, the more nature has already laboured for the deſtruction of the cauſe of diſeaſe, and the leſs there remains of the volume of foreign matter which is to be deſtroyed.

With regard to the cure, it may be conducted upon two general principles; either by leaving it to the courſe of nature, or by employing the aſſiſtance of art. But, although art furniſhes efficacious means againſt this complaint, thoſe to which nature has recourſe, with the view of ſurmounting it, are not leſs

to be admired. Nature, it is true, in this caſe, operates more ſlowly than art; but its operation is as ſure, and it produces a cure without any accident. It brings about a ſolution of the ſeparated bone, in a longer or ſhorter time. In ſome inſtances, ſix or eight months will be ſufficient; ſometimes an year or two, or even more. Pus, ſeparated in too great quantity, irritates the ſoft parts, and produces abſceſſes; from whence reſult ulcers, which afford an outlet not only for the fluids, but alſo for ſmall fragments of bone, till the ſeparated parts be deſtroyed and diſcharged; after which, the ulcers either heal of themſelves, or eaſily yield to gentle treatment.

If the diſeaſe be of long ſtanding, and the ſuppuration not very abundant; if numerous ſplinters have been diſcharged; if the regenerated bone be very ſolid, and thicker than in its natural ſtate, there is reaſon to hope that the ſeparated part is diſſolved, or that there remains but little of it; and that, therefore, nature alone will accompliſh its complete expulſion. Thoſe caſes, alſo, where the diſeaſe is very far extended, where it would be neceſſary to produce a great deſtruction of ſubſtance, which

which might give riſe to an habitual ulcer, are to be left to the courſe of nature, particularly when they occur in young ſubjects, becauſe their bones, not having yet acquired full ſolidity, are more eaſily diſſolved by the pus. In ſome of theſe caſes, a queſtion has been ſtarted, Whether advantage might not be derived from the injection of acid liquors? But our author thinks, there is reaſon to fear theſe injections would reſtrain the pus, which may be viewed as the natural ſolvent, and which he conſiders as the beſt.

Although, however, Nature does thus much, all caſes are not to be abandoned to her. Mr Bouſſelin even thinks, that, in the beginning of the diſeaſe, it would be advantageous to operate upon all of them. At that time, the new bone formed by the perioſtium, hardly covers the ſeparated part; and it leaves openings, by which, without any conſiderable enlargement, the portion of bone incloſed may be extracted. The new bone is at that time ſo ſoft, that it may be cut with the greateſt eaſe. By this plan, the great length of the diſeaſe, always diſagreeable, and ſometimes dangerous, may be avoided, and the cure

greatly accelerated. But, at the ſame time, the operator ought to be aſſured, that the ſeparated part of bone is moveable: for time muſt be given to nature to ſeparate all that is not alive; and the admirable mechaniſm by which ſhe endeavours to reproduce a new bone, to ſupply the want of the old one, ſhould not be diſturbed; which, however, will certainly be done by premature operation. The proper time for operation, is known by the good quality of the pus; by the ſkin which covers the bone being free from inflammation; and by the ſolidity of the membrane, which is the principal ſymptom.

Mr Bouſſelin does not think it neceſſary particularly to deſcribe the manner of operation, becauſe it varies according to circumſtances. It is, he thinks, ſufficient to obſerve, that the affected part is to be brought into full view, either by making an inciſion in the ſoft parts, or by removing them; and that an opening is to be made in the bone itſelf, comprehending all the ſinuſes which penetrate its ſubſtance. This opening muſt alſo be proportioned to the ſize of the ſeparated piece of bone. When the necroſis takes place in a bone

bone much ſurrounded by ſoft parts, theſe are not to be ſpared. Muſcles may even be cut acroſs, if that be neceſſary, to diſcover the ſeat of the diſeaſe. But when the diſeaſe is ſeated in the tibia, as much ſkin muſt be ſaved as poſſible; for, without this precaution, an habitual ulcer may be produced, as inconvenient as the diſeaſe for which the operation was performed.

XI.

Reflexions ſur les effets de l'éther vitriolique, et de l'éther nitreux, dans l'économie animale. *Par* M. de Lavoiſier. Vide *Hiſtoire de la Société Royale de Médecine, tome IV.* 4to, Paris.

IT is, Mr Lavoiſier obſerves, a known fact, that all fluids, and probably volatile bodies in general, by means of certain degrees of heat, paſs from the ſtate of liquid to that of elaſticity; and are transformed into elaſtic aeriform fluids, with all the phyſical properties of air, but without its chemical properties. This change happens from a determined degree of heat applied to each. Thus it happens to vitriolic æther at thirty-two degrees of Reaumur's thermometer; to ſpirit of wine at ſixty-ſix degrees; and to water at eighty.

By

By means of a pneumato-chemical apparatus, Mr Lavoiſier transformed a portion of vitriolic æther into an inflammable air, with which he filled ſeveral glaſs veſſels. The æther thus converted into a vapour, was found to poſſeſs all the principal properties of the inflammable air of marſhes, or of that which is obtained from metals on their diſſolution by acids. Like theſe, it is neither inflammable nor combuſtible, as long as it remains alone, and is contained in a cloſe veſſel. It burns only when in contact with atmoſpheric air. If, with this air, two parts of atmoſpheric air be combined, a permanently elaſtic fluid is formed, which is not condenſed by cold, but which has the property of detonation when it approaches an inflamed body. This permanence is the ſame, when, in place of atmoſpheric air, dephlogiſticated air is employed, in the proportion of one part to two of the inflammable air of æther; but the detonation is much ſtronger.

Nitrous æther, he obſerves, preſents all the ſame phænomena with an inferior degree of the thermometer. But, as it is difficult to procure nitrous æther always exactly the ſame,

the degree of heat is variable, according to variations in the æther employed.

Without entering into a detail of many other curious experiments made with æther converted into inflammable air, the author next proceeds to enquire, how thoſe already related throw light upon the manner in which æther acts in the animal œconomy. Since it is found that this ſubſtance is volatilized at a degree of heat lower than that of the internal parts of the body, it follows, he obſerves, that, when introduced into the ſtomach, it muſt paſs from the ſtate of liquid to that of gas, and be transformed into an inflammable air. Beſides this, as it is difficult to conceive that the ſtomach will not poſſeſs ſome portion of atmoſpheric air, there muſt reſult from this mixture, a permanently elaſtic fluid, which cannot be more condenſed by a degree of heat even much below thirty-two of Reaumur.

By this means, in caſes where the ſtomach, either from the fermentation of thoſe fluids deſtined for digeſtion, or from the uſe of fermenting drinks, is filled with elaſtic, gaſſeous, or mephitic fluids, ſuch as fixed air, or any other, he conſiders the vitriolic æther, but ſtill

but ſtill more the nitrous, as a certain means of expelling them. It is, he thinks, unqueſtionably on this account, that æther is an efficacious remedy in ſome ſpecies of megrim, particularly in thoſe headachs which ariſe from bad digeſtion. It will, he imagines, alſo produce ſimilar effects in caſes of drunkenneſs, and in all thoſe caſes in general, where the fermentation of fluids, either in the ſtomach, or in other neighbouring parts of the inteſtinal canal, has filled thoſe viſcera with mephitic exhalations.

Another property of æther, is that of producing a conſiderable ſenſe of coldneſs in all ſurrounding bodies at the inſtant of its being transformed into an elaſtic aeriform fluid. If, therefore, from any cauſe whatever, there ſhould take place a conſiderable degree of heat in the ſtomach, Mr Lavoiſier thinks, that æther will neceſſarily be a very proper remedy for cooling and ſettling it. And he ſuppoſes it is from this property, that it derives the ſedative effects which have been attributed to it.

From theſe reflections, the author is led to make ſome obſervations on the manner of adminiſtering

miniſtering æther. He thinks it would be an eaſy matter to make it appear, that it is often better to employ it in ſmall doſes, frequently repeated, than to take a large quantity at once. Suppoſing, for example, the ſtomach of a patient to be filled with fixed air, as is the caſe in inſtances of drunkenneſs, or at leaſt in certain inſtances of it; if the firſt doſe of æther which has been adminiſtered, has been ſuch, that there has not ariſen from it a volume of inflammable air equal to the capacity of the ſtomach, that viſcus cannot, by this means, be freed from all the mephitic elaſtic fluid which exiſts there. It is, on the contrary, evident, that there muſt remain in the ſtomach, a mixture of fixed air, and of the inflammable air of æther. In ſuch caſes, it will only be after the third or fourth doſe of æther, that we can conſider the ſtomach as cleaned.

Mr Lavoiſier obſerves, that from this reaſoning, an objection may naturally be ſtarted againſt the uſe of æther. It may be alleged, that in adminiſtering æther in the manner mentioned, to a patient whoſe ſtomach has been loaded with a pernicious elaſtic fluid, we only ſubſtitute one elaſtic fluid to another; and it

remains

remains to be proved, that the inflammable air of æther is more ſalutary than that which before exiſted in the ſtomach. To this he anſwers, that the inflammable air of æther is capable of being abſorbed by water and other watery fluids; from which it follows, that at the end of a longer or ſhorter interval, all the inflammable air of æther will of courſe diſappear, and be combined with the fluids which it meets in the ſtomach.

How far our readers will be diſpoſed to adopt theſe conjectures of Mr Lavoiſier, reſpecting the action of æther, we will not pretend to ſay. We muſt own, that, to us, his reaſoning upon this ſubject appears liable to many objections. Æther is well known to produce very conſiderable effects when applied to different ſenſible parts of the ſurface of the body; as, for example, to the forehead in inſtances of headach. May we not therefore conclude, that its effects, when acting upon a part ſo highly ſenſible as the ſtomach, will be much more conſiderable, both upon that viſcus itſelf, and upon the ſyſtem in general, independently of the generation of any elaſtic vapour, or of the ſenſe of cold which its evaporation produces?

produces? But, allowing that there are other principles upon which æther, taken into the ſtomach, may be ſuppoſed to act ſtill more powerfully than in the ways which he imagines; yet ſtill, not only the reputation of the author, but the ingenuity of the thought itſelf, is ſufficient to recommend it to ſerious conſideration.

XII.

XII.

An Enquiry into the Small-Pox, Medical and Political; wherein a ſucceſsful Method of treating that Diſeaſe is propoſed; the Cauſe of Pits explained; and the Method of their Prevention pointed out. With an Appendix, repreſenting the Preſent State of the Small-Pox. *By* Robert Walker, M. D. *Fellow of the Royal College of Surgeons, Edinburgh.* 8vo, London.

NOTWITHSTANDING the aſtoniſhing improvements lately introduced in the treatment of ſmall-pox, when communicated by inoculation, and for which we are particularly indebted to Mr Sutton; yet it is a melancholy fact, that the mortality occaſioned by this diſeaſe, even in Britain, is not diminiſhed. The improvements made in the treatment of the diſeaſe, when communicated in the natural way, or, to ſpeak more properly, by accidental contagion, have borne no proportion

proportion to thoſe by which the practice of inoculation, or the communication of the diſeaſe by intentional contagion, has been rendered more ſucceſsful. The reduction of deaths, however, occurring in the latter of theſe ways, is one of the chief objects of this inquiry. And, as there is but little reaſon to flatter ourſelves with the hope, that mankind will ſoon be induced univerſally to adopt the practice of inoculation, this ſubject, it muſt be allowed, well merits particular attention; and ſuch attention the learned author here beſtows upon it.

This elaborate treatiſe is introduced with ſome account of the opinions concerning the origin of the Small-Pox. Dr Walker ſeems to agree with thoſe who ſuppoſe, that this diſeaſe was brought into Egypt by the Arabians, about the year 572 after the birth of Chriſt; but, with Dr Friend and Mr Holwell, he thinks it probable, that the Arabians derived this infection from ſome more diſtant regions of the Eaſt. This opinion, he thinks, receives additional credit from the ſimilarity of practice, in the cure of this diſeaſe, obſerved by the Bramins of India, and the Arabians; particularly

particularly their conſtant attention to puncturing the puſtules, which, he thinks, it is probable, the latter derived from the former.

Notwithſtanding the arguments of Dr Thomſon and others, to which very ſatisfactory anſwers are here given, our author conſiders it as a ſelf-evident fact, that the remote cauſe of ſmall-pox is contagion. Of the properties of this contagion, he thinks it evident, that our information muſt be entirely derived from its common and obvious effects upon the human body. From obſerving, that it produces no pernicious effect upon thoſe who, from having formerly had the diſeaſe, are not again ſuſceptible of it, he concludes, that it is not poſſeſſed of the virulent and deliterious qualities aſcribed to it by ſome phyſicians. He thinks, that the practice of inoculation, in which we ſee inflammation to be the firſt obvious effect, ſhews it to be poſſeſſed of an inflammatory principle. But as ſimple inflammation never proves contagious, and as the variolous contagion is an animal production, conſtantly attended with a peculiar fœtor, he is led to view the inflammatory principle of ſmall-pox as poſſeſſing ſomewhat of a ſeptic quality. But

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at the ſame time, he obſerves, that he employs the term ſeptic, only for want of any other that can better convey his meaning. He mentions, however, ſeveral remarkable facts, and relates ſeveral experiments, by which this idea of an inflammatory-ſeptic principle is corroborated.

Dr Walker next endeavours, from the obvious effects of the variolous contagion, to deduce its action on the fluids. As we plainly ſee an accumulation of contagious particles generated in the blood, we may, he thinks, conclude, that its action is that of a ferment; by which he underſtands, that it aſſimulates a portion of ſome of the conſtituent parts of the blood to its own nature. With much judgment and ingenuity, he combats the opinions of Dr Milman and others, who hold different theories on the ſubject.

After this, he endeavours to ſhew, that different quantities of this contagious ichor are generated in the ſyſtem, in different kinds of ſmall-pox. He contends, that the whole quantity generated, is not determined to the ſkin in the form of puſtules. The finer parts of the aſſimulated fluids, paſs off, he thinks, by the

the cutaneous pores, while the more groſs particles are detained in the mouth of the excretory ducts, and, from their ſtimulant nature, produce the primary inflammation which occurs in every pimple. And he thinks, that upon this ground, we may explain the reaſon why the variolous puſtules do not invade the viſcera and internal parts.

Dr Walker next makes ſome remarks on the neceſſity of prediſpoſition, for the occurrence of this infection. The two diatheſes which he conſiders as the moſt powerful occaſional cauſes towards the reception of the variolous contagion, are, an exceſs of the red particles of the blood, and of the coagulable lymph, on the one hand; and a reſolution of the red particles, with attenuation of the coagulable lymph, on the other. From his obſervations on the occaſional and prediſpoſing cauſes, he concludes the proximate cauſe to conſiſt in the blood, in conſequence of the action of the variolous ferment, during the ſtage of fermentation, being more or leſs aſſimulated, and the contagious particles accumulated in the ſyſtem.

In treating of the hiſtory of ſmall-pox, to which Dr Walker next proceeds, he paſſes over the mildeſt form of the diſeaſe, or diſcretæ benignæ, as they have been called, ſuppoſing theſe to be well known; but he furniſhes us with a very accurate account of the other moſt remarkable varieties, particularly of the contiguous, the ſimple confluent, the putrid, and the cryſtalline.

After this view of the theory of the diſeaſe, the author next proceeds to treat of the practice. The leading indications of cure, he endeavours to deduce from the hiſtories of the diſeaſe, and the opinions delivered with reſpect to its nature. The indication which he lays down, in the firſt ſtage, is to prevent, as much as poſſible, too great an aſſimulation of the varioleus ferment, which is chiefly to be fulfilled by avoiding animal food, wines, and every thing of a heating nature; by a cooling and vegetable diet, and the like. Where inflammatory ſymptoms prevail, it muſt, he obſerves, be the buſineſs of a practitioner to moderate the inflammatory fever, and to diminiſh the exceſs of the contagious fluids. We cannot here propoſe to give even an abridged

view

view of the judicious directions which he delivers on theſe ſubjects. But we may obſerve, that although Dr Walker be a very ſtrong advocate for the advantages of the cool regimen in the benign kinds of ſmall-pox; yet repeated diſappointments led him to deſpair of ſucceſs, by this means, in bad ſmall-pox. From attending to the effects of natural diarrhœa, he was led, in all caſes where the ſymptoms indicated an extenſive aſſimulation, and highly inflammatory diſeaſe, to employ early purging. And although he conſiders the uſe of purgatives, either in inoculated ſmall-pox, or in the mild diſeaſe by accidental infection, as not only unneceſſary, but even hurtful; yet he found, that in bad caſes, by artificial diſcharges in this manner, the immediate irritating cauſe of all the eruptive ſymptoms was gradually reduced; of conſequence, theſe ſymptoms were moderated, and a determination of a conſiderable quantity of contagious fluids prevented from ruſhing both to the head and ſurface. But as many phyſicians have been long under a rooted prejudice againſt early purging in ſmall-pox, he here beſtows great pains in giving full and ſatisfactory anſwers to the moſt

material objections which have been made to this practice.

After the inflammatory, Dr Walker next conſiders the treatment of the putrid ſmall-pox. Theſe are commonly uſhered in by an inflammatory fever. When all the ſymptoms of this fever run high, the patient cannot ſuffer much, Dr Walker thinks, from bleeding, while the pulſe keeps firm. And where, after this evacuation, the pulſe retains its ſtrength and firmneſs, nothing, he obſerves, contraindicates the exhibition of a gentle purgative. But, where the diſeaſe commences with typhus, bleeding is hurtful; and the indications are, to check the putreſcent tendency of the fluids, by ſupporting the vis vitæ; and to diminiſh the exceſs of contagious matters in the ſyſtem, by promoting the diarrhœa. Of the particular practices, however, which he recommends with theſe intentions, we cannot pretend to ſpeak.

Dr Walker next treats of the method of cure in the cryſtalline ſmall-pox. When an inflammatory fever appears in the commencement of the diſeaſe, we are obliged, he obſerves, to follow the antiphlogiſtic courſe.

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But inflammatory ſymptoms, though apparently violent for a few days, have frequently a perfect remiſſion with the complete eruption of puſtules, upon which the pulſe becomes feeble and depreſſed, with much anxiety. When the fever thus changes to the low kind, inſtead of purſuing the cold regimen, the vis vitæ muſt be ſupported with wine and other cordials. And, as Dr Walker thinks that the aſſimulation of fluids is not ſo extenſive in this kind, as in many others, he is of opinion there is leſs occaſion for much purging. Here, a chief indication in the treatment, is meliorating the pellucid ichor in the puſtules. For this purpoſe, he ſtrongly recommends the uſe of the Peruvian bark; and here, as well as in the putrid ſmall-pox, the diſeaſe is often attended with petechiæ, maculæ, and vibices.

After conſidering the treatment of different ſpecies, as they may be called, of ſmall-pox, Dr Walker next proceeds to the treatment of particular ſymptoms.

After many judicious remarks on the ſwelling of the face, hands, and fauces; on Cephalagia, Delirium, Coma, Phrenitis, Angina, Dyſpnoea, Pain in the region of the Stomach,

Lumbago, Swelling of the hands, Suppreſſion of urine, and Convulſive fits; he offers ſome remarks on the uſe and abuſe of opiates. In every ſpecies of ſmall-pox, where all the ſymptoms are violent, with a numerous eruption of puſtules, whether of the contiguous, confluent, or other kinds, where there are clear indications of an extenſive fermentation, Dr Walker conſiders the exhibition of opiates to be highly pernicious. He thinks there is no leading indication for adminiſtering opiates in ſmall-pox, unleſs where the evacuant courſe is improper. They may likewiſe, he thinks, be uſed in every caſe as a powerful cordial, and where the vis vitæ appears to fail.

Dr Walker next proceeds to treat of the ſecondary fever. In conſidering this ſubject, after pointing out the cauſes aſſigned for this fever, by ſome of the beſt writers on ſmall-pox, and offering his objections to theſe, he attempts to point out its origin. To him, it ſeems to be the exiſtence of the ſame cauſe which at firſt excited the fever of eruption, and which ſupports, more or leſs, the ſame fever, after the eruption is completed, in all the

the worſt kinds of ſmall-pox, that gives riſe to this fever, *viz.* an exceſs of contagious fluids ſtill remaining in the ſyſtem. A ſlow diſcharge, or total ſuppreſſion of the ptyaliſm, may alſo, he thinks, have ſome ſhare in accelerating the ſecondary fever, as ſo large a quantity of the aſſimulated fluids formerly paſſed freely by this channel.

The ſubject which next occupies Dr Walker's attention, is the theory and prevention of pits. After giving a view of the opinions, both of ancient and modern writers, upon this ſubject, and pointing out his objections to their different theories of pits, he attempts to ſhew what he takes to be their true cauſe, from the knowledge of which we can alone inſure their prevention. He is of opinion, that they neither originate from acrimony, ulceration, nor loſs of ſubſtance, but are the conſequence of the preſſure of the condenſated puſtules upon the tender cutis, producing the ſame effect as that of a ſeal impreſſing melted wax. As the condenſation of the maturated puſtules upon the face, is, he thinks, ſolely owing to the influence of the external air, the firſt ob-

ject which he points out, is to prevent the acceſs of air to the part. For this purpoſe, he adviſes the application of a maſk made of fine cambric, thinly ſpread with a liniment compoſed of four ounces of olive oil, with half an ounce of ſperma ceti, and as much white wax. This maſk he directs to be continued till the puſtules are perfectly emptied, which happens in the courſe of ten, twelve, or fifteen days. During this time, however, it is neceſſary that the maſk ſhould be often ſhifted, and the puſtules gently wiped. For, at every dreſſing, each puſtule will be found bedewed with pus, by which they gradually leſſen in ſize, and become more and more flaccid.

Although Dr Walker aſcribes the pits in the ſmall-pox not to any ulceration, but ſolely to the impreſſion of condenſated puſtules, yet he is far from denying that ulcerations are a common conſequence of ſmall-pox; and he makes ſome obſervations on theſe, principally with the view of pointing out the diſtinction between them and pits. The general cauſe of theſe ulcerations, he ſuppoſes to be the acrimony of the variolous pus: Hence they chiefly

chiefly occur in the confluent ſmall-pox. Theſe ulcerations from the ſmall-pox are to be treated in the ſame manner as other ulcerations. They are to be kept clean; the fungous granulations that ſprout up from the bottom, are to be gently repreſſed with bandages, dry dreſſings, or mild eſcharotics; and they are to be cicatrized in the uſual way.

Dr Walker concludes this work with a ſummary view of the advantages which ariſe from the mode here propoſed for treating the worſt kinds of ſmall-pox. And he endeavours to ſhew, that by the early uſe of the antiphlogiſtic and evacuant plan of cure, in the manner propoſed, we obtain a moderation of the eruptive fever; a diminution of the determination of morbid fluids to the head; a mitigation, if not an abſolute prevention, of the ſecondary fever; and an alleviation of many of the moſt dangerous ſymptoms of the diſeaſe.

To this work is ſubjoined an appendix, containing ſome remarks on the frequency and mortality of the ſmall-pox; from a view of which, ſome means are propoſed for reducing the number of deaths. In treating of this ſubject,

ſubject, he beſtows due encomiums on the judicious regulations publiſhed ſome years ago by Dr Haygarth of Cheſter, in his Inquiry how to prevent the Small-Pox; of which an analyſis was given in a former volume of theſe Commentaries, (Vol. I. Decade II.) On this ſubject, Dr Walker himſelf propoſes the following ſhort and ſimple rules, which, he thinks, may eaſily be reduced to practice in every family.

1. Suffer no perſon, liable to the diſtemper, to enter the houſe where it is, and far leſs the chamber of the ſick.

2. Let none of the family, who have not formerly undergone the diſeaſe, aſſociate with the infected.

3. However mild the diſeaſe may be, the ſick ought never to be permitted to walk the ſtreets, and to expoſe others to infection.

4. Deſtroy all uſeleſs infectious rags.

5. Let no linen, or whatever elſe has been uſed or handled by the ſick, be careleſsly ſcattered about, or ſent to another family, where any are liable to the diſeaſe.

6. All the linen, *&c.* uſed by the ſick, ought

ought to be immerſed in a pail of water, and afterwards waſhed out and well aired.

7. Cleanlineſs, in general, is of the greateſt uſe in purſuing the preventive plan.

8. When the diſtemper is over, the chamber muſt be waſhed, and every thing in it expoſed for ſome time to the air.

Although the ſimplicity of this plan may, by ſome, be conſidered as an objection to it; yet, in reality, it ought to be a recommendation: and we have little doubt, that if people in general could be brought to put theſe rules in practice, the experience of their efficacy would afford the moſt complete demonſtration of the advantages to be derived from them. At the ſame time, there is well grounded reaſon for hoping, that by the uſe of proper means for preventing the propagation of accidental contagion, conjoined with the general practice of inoculation, a diſeaſe, which, even at the preſent hour, is productive of as many deaths in Britain as it was a century ago, might be almoſt, if not altogether, baniſhed from our bills of mortality.

This, therefore, is a ſubject well meriting the attention, not only of the humane phyſi-

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cian, but even of the Legiſlature itſelf. And although every practitioner may not be diſpoſed to adopt all Dr Walker's reaſoning upon this ſubject; yet, in our opinion, every candid reader will derive much ſatisfaction from a careful peruſal of his work.

XIII.

XIII.

Select Specimens of Natural History, collected in Travels to discover the Source of the Nile, in Egypt, Arabia, Abyssinia and Nubia. Vol. V. 4to, Edinburgh.

THE four preceding volumes of this work, contain an account of the travels and adventures of the celebrated Mr Bruce, in an expedition undertaken for the purpose of discovering the source of the Nile. Any account of these would be entirely foreign to the nature of the present work. But he has here collected, under the form of an appendix, his observations on those particulars which, to him, appeared most curious, either in the vegetable or animal kingdom. And, in this part of his work, several particulars are to be met with, well meriting the attention, not only of the curious naturalist, but also of the industrious physician.

After

After ſome preliminary remarks on the method of arrangement followed in this appendix, Mr Bruce, one of whoſe principal views it is, to aſcertain thoſe plants and ſhrubs well known to the ancients, but which, from different cauſes, are now either of doubtful exiſtence, or uncertain deſcription, begins with giving an account of the Papyrus. This plant, as he juſtly obſerves, was at firſt the repoſitory of learning, and of record. It was the vehicle of knowledge from one nation to another: its uſes were ſo extended, that it became even the food of man. Yet, in modern times, naturaliſts are not only diſputing what this plant was, but alſo whether it is ſtill to be found in Egypt. Mr Bruce, with his own hands, has collected ſpecimens of it, from Syria, from the river Jordan, from different places in Upper and Lower Egypt, from the lakes of Tzana and Gooderoo in Abyſſinia. All theſe he has found, in every particular, the ſame with what has been deſcribed by the ancients. He only thinks, that thoſe of Egypt, the middle of the two extremes, were ſtronger, fairer, and fully a foot taller, than thoſe either of Syria or of Abyſſinia.

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The Papyrus of the ancients, according to Mr Bruce, is a ſpecies of the Cyperus of Linnæus, but does not exactly correſpond with his deſcription of the Cyperus Papyrus. It is, according to Mr Bruce, about ten feet high, although he ſuppoſes, that when attention was beſtowed upon the culture of it, ſome plants muſt have riſen to fourteen or fifteen feet. The ſtalk is of a vivid green, thickeſt at the bottom, and tapering to the top; it is of a triangular form. It has but one root, which is large and ſtrong, which runs horizontally. From the middle of it, the ſtalk riſes at right angles; and a number of ſmall elaſtic fibres, deſcending from it in a perpendicular direction, like the ſtrings of a tent, fix it to the earth at the bottom. About two feet, or a little more, of the lower part of the ſtalk, is covered with long, hollow, ſword-ſhaped leaves, which are of a duſky brown, or yellow colour. The ſtalk, from the covering of which the paper was made, Mr Bruce ſuppoſes to have been cut off about the place where theſe leaves end. This deſcription is illuſtrated by an elegant engraving, from a drawing

drawing made by Mr Bruce himſelf, of the papyrus as growing.

Mr Bruce gives a very full account of the various purpoſes for which this plant was employed by the ancients. And, in particular, he offers ſome conjectures on the method in which he ſuppoſes they made their paper of it; which, he thinks, ſucceeded immediately to the hieroglyphic writings on ſtone: but he does not pretend to fix the date of its introduction. And he obſerves, that if the date of the invention be doubtful, the time when it was loſt, or rather perhaps ſuperſeded by a more convenient practice, is equally uncertain. He tells us, that he has in his poſſeſſion a large and very perfect manuſcript on this paper, which was dug up at Thebes. The boards of this book are of papyrus root, covered firſt with the coarſer pieces of paper, and then with leather, in the ſame manner as would be done now. It is of the ſize of a ſmall folio. The letters are ſtrong, deep, black, and apparently written with a reed, as is ſtill practiſed by the Egyptians and Abyſſinians. He tells us he has ſeen other detached leaves of the papyrus; but he does not believe

believe that there is another book of it exiſting at the preſent time, excepting that in his poſſeſſion, which is very perfect.

The next vegetable of which he treats, is the Baleſſan, Balm, or Balſam. The great value ſet upon this drug in the Eaſt, remounts to very early ages. It is coeval, at leaſt, with the Indian trade for pepper; and the Iſhmaelites, or Arabian carriers, brought it into Egypt from India, as part of their cargo, with pepper.

Balſam is the product of a tree about fourteen feet high, which grows ſpontaneouſly all along the coaſt behind Azab, to the Straits of Babelmandel. Of this tree, alſo, Mr Bruce's deſcription is illuſtrated by an engraving. He takes it for granted, that it would be very ſoon tranſplanted from the African ſide to the oppoſite coaſt of Arabia Felix; and he thinks, that, at a ſtill later period, this highly valued perfume was tranſplanted into Judea, where it was cultivated only in the King's gardens. He ſuppoſes, that, after this, the importation of it from Arabia muſt have been prohibited as contraband; and that it was only

at this period it obtained the name of Balſamum Judaicum, or Balm of Gilead.

Three productions from this tree, were, he obſerves, very much eſteemed among the ancients. The firſt was called Opobalſamum, or the Juice of the Balſam, which was the fineſt kind, compoſed of that greeniſh liquor found in the kernel of the fruit. The next, was Carpobalſamum, made by expreſſion of the fruit when in maturity. The third, was Xylobalſamum, the worſt of all; it was an expreſſion or decoction of the ſmall new twigs, of a reddiſh colour. But the principal quantity of balſam, in all times, was, Mr Bruce thinks, produced by inciſion, as it is at this day. The tree is cut by an axe, when the juice is in its ſtrongeſt circulation, in July, Auguſt, and the beginning of September. From this inciſion, the balſam is received into a ſmall earthen bottle, and every day's produce gathered, and poured into a larger bottle, which is kept cloſely corked.

This balſam, as at firſt received into the bottle, from the wound made in the tree, is of a light yellow colour, apparently turbid, in which there is a whitiſh caſt. As it ſettles,

tles, it turns clear, and loſes the milkineſs which it at firſt had when flowing from the tree. It has then the colour of honey, and appears more fixed and heavy than at firſt. After being kept for years, it grows a much deeper yellow, and of the colour of gold. Mr Bruce tells us he has ſtill ſome of it, which he got from the Cadi of Medina in 1768. It is now, he obſerves, as deep in colour as the yelloweſt honey; it is perfectly fluid, and has loſt very little either of its taſte, ſmell, or weight.

The ſmell of balſam, in its recent ſtate, is at firſt violent, and ſtrongly pungent. It diſſolves eaſily in water. If dropt on woollen, it will waſh out, and leaves no ſtain. It is of an acrid, rough, pungent taſte. By the Arabs it is uſed, Mr Bruce tells us, in all complaints of the ſtomach and bowels. It is reckoned powerfully antiſeptic, and uſeful in preventing the infection of the plague; but it is particularly eſteemed by the ladies as a coſmetic. The method of uſing it, is, by firſt going into the warm bath till the pores are opened, and then anointing with a ſmall quantity, which the veſſels abſorb.

Among other vegetables not aſcertained by botaniſts, is that furniſhing the Gum Myrrh. This point, however, Mr Bruce has alſo endeavoured to determine with accuracy. When on the borders of the Troglodyte country, he made many attempts to procure branches of the myrrh tree; but in vain: at leaſt he could obtain no branches ſufficient to riſk a drawing from. But, ſome weeks after this, when he was walking at Empas, a Mahometan village about twenty miles ſouth from Gondar, the capital of Abyſſinia, he ſaw a large tree, with the whole upper part of the trunk ſo covered with boſſes or knobs of gum, as to appear monſtrouſly deformed. And, upon farther inquiry, he found that it had been brought, many years before, from the myrrh country, by merchants, and planted there for the ſake of its gum. Neither the origin of the tree, which they called Saſſa, nor the gum upon it, could allow him for a moment to doubt, that this was the tree from which a gum is obtained, which had often been brought him from the myrrh country. And he had the additional ſatisfaction to find the tree all covered over with beautiful crimſon flowers,

flowers, of a very extraordinary and large conſtruction. Mr Bruce ſuppoſes this to be the Opocalpaſum mentioned by Galen, and, with which, Galen complains that the myrrh was then often mixed. This gum, which is now called Saſſa, upon being put into water, ſwells, turns white, and loſes all its glue. The tree, Mr Bruce tells us, grows to a great height, not inferior to that of an Engliſh elm; and the one which he found at Empas, was about two feet in diameter. He here gives us a very minute deſcription of the tree, and of its beautiful flower, which are illuſtrated by an accurate drawing; without which, any deſcription of it could hardly be intelligible. The flower, however, has no odour; and he never ſaw any fruit or ſeed which the tree bore.

Beſides theſe, Mr Bruce here preſents us with accurate deſcriptions, and elegant figures, of ſeveral curious and beautiful vegetables; eſpecially of the Ergett, Enſete, Kol-Quall, Rack Gir-Gir, Kantufa, Gaguedi, Wanzey, Farek, Kuara, and Walkuffa. But, as none of theſe ſeem to be employed in medicine; without taking any farther notice of them, we

ſhall next give ſome account of what he ſays of the Wooginoos, or Brucea Antidyſenterica.

This ſhrub, he obſerves, is a production of the greateſt part of Abyſſinia, eſpecially of the ſides of the valleys in the low country. The figure with which we are here preſented, was drawn at Hor-Cacamoot, in Ras el-Feel, where the wooginoos grow abundantly, and where dyſenteries prevail continually; Heaven having put the antidote in the ſame place with the poiſon. Some weeks before Mr Bruce left Gondar, he had been much tormented with dyſentery; and when he happened to be at Hor-Cacamoot, his diſeaſe, which had reſiſted every remedy he could think of, threatened the moſt imminent danger. By the advice of the natives, he had recourſe to the bark obtained from the root of this tree. This root is nearly as thick as a parſnip, and is covered with a clean, clear, wrinkled bark, of a light brown colour, which is eaſily peeled off from the root. The native who directed him to the uſe of it, after having removed it from the root, and cleared the inſide of it from a whitiſh membrane, laid it to dry in the ſun, and afterwards reduced it to a powder. Of this

this powder, Mr Bruce took, for the firſt doſe, about an heaped tea ſpoonful, in a cup of camel's milk; and two of theſe doſes were taken in the day. On the firſt day, he found little alteration; but, on the ſecond, he found himſelf ſenſibly better; and, by the ſixth or ſeventh, he was cured. In the courſe of his journey through Sennaar, where dyſenteries prevail very much, he found that all the inhabitants were acquainted with the virtues of this plant; and he uſed it ſucceſsfully in many other caſes.

It is, he obſerves, a plain ſimple bitter, without any aromatic or reſinous taſte; but it leaves in the throat and palate ſomething of roughneſs. Mr Bruce brought the ſeeds of this ſhrub to Europe; and it has grown in every garden into which it has been introduced. It was not before known to botaniſts; and Sir Joſeph Banks, juſtly celebrated for his extenſive knowledge in botanical ſcience, has given it the name of Brucea Antidyſenterica.

In a printed letter which has lately been ſent to medical practitioners in many different parts of Britain, by Mr J. Butt, of Bartlet's Buildings, London, it is aſſerted, that a bark lately

brought in conſiderable quantities from America, under the title of Cortex Anguſturæ, is the bark of the Brucea Antidyſenterica, or Wooginoos of Abyſſinia; and that, excluſive of other qualities, it is found, in the cure of fevers, to be much ſuperior to the Peruvian bark. Of the medical virtues of the Cortex Anguſturæ, we have not yet ſufficient experience to ſay any thing from our own obſervation. And, on what botanical deſcription of the tree, from which it is obtained, it has been aſſerted to be the ſame with the Brucea Antidyſenterica, we do not know. But we may obſerve, that the Cortex Anguſturæ, as obtained from London, appears to us to be eſſentially different, both in its appearance and ſenſible qualities, from the dried bark of the Brucea Antidyſenterica, obtained from the trees growing in the botanical garden of this city, and which were raiſed from ſeeds given to the late Dr Hope by Mr Bruce.

Another article, of which Mr Bruce treats, and which may be conſidered as deſerving particular notice, is the Cuſſo, or Bankſia Abyſſinica, as it is now called. This, he tells us, is

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one of the moſt beautiful, as well as one of the moſt uſeful trees of Abyſſinia. It is an inhabitant of the high country, and indigenous there; and he conſiders it as an example of the wiſdom of Providence, that it does not extend beyond the limits of the diſeaſe, of which it was intended to be the cure.

The Abyſſinians, he obſerves, of both ſexes, and at all ages, are troubled with a terrible diſeaſe, which cuſtom, however, has enabled them to bear with a kind of indifference. Every individual, once a month, evacuates a large quantity of worms, of the kind known by the name of Aſcarides. The method of promoting theſe evacuations, is, by infuſing a handful of dry cuſſo flowers in about two Engliſh quarts of bouza, or the beer which they make from teff. After infuſion for the ſpace of a night, it is fit for uſe next morning. During the time the patient is under the operation of the cuſſo, he makes a point of being inviſible to all his friends, and continues at home from morning till night. It is alleged, that the want of this medicine, is the reaſon why the Abyſſinians do not travel; or, if they do,

do, why moſt of them are ſhort lived. The ſeed of this tree is very ſmall, and it ſheds its ſeed very eaſily; from which circumſtances, no great quantity can be gathered: and Mr Bruce thinks, that it is probably from this circumſtance, that the flower is ſubſtituted. It is of a bitter taſte, but is not nearly ſo ſtrong a bitter as the ſemen ſantonicum.

The Cuſſo ſeldom grows above twenty feet high, and is very rarely ſtraight. It is commonly planted near churches, for the uſe of the town or village. The leaf is about two inches and a quarter long, divided into two by a ſtrong rib. It is of a deep unvarniſhed green, exceedingly pleaſant to the eye. The fore part is covered with ſoft hair or down. The flower is at firſt of a greeniſh colour, tinged with purple; but, when full blown, the outer leaves are altogether of a deep red or purple; the inner ones are white, and conſiſt of five petals, reſembling another flower. In the middle, is a ſtrong piſtil, with a round head, ſurrounded by eight ſtamina of the ſame form, loaded with farina. The bark of the tree is ſmooth, of a yellowiſh white, inter-

ſperſed

ſperſed with brown ſtreaks, which paſs through the whole body of the tree.

The better to illuſtrate the deſcription of this vegetable, Mr Bruce has given two very elegant engravings of it. And, as he aſſures us that the figures are true and exact beyond exception, he is inclined to hope, that this tree may be found in the Weſt Indies or America. Since it proves a gentle, ſafe, and efficacious medicine in Abyſſinia, he does not doubt, that the ſuperior ſkill of European phyſicians may turn it to the advantage of mankind. In conſequence of the eſtabliſhed prerogative of diſcoverers, Mr Bruce has named this beautiful and uſeful tree after that illuſtrious botaniſt Sir Joſeph Banks, diſtinguiſhing it by the title of Bankſia Abyſſinica.

European botaniſts have not probably been ſo ſucceſsful with this tree, as with the Brucea; at leaſt no mention is made of its growing, either at Kew, or in any of the other gardens which Mr Bruce enriched with ſeeds. If, however, fertile ſeeds can be procured, a trial ſhould be made to propagate it in the botanic gardens

gardens at Jamaica and St Vincents, or in ſome other proper ſituation in our Weſt India iſlands. For, after the induſtrious reſearches of able botaniſts, we think there is reaſon to fear that it is not indigenous there.

The laſt vegetable production of which Mr Bruce treats, is the Teff. This is a grain commonly ſown over all Abyſſinia, where it ſeems to thrive equally in all ſorts of ground; and from it is made the bread in common uſe throughout the whole country. The Abyſſinians, he obſerves, have indeed plenty of wheat, and ſome of it of excellent quality, from which they make very fine wheat bread: but this is chiefly confined to people of the firſt rank. Teff, on the other hand, is uſed by all ſorts of people, from the King downwards; and there are kinds of it which are eſteemed fully as much as wheat. The beſt is as white as flour, exceedingly light, and eaſily digeſted; but there are others of a browner colour, ſome of them nearly black. This laſt is the food for ſoldiers and ſervants. Many different cauſes produce this variation of colour. The lighter the earth is, in which it grows, the bet-

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ter and the whiter will the teff be; and the teff ripening before the heavy rains, is whiter and finer than it is afterwards. Much of its whiteneſs alſo depends upon ſifting the huſk from it after it is reduced to flour. This flour, made into a lump with water, is put into an earthen jar, at ſome diſtance from the fire, where it remains till it begins to ferment, or turn ſour. It is then baked into cakes of a circular form, and about two feet in diameter. This bread is of a ſoft ſpongy quality, and of a ſouriſh taſte, not diſagreeable. Two of theſe cakes every day, and a coarſe cotton cloth once a year, are, Mr Bruce tells us, the wages of a common ſervant.

The Bouza, or common beer of the country, is made from the teff in the following manner. The teff bread, well toaſted, is broken into ſmall pieces, and put into a large jar. Warm water is then poured upon it. It is afterwards put by the fire, and frequently ſtirred for ſeveral days, the mouth of the jar being cloſe covered. After being allowed to ſettle for three or four days, it acquires a ſouriſh taſte, and is then what they call Bou-

za.

za. In Atbara, bouza is made in a ſimilar manner; only, inſtead of teff, cakes of barley meal are employed. Both liquors, Mr Bruce obſerves, are very bad; but the worſt is that made of barley. Theſe liquors are probably very ſimilar to the Quas of the Ruſſians, which is made of cakes formed of a mixture of rye-meal and malt.

The plant itſelf is herbaceous. From a number of weak leaves, proceeds a ſtalk about twenty-eight inches in length, not perfectly ſtraight, and pointed or knotted at particular diſtances. About eight inches from the top, a head is formed of a number of ſmall branches, upon which it carries the fruit and flowers. The flower is crimſon, and ſcarcely perceptible by the naked eye, but from the oppoſition of colour. The piſtil is divided into two, ſeemingly attached to the germ of the fruit, and has at each end ſmall capillaments forming a bruſh. The ſtamina are three in number; two on the lower ſide of the piſtil, and one on the upper. Theſe are each of them crowned with two oval ſtigmata, at firſt green, but afterwards of a crimſon colour. The fruit is found

found in a capſula, conſiſting of two conical leaves, which, when cloſed, ſeems to compoſe a ſmall conical pod, pointed at the top. The fruit or ſeed is oblong, and not ſo large as the head of the ſmalleſt pin; yet it is very prolific, and produces theſe ſeeds in ſuch quantity, as to yield a very abundant crop.

It is, Mr Bruce thinks, a matter of doubt, whether this grain was known to the Greeks and Romans. He thinks it, however, very improbable, connected as Egypt and Ethiopia were for the firſt ages, both by trade and religion, that a grain, of ſuch conſequence to one nation, ſhould be utterly unknown to the other. But the ancient writers have deſcribed moſt of their grains ſo lamely, that we cannot expect to arrive at any certainty on this ſubject. From the ſimilarity of name, however, he offers it at leaſt as a conjecture, that the grain mentioned by Pliny under the title of Tiphe, was the Teff of Abyſſinia.

After treating of the moſt beautiful and intereſting vegetables, Mr Bruce next gives ſome account of the moſt ſtriking quadrupeds, birds, and fiſhes, which he met with in the courſe

courſe of his travels. And he concludes with ſome remarks on the pearls of the Red Sea. But although his accounts of theſe may well merit the attention, and excite the curioſity of naturaliſts; yet they are not ſo immediately connected with medicine, or medical philoſophy, as to fall within the plan of our work.

XIV.

XIV.

Some Remarks on the Prevalence of the Atrophia Lactantium. *By* Joſhua Walker, M. D. *Phyſician to the General Infirmary at Leeds.* Vide *Memoirs of the Medical Society of London, Vol. II.* 8vo, London.

THE Atrophia Lactantium, Tabes Nutricum, or that emaciation which ariſes from the ſuckling of children, is a diſeaſe with which phyſicians are not unacquainted. But its more frequent occurrence, Dr Walker obſerves, in the town and neighbourhood of Leeds, renders it now a ſubject of more ſerious conſideration than formerly, and eſpecially to the inferior claſſes of females, to whom it is particularly incident. It muſt therefore appear to be a matter of importance to point out the cauſe of this growing malady, and to excite the attention of practitioners towards it.

It has, he remarks, been obſerved with regret in ſeveral parts of Britain, and, among o-

thers, at Leeds, that ſince the more plentiful introduction of tea into the families of the induſtrious poor, by the late reduction of its price, the diſeaſe which is here treated of has made an unuſually rapid progreſs. The difficulty with which animal food is procured by the lower ranks of ſociety, in ſufficient quantity, has led many of them to ſubſtitute, in place of more wholeſome proviſions, a cheap infuſion of this foreign vegetable; the grateful flavour, and perhaps, it may be added, the narcotic quality of which, is found to create an appetite for itſelf in preference to all other kinds of aliment: while, at the ſame time, the lowering effects of tea drinking, lead too many of them to ſeek for relief from ſpirits, at the expence of health, and the ſure conſequences of penury and want.

As this change in the article of diet has been very generally made, eſpecially by the females, their conſtitutions have been rendered much leſs able to bear evacuations of any kind, and particularly that which takes place by nurſing. And Dr Walker tells us, he can with truth affirm, that during theſe laſt two years, more than two hundred patients of this denomination

mination have fallen under his notice. From the inquiries which Dr Walker has been led to make, reſpecting the nature of their diet, their almoſt invariable reply has been, that they have chiefly depended upon tea for their ſupport; while, at the ſame time, they were permitting an apparently healthy child to draw the whole of its nouriſhment from them.

Dr Walker thinks, that the ſymptoms of this diſeaſe clearly prove its foundation to be laid in debility, and an impoveriſhed ſtate of the whole ſyſtem, ariſing from a deficiency of nutritious aliment, while the conſtitution particularly requires it, to repair the continual waſte which is the conſequence of ſuckling. He conſiders the lungs as being only ſymptomatically affected, in a ſecondary way.

The patient firſt complains, he obſerves, of languor and general weakneſs, loſs of appetite, fatigue after exerciſe, even of the moſt gentle kind, and pains in the back and limbs. After theſe, ſymptoms of general atrophy come on; the face, in particular, grows thin, and is marked by a certain delicacy of complexion, and paleneſs about the noſe, but with a ſmall

degree of ſettled redneſs in the cheeks. Soon after this, if the patient ſtill continue to give ſuck, ſhe is ſeized with tranſitory ſtitches in the ſides, under the ſternum, or in ſome other part of the thorax. Theſe are accompanied with a ſhort dry cough, and ſlight dyſpnœa. The pulſe alſo becomes frequent, but ſeldom ſo hard as in the inflammatory ſtate of genuine phthiſis pulmonalis. Morning ſweats next make their appearance; abſceſſes are often formed in the lungs; pus, mixed with mucus, is expectorated; the general weakneſs increaſes; the emaciated patient is unable to ſupport an erect poſture, and at laſt dies literally exhauſted.

With reſpect to the method of treating this diſeaſe, Dr Walker obſerves, that his deſign is rather to point out the cauſe of its preſent unuſual prevalence, that ſuitable cautions may in due time be given to the unſuſpecting ſufferers, than to offer to the public any new mode of practice. The plan of cure which he chiefly propoſes, is the following: 1*ſt*, The mother muſt wean her child immediately on the appearance of ſymptoms of debility. 2*dly*, The patient's diet muſt be changed from tea, and the leſs nutritive vegetables, to milk, and its

its various preparations. Broth, and a ſmall quantity of ſolid animal food, with a due proportion of bread and eſculent roots, are alſo to be enjoined. And, where the poverty of the patient does not prevent it, jellies, chocolate, ſago, ſalep, and tapioca, are alſo to be adviſed. 3*dly*, The animal food which is allowed ſhould always be taken for an early dinner, and by no means late in the afternoon or evening.

In addition to this plan of regimen, however, he recommends alſo the uſe of gentle tonics, and particularly the following mixture of Gum Myrrh and Sal Martis; which, with ſome alteration, is the ſame recommended by Dr Griffith in his eſſay on hectic fever.

℞ Gummi Myrrhæ pulv. drachmam unam.
Tinct. Cort. Peruv. drachmas ſex.
Tere ſimul, et adde ſenſim.
Aq. Fontanæ uncias ſex.
Salis Nitri ſcrupulos duos.
Salis Martis grana duodecim.
Syrupi Balſamici ſemunciam. f. Miſt. cujus capiat ægra unciam, mane jejuna, hora undecima matutina et quarta pomeridiana.

In ſome caſes, where there appears to be an exacerbation of the fever in the afternoon, Dr Walker has thought it more uſeful to confine the adminiſtration of this remedy to the forenoon, and to direct a few ſpoonfuls of ſaline julep to be taken frequently in the afternoon, and during the night, if neceſſary.

If, for the courſe of a week after this mixture has been regularly adminiſtered, the patient remain free from pain, or a ſenſe of ſtricture in the thorax, or any other ſymptoms indicating an inflammatory affection of the lungs, we may, Dr Walker thinks, hope for a favourable termination of the diſeaſe. In this caſe, bleeding, he contends, ſhould not be permitted even in the ſmalleſt quantity, as the patient's ſtrength, as well as general habit, have been ſufficiently reduced by the preceding circumſtances of lactation and improper diet.

If, however, when the diſorder has been neglected, and the patient has continued to give ſuck longer than her ability will permit, the ſymptoms indicate a more advanced ſtate of the diſeaſe, and fixed pains, in ſome part of the thorax, come on, with oppreſſed breathing, and

and a frequent hard pulſe, then, he thinks, a ſmall bleeding, to the amount of two or three ounces, may be of uſe. And inſtead of myrrh, iron, bark, and vitriolic acid, it will be adviſeable to take off the inflammatory determination to the lungs, by ſtrictly enjoining a milk and vegetable diet; by keeping the bowels gently open with the mildeſt laxatives; by moderating the ſymptomatic fever with cooling ſaline ſubſtances; and by palliating the cough with mucilaginous medicines.

The inflammatory ſpaſm, or conſtriction at the thorax, ſhould at the ſame time be relieved by the application of bliſters to the pained part, and renewing them as they heal, rather than by keeping them open. When moſt of the inflammatory ſymptoms are thus removed, theſe patients then bear the uſe of myrrh, watery infuſions of bark, and elixir of vitriol, with conſiderable advantage; which are found, by experience, to be much more generally beneficial in theſe ſymptomatic caſes, than in genuine phthiſis ariſing from the inflammation and ſuppuration of tubercles in the lungs themſelves.

If the diſeaſe be ſtill farther advanced, and accompanied with morning ſweats, purulent ſpitting, proſtration of ſtrength, and the utmoſt degree of debility, both reaſon and experience, he tells us, point out the expediency of ſupporting the patient's ſtrength, by reſtorative diet, allowing a ſmall proportion of animal food at leaſt once a day.

XV.

XV.

On the Efficacy of the Gummi rubrum aſtringens Gambienſe, or, as ſome term it, the Gummi Kino, in Intermittent Fevers, and certain preternatural diſcharges. In a letter to Dr Lettſom from Anthony Fothergill, M. D. *&c.* Vide *Memoirs of the Medical Society of London, Vol. II.* 8vo, London.

THE preſent inquiry reſpecting the Gum Kino, was, the author informs us, begun at the deſire of the late celebrated Dr John Fothergill, who firſt introduced this new aſtringent gum into the Materia Medica. Dr A. Fothergill had formerly communicated to his excellent friend ſome experiments on its chemical and pharmaceutical properties; but that paper is, it ſeems, now miſſing. The preſent paper gives ſome account of its medical virtues.

As

As the Kino contains an aromatic, combined with an aſtringent quality, Dr A. Fothergill conſidered it as in ſome degree approaching to the Peruvian bark. It ſeemed, therefore, not unreaſonable to ſuppoſe, that it might poſſibly, in ſome caſes, ſupply its place. This led him to try it in intermittent fevers, and preternatural diſcharges. In ſome caſes, it ſucceeded far beyond his hopes; in others, it diſappointed his expectation. But, to enable the reader to form a proper eſtimate of its properties, he here preſents us with a ſhort, yet accurate detail of the chief caſes in which he employed it.

The firſt caſe here related, is that of a girl in the eighteenth year of her age, who had for two months been ſubjected to a quotidian ague, which had reſiſted the Peruvian bark, and ſeveral other medicines. Finding attempts to cure at home unſucceſsful, ſhe came under the care of Dr Fothergill as an out-patient at the Northampton hoſpital. He directed for her the Gum Kino, under the form of tincture, prepared by diſſolving two ounces of it in a pound of proof ſpirit. Of this tincture, half an ounce was directed to be taken an hour

hour before the fit, in a draught of herb tea, and to be repeated every four hours during the intermiſſion. The fits ſoon became milder, and in about a month the ague wholly diſappeared.

A girl, aged fourteen, had been for ſix weeks affected with a quotidian ague, attended with the uſual ſymptoms. After an emetic, ſhe took every four hours a ſcruple of the Gum Kino in herb-tea. It occaſioned no ſickneſs or nauſea; on the contrary, her appetite, during its uſe, daily improved. In leſs than ten days, the ague ceaſed.

A woman, aged thirty-ſeven, was admitted into the Northampton hoſpital, for hyſteric ſymptoms. In ſix weeks, ſhe was conſiderably relieved from theſe, by the uſe of Extract of Bark, and Volatile Fœtid Spirit. But even during the liberal uſe of the bark, ſhe was ſeized with a tertian intermittent, againſt which that grand febrifuge, as it has been termed, ſeemed to have loſt its efficacy. In its place, therefore, Dr Fothergill ordered half a dram of the Kino to be taken every four hours between the paroxyſms, without any previous emetic. This ſhe continued about a month,

month, when the ague left her, and ſhe was diſcharged.

A middle-aged man was admitted into the hoſpital, after having laboured under a tertian ague for four months. He had taken Peruvian bark for about three months, but without any laſting benefit. His diſeaſe was attended with ſevere cough. After an emetic of antimonial wine, Dr Fothergill directed half an ounce of the tinctura è Kino to be taken every four hours in warm linſeed tea. A common linctus was ordered to be taken occaſionally when the cough was troubleſome. The ague entirely diſappeared in leſs than a month; but the cough ſtill, in ſome degree, continued. At laſt, however, it yielded to country air.

Beſides theſe, Dr Fothergill, in the paper before us, relates ſeveral other caſes of intermittents, which were removed during the uſe of this remedy. But, among others, we have the following, in which it was unſucceſsful. A middle-aged man, of a ſickly conſtitution, was admitted into the hoſpital for an intermittent, under which he had laboured for ſeveral months. During that period, it had aſ-

ſumed

ſumed various types, and had of late become totally irregular. After an antimonial emetic, the Tinctura è Kino was given between the fits, as in the former caſes. By this means, the diſeaſe became leſs ſevere; but ſtill the paroxyſms returned at irregular periods, although the medicine was continued almoſt for two months. Tincture of bark was now given in its ſtead, and an antimonial ſudorific during the paroxyſm, but without any better ſucceſs; for the intermittent continued as obſtinate as ever during the remaining Winter, and even till the Spring was conſiderably advanced, when it went off ſpontaneouſly; rather, perhaps, in conſequence of the genial warmth of the ſeaſon, than real utility derived from any of the medicines. From caſes ſimilar to this, Dr Fothergill obſerves, wonderful cures of agues are often ignorantly attributed to a variety of the moſt abſurd and inſignificant remedies, merely in conſequence of the noſtrum being adminiſtered at a lucky period.

In addition to this caſe, we ſhall relate only one other, which, in its circumſtances, was ſomewhat peculiar. A robuſt man, in the fortieth year of his age, was admitted for an

Autumnal

Autumnal quartan, which had continued obſtinate above four months. The cold fit generally laſted full three hours, during which his appetite was voracious, and he devoured not only his own food, but that of the other patients, when he could get it. The rigour was ſucceeded by a ſevere hot fit, which continued for ſeveral hours. After an emetic, he took half a dram of the Gum Kino, every four hours, during the intermiſſion. The ſymptoms ſoon abated, and at length ceaſed for about ten days. Then, however, they returned with greater violence. The emetic was now repeated, double doſes of the gum were adminiſtered, and an anodyne pill at the beginning of the hot fit. The paroxyſms, from this time, became milder, his appetite more moderate, and, in about three weeks longer, the ague entirely diſappeared.

Upon the whole, from the experience which Dr Fothergill has had of the uſe of this aſtringent gum in intermittents, particularly where the Peruvian bark had failed, he conſiders it as well deſerving the attention of medical practitioners. It may not, however, be improper to remark, that, in none of the inſtances here mentioned,

mentioned, was the intermittent immediately ſtopt. In many of them, it was continued for the ſpace of ſeveral weeks; and, during that period, there is at leaſt a chance that a cure may have taken place, either from ſome other cauſe, or even what may be called ſpontaneouſly.

With regard to the uſe of this medicine in preternatural diſcharges, Dr Fothergill obſerves, that he has tried it with various ſucceſs. He does not, however, detail the caſes in which he uſed it; but obſerves, in general, that in profuſe diſcharges of the catamenia, it has ſometimes afforded ſignal relief. He has likewiſe found it uſeful in recent diarrhœas and dyſenteries, after neceſſary evacuations. And, in a youth of fourteen, who from infancy had been troubled with an incontinency of urine, remarkable benefit was obtained from the daily uſe of the Gum Kino, made into an electuary with the Syrupus è Meconio.

In fluor albus, it has generally, he obſerves, diſappointed his expectations. In one caſe of chronic dyſentery, in another of diarrhœa, and in a third of ſeminal weakneſs, it was tried for a long time with no better ſucceſs. He thinks

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it, however, but fair to obſerve, that the two former caſes afterwards baffled a variety of other remedies, and at length terminated fatally. The latter remained far from being cured. But, as he juſtly obſerves, on what article of the Materia Medica can we rely, when internal organs are decayed, or have loſt their natural tone? And although we cannot, from any experience of our own, confirm Dr Fothergill's opinion with reſpect to the advantages of the Gum Kino in intermittents; yet, from numerous obſervations in actual practice, we are convinced, that, where an aſtringent is indicated, the Gum Kino may be often employed with peculiar advantage.

XVI.

XVI.

Obſervations on the Effects of Tartar Emetic, and of Arſenic, by external abſorption. Communicated in a Letter to Dr Lettſom, by John Sherwen, *Surgeon.* Vide *Memoirs of the Medical Society of London, Vol. II.* 8vo, London.

THE ingenious author of the obſervations now under conſideration, anxious for the improvement of medical ſcience, has made himſelf the ſubject of experiments, both curious and intereſting, with the view of aſcertaining the effects of two of the moſt powerful articles of the Materia Medica. And he here freely communicates the reſult of them to the public.

On the 18th of October 1785, he rubbed upon the palms of his hands, with the aſſiſtance of a few drops of water, five grains of Emetic Tartar. He was at that time in per-

fect health. The firſt ſenſible effect, was a conſiderable glow of heat upon the parts. But, in about half an hour, he dropt aſleep as uſual, and reſted well till four in the morning. He then awoke, contrary to his uſual cuſtom, and was ſenſible of a very ſlight nauſea. It was, however, ſo ſlight, that he thinks it might perhaps be fancy only. His ſkin burnt a little, and was rather uneaſy; but, in leſs than an hour after, he began to perſpire, and continued doing ſo, in a pleaſant manner, till his uſual hour of riſing. But, at that time, the perſpiration increaſing, he continued in bed till ſeven; and was convinced, that, had he been able to have continued longer in bed, he might have induced a copious ſweat, by the uſe of warm diluting drinks. Upon riſing, and wiping off the perſpiration with a dry cloth, he found no inconvenience, excepting ſome little diſinclination to breakfaſt.

As the emetic tartar, in the form of powder, though aſſiſted with moiſture, did not ſeem to rub in pleaſantly, he varied the form, by diſſolving one dram in two ounces of water, which produced a ſaturated ſolution, part of the emetic tartar remaining undiſſolved at the

the bottom of the phial. At ten o'clock at night, he again rubbed into his hands and wriſts eighty large drops of this ſolution, containing, as nearly as he could judge, nine grains of the tartariſed antimony. The ſame quantity was, at the ſame time, uſed by two young men in his family, who did not know that it was a ſolution of emetic tartar, as he wiſhed to hear their account in the morning, uninfluenced by fancy.

Mr Sherwen himſelf awoke at four o'clock, as before, hot, and rather uneaſy. His pulſe was quickened, as if he had drank wine. He felt ſome ſlight nauſea, and a periſtaltic motion. In about an hour, his ſkin began, as before, to moiſten; and at ſix o'clock perſpiration came on. At this time he aroſe; and, in the courſe of two hours, found the antimony to act twice as a gentle laxative.

Both his coadjutors felt a burning ſenſation in the palms of their hands, and were ſweated in the night. One was ſick the next forenoon; the other was ſlightly ſick, and had a briſk evacuation by ſtool; but was cured of a cold which he had upon him at the time when he went to bed.

For two or three days after this experiment, Mr Sherwen was ſenſible of an increaſed flow of urine, and ſome little tendency to looſeneſs, a thing very unuſual to him. Soon after this, he prevailed upon a lady of a very delicate nervous habit, who had a ſlight cold and inflammation of the tonſils, to try the ſame remedy, *viz.* five grains of tartariſed antimony, rubbed in with the aſſiſtance of a few drops of water. She ſlept as uſual, felt a burning ſenſation in the palms of her hands, and, once or twice in the night, awoke with nauſea, but no perſpiration. The ſame lady repeated the doſe in ſolution, to the quantity of ſeven grains. She experienced ſome ſlight perſpiration and nauſea. In the morning, it had the effect of an eaſy doſe of phyſic; and, throughout the following day, ſhe was ſenſible that her whole ſyſtem was acted upon by the medicine. Its moſt ſenſible effect, was a conſiderable increaſe of the flow of urine; and, two or three days after, ſhe obſerved a raſh, with conſiderable itching, all over her ſkin, which did not ſubſide in leſs than two days more.

A lady,

A lady, aged fifty, had long complained of pain in her ſide, loſs of appetite, and chronic weakneſs, which ſhe ſometimes attributed to a fall that ſhe met with ſix months before. At other times, ſhe aſcribed her diſorder, as women at that period do almoſt every diſorder, to the menſes flying about her. Her illneſs, however, in Mr Sherwen's opinion, was probably in a great meaſure owing to the drying up of an ulcerous inflammation in her leg, which had for ſome years been attended with a conſiderable diſcharge, and which had entirely ceaſed upon the application of a white powder given by a neighbour. Mr Sherwen prevailed upon this lady to rub ſeven grains of tartariſed antimony, with a few drops of water, upon her ſide, and the region of her ſtomach, where the pain was chiefly felt. She rubbed it in freely with her own hand. After uſing three or four doſes, he aſked what effect ſhe had obſerved. She ſaid, that it ſearched her all over; that ſhe ſweated ſo profuſely, her ſhift and the ſheets might have been wrung; that ſhe was ſick, but did not retch. After the uſe of this remedy, her leg began again to diſcharge freely; and ſhe felt

herſelf ſo much relieved, that ſhe deſired to have a continuation of the ſame medicine. She rubbed in, for ſome time, ten grains of the antimony every ſecond night, and obtained a perfect cure from many complaints which had been very obſtinate. Her diſeaſe, however, at laſt put on an intermittent appearance, in which the Peruvian bark produced a happy effect.

Theſe different experiments, afford, Mr Sherwen thinks, ſufficient evidence, that large quantities of tartariſed antimony may thus be introduced into the conſtitution with very little inconvenience. And there cannot, he affirms, be a doubt, that this mode of adminiſtering antimonials muſt be infinitely preferable to ſwallowing, when we wiſh them to act on the general ſyſtem as alteratives. If a putrid or bilious colluvies is to be evacuated from the ſtomach or inteſtines, a proper doſe, by the mouth, will always be preferred. But how many patients, he obſerves, labouring under ſcorbutic, herpetic, and leprous eruptions, have perſevered in the uſe of antimonial wine for months, nay, for years, with little or no benefit? If, ſays he, antimonials be uſeful in

theſe,

theſe, or any other chronic affections, let them in future be adminiſtered in the manner here propoſed. For thus the fluids of the human frame may be ſafely ſaturated with antimony in its moſt active form; and a proportion of this valuable medicine may thus, without exciting irritation in the ſtomach, paſs through the ſyſtem in one week, greater than in twelve months by the uſual mode of adminiſtering it.

That the diſcoveries reſulting from theſe important, though ſimple experiments of Mr Sherwen, may lead to uſeful concluſions in practice, to us appears highly probable; but his expectations from the ſuperiority of this mode of introducing antimony, are perhaps too ſanguine. And there is certainly ſome room for doubting, whether its effects, in the removal of leprous and herpetic complaints, are in any degree to be attributed, as he ſuppoſes, to the human fluids being ſaturated with this mineral ſubſtance in an active form. Perhaps the benefit derived from antimony, even when introduced into the blood by friction on the ſurface, is ſtill much more to be attributed to its action on the ſenſible muſcular

fibre, and even on the ſtomach itſelf, than to any change induced on the maſs of blood. But, whatever may be the principle on which the benefit reſulting from this practice is to be explained, it well merits future attention; and whether the real advantages derived from it ſhall hereafter be found to be very conſiderable or not, we muſt ſtill conſider ourſelves as much indebted to the ingenuity of Mr Sherwen for his obſervations on this ſubject.

In concluding his obſervations on this ſubject, Mr Sherwen thinks it neceſſary to caution patients againſt the uſe of acids. He had ſome reaſon to think, that he was himſelf injured by inattention in this reſpect. It has already been mentioned, that, for two or three days after the external application of the ſolution of tartariſed antimony, he felt an increaſe both of the urinary and inteſtinal diſcharges, from which he concluded that he was ſtill under the influence of antimonial particles, floating in the ſyſtem. At that time, he rubbed a few grains of tartariſed antimony, with his own hands, upon the ſkin of a patient afflicted with a dyſenteric fever, of a very malignant kind, which had evidently been acquired

by

by infection, and from which he could evidently trace the progreſs of infection to two other patients, who with ſome difficulty recovered. He waſhed his hands carefully immediately after, and thought no more of what he had done.

The next day, he ate a ſmall bunch of grapes; the following day another; and, in the afternoon, having occaſion to go through an excellent field of turnips, of which he is remarkably fond, he was tempted to indulge his palate. In the night, he was ſeized, ſoon after having been called up in the courſe of his profeſſion, with violent tormina, and almoſt inceſſant inclination to go to ſtool, with little or no evacuation. Often, after ſtraining ten minutes, not more than a few drops of mucus, ſlightly tinged with blood, would appear. In the morning, he took infuſion and tincture of ſenna, with ſoluble tartar, and diluted moſt copiouſly with water-gruel and mutton-broth, with a view to increaſe the quantity of the diſcharge, but with little effect, as the fluids which he drank in ſuch quantities quickly paſſed off by the kidneys, without waſhing the inteſtines. The teneſmus continued with racking

racking pain all day. At night, he was quieted by the uſe of a teſtaceous mixture, with plenty of Gum arabic, without having recourſe to Laudanum. By the uſe of the teſtaceous mixture, he got perfectly well in a few days, generally finding immediate relief as ſoon as it reached his ſtomach, though the ſeat of the pain was low down in the inteſtinal canal.

Unable to determine whether this complaint was excited by the abſorption of the tartariſed antimony, or by infection, Mr Sherwen thinks it beſt to leave the intelligent reader to his own reflections. The conſequence, however, upon his health, was, he tells us, ſuch, that he could not help conſidering as ſtumbling at the very threſhold, as it put a ſtop, for ſeveral days, to his career of experiments.

After Mr Sherwen had ſome ground for ſuſpecting that he had ſuffered ſo ſeverely from the tartariſed antimony, it may perhaps appear extraordinary, that the next ſubject of experimental inquiry ſhould be arſenic. He had long, however, he tells us, been anxious to hit upon ſome lenient mode of adminiſtering this powerful mineral, knowing that the

moſt

moſt valuable remedies have been diſcovered in the claſs of poiſons. Arſenic, taken internally, was ſome years ago ſtrongly recommended in France, for the radical cure of cancers. But the practice does not appear to have made any great progreſs even there.

Reflecting upon this ſubject, it occurred to Mr Sherwen, that as arſenic is but little ſoluble in water, it would be neceſſary to procure a more ſoluble preparation of it, in order to inſtitute fair and judicious trials. And Mr Sherwen flatters himſelf, that he has been fortunate in his endeavours to procure ſuch a preparation, which he has here freely communicated to the public, in hopes that ſome ingenious reader may aſſiſt in perfecting and rendering it uſeful to mankind. This preparation, which is made in the following manner, he ſtyles

Arſenicum Solubile vel Tartariſatum.

℞ Arſenici albi.

Chryſtallorum Tartari ſingulorum uncias duas.

Aquæ puræ libram unam. Coque per horam dimidiam; deinde cola per chartam,

tam, et rite evaporatum ſepone quo chryſtalli formentur.

It will immediately, he obſerves, occur to the intelligent chemiſt, that this is a preparation formed on the plan of the Antimonium Tartariſatum of the London Pharmacopœia. And Mr Sherwen obſerved with pleaſure, that he could, in this manner, with little trouble, produce an arſenical tartar, ſoluble in water, and of a beautiful appearance.

After having prepared the Arſenicum Tartariſatum, he made the firſt trials of it upon himſelf; and this duty is, he thinks, incumbent upon every one who wiſhes to ſtrike out new diſcoveries in medicine, eſpecially when he attempts the uſe of dangerous drugs. At ten o'clock at night, on the 27th of October, he rubbed one grain of it into the palms of his hands. He ſlept well as uſual; and, in the morning, thought he could obſerve a very ſenſible increaſe in the flow of urine, but could diſcover no other effect. He repeated the experiment the night following, in conjunction with two young gentlemen under his care. All of them experienced the ſame effect, ſome increaſe, *viz.* in the flow of urine, but nothing

thing elſe remarkable. On the 29th, they repeated the experiment with two grains each. The increaſed ſecretion of urine was remarkable in them all; and Mr Sherwen himſelf was ſenſible of ſome degree of naufea in the morning; from which he infers, that the medicine acted on the general ſyſtem.

On the 30th, he determined upon trying the ſame medicine inwardly; and, for this purpoſe, he directed a grain of the tartariſed arſenic to be rubbed up with half an ounce of ſugar, and then divided into ſixteen equal parts. The ſmallneſs of the doſe, he obſerves, may perhaps wear the appearance of timidity; but, in a buſineſs of this kind, it is, he thinks, impoſſible to act with too much caution, eſpecially as the quantity can be increaſed at pleaſure. He ſwallowed it undiluted. It excited ſome uneaſy ſenſation in the œſophagus, not unlike the heart-burn; and, ſmall as the doſe was, he could perceive its effects as a very powerful diuretic. The next night he repeated the ſame doſe, in conjunction with his two aſſiſtants and his coachman; and all of them experienced its effects as a diuretic.

About

About a month after this, Mr Sherwen ventured on a much larger doſe of the Arſenicum tartariſatum. On the 29th of November, at ten o'clock at night, he ſwallowed half a grain of it, diſſolved in half an ounce of water. In this experiment, he was deſerted by his fellow-labourers; but, with him, it was at leaſt attended with no bad effect. We are not, however, informed of the particular reſult of the experiment. For he tells us, that, in conſequence of ſome particular hurry next day, he either neglected to make a minute of the effect, or, if he did ſo, his paper has been miſlaid. From his not recollecting the particulars, however, we may readily conclude, that nothing very remarkable occurred; and the experiment at leaſt ſerves to ſhew, that the medicine may be taken to the extent of half a grain, with impunity, at leaſt. Other ſubjects having of late engaged Mr Sherwen's attention, he has never repeated theſe experiments. But he truſts, that the obſervations already offered, may induce ſome other practitioner to proſecute the inquiry.

We need hardly, we preſume, remind our reader, of a treatiſe on the ſubject of arſenic,

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employed as a medicine, which was publiſhed ſome years ago by the ingenious and induſtrious Dr Fowler of Stafford, and of which an account was given in a former volume of theſe Commentaries. From that treatiſe it appeared, that Dr Fowler had very extenſively employed arſenic internally, with ſucceſs, in the cure of intermittent fevers, and periodic headachs. By him, alſo, it was exhibited in a ſaline ſtate; but in place of bringing it to that condition by means of an acid, he had recourſe to the fixed vegetable alkali; and he employed it in a ſtate of watery ſolution, without its having been brought to the form of cryſtals. Still, however, the medicine which he employed may be conſidered as alkaliſed arſenic. But whether this mineral ſubſtance, when employed for medical purpoſes, is to be preferred in its alkaliſed or tartariſed ſtate; or whether, from either of them, we can derive good effects not to be had from other and leſs dangerous medicines, ſtill remains to be determined by future experience.

The few experiments here recorded, clearly prove, Mr Sherwen thinks, that the preparation

tion of arſenic which he employed, is poſſeſſed of great powers as a diuretic, independent of that further power which it is well known to poſſeſs, of exciting the moſt heart-felt ſickneſs and nauſea. And on this he is inclined to believe, that the efficacy of various emetics and hydragogue cathartics, in exciting the action of the abſorbent veſſels, often depends. And, if any reader, ſtruck with the importance of this ſubject, ſhould think of proſecuting the inquiry, ſome encouragement may, he thinks, be offered to him, from obſerving, that there was once a time, when practitioners would have dreaded the internal uſe of mercury, antimony, and perhaps hemlock, as much as we do, at this day, the internal adminiſtration of arſenic.

XVII.

XVII.

Obſervations on Cancers. *By* Henry Fearon, *Surgeon to the Surry Diſpenſary, and F. M. S.* Vide *Memoirs of the Medical Society of London, Vol. II.* 8vo, London.

MR Fearon ſets out with obſerving, that, in the paper before us, he is far from pretending, thoroughly to inveſtigate the cauſe, origin, and nature of cancer; a diſeaſe, with the ſucceſsful medical treatment of which, every candid and modeſt practitioner in phyſic will readily acknowledge himſelf unacquainted. When, therefore, he ventures to hazard the opinion of inflammation being the cauſe of Cancer; or, in other words, that it is always connected with the diſeaſe in a greater or leſs degree, it is more, he tells us, with the deſign of exciting the inquiries of other practitioners, than from the vain attempt

of elucidating perfectly a complaint hitherto enveloped in obſcurity.

From obſtructions, external injury, and the like, inflammation, he obſerves, in ſome degree enſues. And he is inclined to think, that if we were to treat cancerous complaints at an early period, as proceeding from inflammation, we would be much more ſucceſsful in practice. To this opinion and mode of cure, Mr Fearon was firſt led by an incident, which occurred in a particular caſe afterwards related. In that caſe, ſuppoſing, from the ceſſation of the menſtrual evacuation, that there would, for ſome time, be a greater quantity of blood in the conſtitution than it had been accuſtomed to bear, he thought advantage might be derived from ſubſtituting an artificial evacuation, inſtead of that which had ceaſed. The more he has ſince reflected on all the practice he has witneſſed, the more it has tended to confirm his opinion. For in all caſes, he obſerves, where he has ſeen Solanum, Mercury, Martial flowers, or Arſenic given, they did harm. And if, from Cicuta or Opium, any advantages appeared to enſue, they were but of ſhort duration.

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The cure of Cancer, according to Mr Fearon, is very ſimple, and conſiſts in bleeding, either topical or general, according to the ſeat of the complaint, or the part affected. In the beginning of ſcirrhous affections of the breaſt and teſtes, the mode he has adopted of taking away blood, is by leeches repeatedly applied to the parts. In this courſe, however, he tells us he has often been interrupted by the topical inflammation, produced by theſe animals, around the parts where they faſtened. In delicate females, he has thus often loſt a week before he could proceed to the reapplication of them. When ſymptoms lead him to ſuſpect the ſtomach, uterus, or any of the other viſcera, to be ſo affected, that the complaint either is, or will ſoon be cancerous, he has recourſe to general bleeding. But whether general or topical bleeding be employed, he conſiders perſeverance, for a ſufficient length of time, as neceſſary; and he aſſures us, that though the pulſe never indicated ſuch practice, yet the patients have not ſuffered by repeated bleedings. On the contrary, when they allowed a certain time of loſing blood to paſs, they felt a return of their ſymptoms,

and, of their own accord, deſired to be bled again.

To this plan of practice by repeated bleedings, Mr Fearon joined a milk and vegetable diet, avoiding wine, ſpirits, and fermented liquors. He alſo directed the belly to be kept open, and ſaturnine applications to be uſed externally. To illuſtrate and confirm this practice, different caſes are here related; and, from one of theſe, Mr Fearon, as has already been hinted, was led to adopt his preſent opinion reſpecting the nature and treatment of this affection.

The ſubject of the firſt caſe, was a poor woman about the fiftieth year of her age, a patient at the Surry Diſpenſary. She ſuſpected her complaints to have originated from her having been expoſed, for ſome time, to the inclemency of the weather, as ſhe then felt herſelf generally indiſpoſed, and went to bed. She complained of ſickneſs at her ſtomach and back; ſymptoms which ſhe ſuppoſed to have ariſen from the obſtruction of the menſes, which had not appeared for ſix weeks. Something warm was taken, with the view of promoting the uſual diſcharge; but in this hope ſhe

ſhe was diſappointed, as they never appeared, and her pains continued gradually to increaſe, extending all over her bowels, particularly after eating. Theſe ſymptoms continued for about ſixteen months, without any intermiſſion, excepting for a few days at a time. During that period, ſhe had repeatedly applied to ſeveral regular, as well as itinerant practitioners, but without obtaining the leaſt relief. Vomits, bliſters, purgatives, and every other remedy which had been tried, only increaſed her complaints.

When Mr Fearon firſt ſaw her, ſhe was amazingly reduced in fleſh. She complained of cold fits, attended with ſhiverings, and was affected with a ſwelling on the right ſide of her belly; on examination of which, he found that the abdomen was much diſtended, and he could feel a conſiderable local induration. She complained of thirſt; her appetite had been for ſome time on the decline; and no ſolids would lie on her ſtomach, as vomiting enſued ſoon after eating, attended with a diſcharge of blood, and a very offenſive acrid matter. Her reſpiration was difficult; her pulſe ſmall and frequent; ſhe was coſtive;

and her urine was in ſmall quantity, and high-coloured. All theſe ſymptoms increaſed for ſome time after Mr Fearon ſaw her, till death freed her from ſufferings which almoſt exceeded deſcription.

Permiſſion being obtained to open the body, the ſtomach was found to be the chief ſeat of the diſeaſe. Its great extremity was of a natural appearance, but contained a quantity of chocolate-coloured fluid, ſo extremely offenſive, that the ſmell produced ſickneſs, even with thoſe accuſtomed to diſſection. The middle of the ſmall extremity and pylorus formed a compound maſs, which was cloſely united to all the neighbouring parts. On the middle, and fore-part of the ſtomach, there was an ulcer about the ſize of half a crown, with uneven ragged edges, through which ſome of the fluid was diſcharged into the cavity of the abdomen. The duodenum, ducts, and gall-bladder, all adhered ſtrongly to the liver, and formed a maſs of great ſize. On being laid open, it diſcovered an extenſive cavity, with large cancerous knobs appearing on its ſurface. It is perhaps unneceſſary to add, that while the diſeaſe was here evidently

cancer,

cancer, the effects of inflammation were manifeſt, and perhaps, in ſome degree, led Mr Fearon to the plan which he has ſince employed for the treatment and prevention of this loathſome diſeaſe.

The next caſe here recorded, is that of a lady in Clifford ſtreet, who conſulted Mr Fearon for a lump which ſhe had diſcovered in her right breaſt. The firſt ſymptoms, were a ſtretching fulneſs in the part, attended with an oppreſſion at the ſtomach. As theſe complaints were ſimilar to what ſhe had been accuſtomed to feel preceding the appearance of her menſes, ſhe did not think it neceſſary to take any opinion of her caſe for a fortnight afterwards. But an increaſed hardneſs, with a darting pricking pain, particularly after being handled, juſtly alarmed her. She was now in the forty-ninth year of her age, and her menſes had not appeared for ſix weeks before ſhe perceived the lump, which was clearly a ſcirrhus forming. But, between the ſeventh and eighth week from the former appearance, ſhe had a plentiful flow of the catamenia, which laſted longer than uſual. During this, the lump in her breaſt ſubſided, and the pain went entirely off. As the cure was here

clearly to be attributed to the return of the menſes, Mr Fearon directed, that when theſe entirely ceaſed, bleeding ſhould be ſubſtituted to the amount of three or four ounces every ſix weeks or two months; that her belly ſhould be kept open, and that ſhe ſhould live abſtemiouſly. By theſe means, ſhe has now remained free from a relapſe for ſome years.

The next caſe related, is that of Elizabeth Robinſon, a patient at the Surry Diſpenſary. Before her admiſſion, ſhe had, for ſix months, been afflicted with a ſwelling and pain in her breaſt. The tumour was incompreſſibly hard to the touch, and gave her very acute pain after being handled. The nipple was contracted, and the veins of the ſkin were varicoſe. After Cicuta, Martial flowers, and Corroſive ſublimate, had been tried without ſucceſs, Mr Fearon ordered four leeches to be applied to the breaſt every ſecond day, directing, at the ſame time, a milk and vegetable diet. This plan ſoon produced a diminution of the ſwelling, pain, and all the concomitant ſymptoms; and in nine weeks ſhe appeared to be perfectly cured. From the loſs of blood, ſhe became very thin and pale, inſomuch,

inſomuch, that her acquaintance adviſed her not to loſe any more. But the uncommon benefit which ſhe experienced from the bleeding, induced her to perſevere; and ſhe has ſince recovered her health and vigour, which ſhe now enjoys without the leaſt interruption.

The laſt caſe we ſhall mention, is that of a gentleman aged fifty, who conſulted Mr Fearon for a ſcirrhous teſticle, which had been two years forming. During that time, the ſize, weight, and pain, had conſiderably increaſed, and the ſpermatic cord was a little thickened. The darting pains were ſo frequent at times, as to deprive him of his natural reſt. Mercury and ſea-bathing had been employed without effect. Upon his application to Mr Fearon, he ordered ten ounces of blood to be taken from the arm, and leeches to be applied to the part at leaſt thrice a-week. To this an abſtemious diet was conjoined, and his body kept open. This plan was continued only ten weeks, by which time he was completely cured.

From theſe facts, Mr Fearon concludes bleeding to be a ſpecific in the early ſtages of ſcirrhous complaints. And he adds, that even

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in apparently reduced and ſhattered conſtitutions, when the diſeaſe has been of long continuance, attended with affections of the lungs, ſcirrhus of the kidneys, liver, or any other viſcera, and, laſtly, even with a cadaverous countenance, becoming yellow, wan, and ſallow; the diſeaſe, being entirely beyond operation, while cicuta and opium fail of their effects, ſmall bleedings have often immediate influence in mitigating the ſufferings of patients, whoſe approaching fate cannot be prevented.

To theſe facts, Mr Fearon obſerves, many more might be added; but he thinks them ſufficient to demonſtrate the influence of blood-letting in this diſeaſe. There cannot be a doubt, that it will afford ſincere pleaſure to other practitioners, to find the ſucceſs of Mr Fearon's practice confirmed by their own experience. But when he repreſents blood-letting as a ſpecific in Cancer, we cannot help entertaining fears, that it will be found no more entitled to the appellation, than other boaſted ſpecifics, now almoſt entirely neglected. At the ſame time, if it ſhall be found even ſometimes advantageous,

vantageous, in combating the diſeaſe in its incipient ſtate, and in alleviating the ſufferings of the patient towards the laſt periods of it, practitioners muſt neceſſarily conſider this practice as well meriting attention and imitation.

XVIII.

XVIII.

The Philoſophy of Natural Hiſtory. *By* William Smellie, *Member of the Antiquarian and Royal Societies of Edinburgh.* 4to, Edinburgh.

IN the work now before us, the ingenious author, introduces his ſubject with ſome obſervations on the diſtinguiſhing characters of animals, plants, and minerals. Nothing, he obſerves, is apparently more eaſy than to diſtinguiſh an animal from a plant; and yet the proper diſtinction has puzzled the moſt acute inquirers, and perhaps exceeds the limits of human capacity. After ſhewing, that the attempts made to aſcertain the boundaries between the vegetable and animal kingdom, by Jungius, Ludwig, Linnæus and others, have proved altogether abortive, he endeavours to demonſtrate, from a variety of facts, that we are entirely ignorant of the eſſence and properties of life;

life; that plants make very near approaches to animals; and that this ſimilarity, as well as the difficulty of fixing the preciſe boundaries by which theſe two great kingdoms of nature are limited, are the direct conſequences of the organization of vegetables. This organic ſtructure, though greatly diverſified in different ſpecies of animals and vegetables, evinces, he thinks, that Nature, in the formation of both, has acted upon the ſame general plan. Since plants, as well as animals, are compoſed of a regular ſyſtem of organs, may we not, he adds, preſume that the vegetable part of the creation is not entirely deprived of every quality which we are apt to think peculiar to animated beings? He does not, he tells us, mean to inſinuate that plants can receive pleaſure or pain. But, as many of their motions and affections cannot be explained upon any principle of mechaniſm, he is inclined to think, that they originate from the power of irritability; which, though it implies not the perception of pleaſure or pain, is the principle which regulates all the vital and involuntary motions of animals.

It is, our author thinks, unneceſſary to mark the diſtinction between vegetables and minerals. For, while the tranſition from the animal to the plant is effected by ſhades ſo imperceptible as to elude the moſt acute obſervers; between the plant and the mineral, there is a vaſt chaſm in the chain of being. In bodies purely mineral, not a veſtige of organization can be diſcovered. But, although Nature ceaſes to organize, ſhe continues to arrange. Here Nature, he obſerves, regardleſs of ſymmetry, conjoins heterogeneous materials, of which ſhe compoſes original maſſes. Many ſtones, flints, and other concretions, afford examples of this kind; and, though more art appears in the formation of metals, yet their ſtructure exhibits no veſtiges of organization.

Having ſhewn the extreme difficulty of fixing the boundaries which ſeparate the animal from the vegetable kingdom, Mr Smellie proceeds to the more pleaſing taſk of enumerating ſome of thoſe beautiful analogies which ſubſiſt between them. And here, under the different heads of Structure and Organs, Growth and Nouriſhment, Diſſemination and Decay,

Decay, he preſents the reader with many ingenious and curious obſervations.

In treating of the organs, and general ſtructure of animals, he gives a ſhort view of the external and internal parts of the human body. He compares this ſtructure with thoſe of Quadrupeds, Birds, Fiſhes, and Inſects; and concludes with an inquiry, how far the peculiarities of ſtructure are connected with peculiarities of manners and diſpoſition. From numerous facts, he concludes, that the bodily forms of the different kinds of animals are exactly adapted to the rank they hold in the creation; and that their œconomy and manners are ſtrictly and invariably connected with their ſtructure and organs. Change, ſays he, the external or internal form of an animal, diminiſh the number of ſtomachs in the ruminating animals, or give to the horſe a parrot's bill, and the ſpecies will be annihilated. But the comparative power, or ſtrength of animals, depends not, he obſerves, on ſtructure alone. Mental faculties and docility ſeem to be the greateſt ſources of animal power. Hence man's unlimited empire over other creatures. The invention of language, of arms, of writing,

ing, printing, and engraving, have been the chief means of his acquiring the dominion of the earth. By theſe arts, men tranſmit the inventions and improvements of one age to another. By theſe arts, the diſpoſitions of men are ſoftened; their manners become more civilized; humanity is gradually extended; and groſſer animoſities yield, at leaſt, to external politeneſs. How far this progreſs of ſcience and the peaceful arts of life, by the accumulation of ages, may proceed, it is impoſſible to determine. But the time, it is to be hoped, is not very remote, when the fiercer contentions of nations will ceaſe; when ſelfiſhneſs and venality will give way to generoſity of temper, and uprightneſs of conduct.

After many intereſting remarks on the reſpiration of animals, and the various modifications of the organs employed by Nature for the tranſmiſſion of air into animal bodies, he from thence concludes, that air is neceſſary for the ſupport and continuation of animal life. And he obſerves, that not only men, quadrupeds, birds, fiſhes, reptiles, and the larger inſects, but even fleas, mites, the minute eels found in paſte or in vinegar, and the animalcules produced

duced by infuſing animal and vegetable ſubſtances in water, inevitably periſh when deprived of this all-vivifying element. Air is, he obſerves, no leſs neceſſary to the exiſtence and vegetation of plants, which abſorb and tranſmit it through every pore, and whoſe vegetating powers are found to be irrecoverably extinguiſhed in the exhauſted receiver of an air-pump.

As the air, however, which we continually breathe, is an univerſal menſtruum, and, of courſe, liable to be impregnated with exhalations from every ſubſtance to which it has acceſs, the great importance of perſonal, as well as domeſtic cleanlineſs, is an obvious reflection; and, in building towns or houſes, the ſituation with reſpect to air is a capital object. Hence, as our author juſtly obſerves, the vicinity of marſhes, of ſtagnating waters, of manufactures of oil, tallow, ſal-ammoniac, the ſmelting and corroding of metals of every kind, and many other operations which contaminate the air, ſhould be either avoided or removed, as they are the peſts of our ſenſes, and the poiſoners of our conſtitutions.

After ſome obſervations on the motions of animals, Mr Smellie next proceeds to treat of their inſtincts. He firſt gives ſome examples of what he calls pure inſtincts; by which he underſtands thoſe, independently of all inſtruction or experience, inſtantaneouſly producing certain actions when particular objects are preſented to animals, or when they are influenced by peculiar feelings. Of theſe, in the human ſpecies, a remarkable example occurs, in the inſtinct of ſucking. And the brute creation, he obſerves, afford innumerable examples of pure inſtincts. Thus, when caterpillars are ſhaken off a tree in every direction, all of them inſtantly turn towards the trunk, and climb up, though they had never formerly been on the ſurface of the ground.

As a ſecond claſs of inſtincts, he gives examples of thoſe which accommodate themſelves to peculiar circumſtances and ſituations. To this claſs, he thinks, many human inſtincts may be referred; but as theſe are highly improveable by experience and obſervation, they fall, he thinks, more naturally under a third claſs, preſently to be mentioned. Paſſing over the examples of the Falcon, the Dog, and the

the Fox, purſuing their prey with intelligence and addreſs, he mentions a ſtriking example in a Cat of his own, who dexterouſly opened with her paw the common iron latch of the door of a cloſet into which ſhe was often put, as ſoon as ſhe tired of her confinement.

The third and laſt claſs of inſtincts, comprehends all thoſe which are improveable by experience and obſervation. The ſuperiority of man over other animals, ſeems, to him, to depend chiefly on the great number of inſtincts with which his mind is endowed. The following, he conſiders as examples of modified, compounded, or extended inſtincts. Superſtition is the inſtinct of fear, extended to imaginary objects of terror. Devotion is an extenſion of the inſtinct of love to the Firſt Cauſe, or Author of the univerſe. Reverence, or reſpect for eminent characters, is a ſpecies of devotion. Avarice is the inſtinct of love, directed to an improper object; and Hope is the inſtinct of love, directed to future good. In this manner, he thinks all the modified, compounded, or extended paſſions of the human mind, may be traced back to their original inſtincts.

Inſtinct, he thinks, may be defined, "Every original quality of mind which produces particular feelings or actions, when the proper objects are preſented to it." And, from the facts here enumerated, he thinks it apparent, that every animal is poſſeſſed of ſome of theſe qualities; that the intelligence or reſources of animals are proportioned to the number of inſtincts with which their minds are endowed; that all animals are, in ſome meaſure, rational beings; and that the dignity and ſuperiority of the human intellect, are neceſſary reſults, not of the conformation of our bodies, but of the great variety of inſtincts which Nature has been pleaſed to confer on the ſpecies.

The next ſubject which engages Mr Smellie's attention, is the Senſes. No animal, of which we have any knowledge, is endowed with more than five external ſenſes; and no animal, however imperfect, is deſtitute of the whole. On each of the ſenſes of Smelling, Taſting, Hearing, Seeing, and Touching, he offers many curious and intereſting obſervations. And he concludes this ſubject with a ſhort view of the ingenious performance of the Abbé de Condillac, intituled, Traité des Senſations;

ſations; in which the ſagacious author imagines the ſituation and feelings of a ſtatue, limited, at firſt, to a ſingle ſenſe, and afterwards acquiring gradually the whole five: and, by this ſuppoſition, he beautifully illuſtrates how far the different ſenſes correct and improve each other.

In treating of Infancy, in which our author includes the portion of life which commences at birth, and terminates at that period when animals have acquired the power of ſelf-preſervation, without any aſſiſtance from their parents, he obſerves, that it muſt neceſſarily vary greatly in different animals. But he endeavours to ſhew, that its duration, from man to the inſect tribes, is proportioned, not to the extent of life, but to the ſagacity or mental powers of the different claſſes of animals. The great mortality of mankind, during this period, is, he thinks, to be attributed to unnatural practices in the management of children, introduced by ſuperſtition, ignorance, over-refinement, prejudice, or hypothetical ſyſtems; while the œconomy and analogy of Nature, in the conduct and ſituation of inferior animals, are almoſt totally neglected.

From his obſervations concerning the infancy of animals in general, he concludes, that Nature has uniformly, though by various modes, provided for the nouriſhment and preſervation of all animated beings, while they are in an infantine ſtate. Though the human ſpecies continue long in that ſtate, the attachment and ſolicitude of both parents, inſtead of abating in proportion to the time and labour beſtowed upon their progeny, conſtantly augment, and commonly remain during life. The reciprocal affections of parents and children, is one of the greateſt ſources of human happineſs. If the love of children were not ſtrong, and if it did not increaſe with time, the anxiety and fatigue of mothers would be inſufferable. But Nature, whoſe wiſdom is always conſpicuous, makes affection brave every difficulty, and ſooth every pain. If a child be ſickly, and require uncommon care, the exertions of the mother are wonderfully ſupported. Pity unites with love; and theſe two paſſions become ſo ſtrong, that hardſhips and fatigue of every kind are ſuffered with cheerfulneſs and alacrity.

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With regard to the inferior tribes of animals, Nature, Mr Smellie obſerves, has not been leſs provident. To quadrupeds and birds, ſhe has given a ſtrong and marked affection for their offspring, as long as parental care is neceſſary. But, as ſoon as the young begin to be in a condition to protect and provide for themſelves, the attachment of the parents gradually ſubſides. They become regardleſs of their offspring, baniſh them from their preſence with blows, and ſeem to have no knowledge of the objects which ſo lately had engroſſed all the attention of their minds, and occupied all the induſtry and labour of their bodies. And here, he remarks, the dignity and ſuperiority of man appears in a conſpicuous light. Inſtead of loſing the knowledge of his offspring, after they arrive at maturity, his affection expands, and he embraces grandchildren and great-grandchildren, with equal warmth as if they had immediately originated from himſelf.

After many ingenious remarks on the growth and food of animals, our author proceeds to treat of the ſexes of animals and vegetables. On the latter of theſe ſubjects, he ſtrenuouſly

combats the preſent prevailing doctrine reſpecting the ſexes of plants; and, by much acute reaſoning, founded on experiments made by himſelf, and on thoſe alſo of Spallanzani, he endeavours to ſhew, not only that the hypotheſis of the ſexual ſyſtem is not yet proved, but alſo that it has no foundation in nature. On a ſubject of ſo intricate controverſy, it would be foreign to our buſineſs here to enter. We may only obſerve, that, notwithſtanding all the ingenuity he has exerted upon this ſubject, the facts and arguments in ſupport of the ſexual ſyſtem of plants, ſeem to us ſtill ſo far to preponderate, as to render it at leaſt no improbable ſuppoſition. The ſubject, however, ſtill affords ample ſcope for the labours of the future theoriſt; and even a repetition of the experiments made by Mr Smellie and Spallanzani, may not be unworthy of attention.

After ſome obſervations on the puberty of animals, and on their loves, Mr Smellie proceeds to treat of the transformation of animals. From this he conſiders even man as not exempted; which clearly appears from the account he gives of the progreſs of the human

ſpecies,

ſpecies, from the embryo ſtate to that of perfection, decay, and diſſolution. He elegantly delineates, alſo, the changes which the mind of man undergoes, which are no leſs remarkable than thoſe of his body. But, of all animals, the moſt various and wonderful tranſformations take place in the inſect tribe. After giving an account of ſome of the moſt common transformations, and pointing out the diverſity in the appearance, the ſtructure, and the organs of the caterpillar, the chryſalis, and the fly, which, to one unacquainted with their transformation, in place of an identical animal, would be conſidered as three diſtinct ſpecies, he gives examples of ſome of the more uncommon kinds of transformations.

There is not, he obſerves, a law eſtabliſhed among organized bodies, which ſeems to be ſo univerſal, as, that all of them grow or augment in ſize, after birth, till they arrive at maturity. If a hen were to bring forth an egg as large as her own body, and if this egg, when hatched, were to produce a bird of equal dimenſions with the parent, it would be conſidered as a miracle; but the ſpider-fly, ſo denominated from its figure, affords an exam-

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ple of a ſimilar prodigy. This fly actually lays an egg, from which a new fly is hatched, as large and as perfect as its mother. This egg is roundiſh, is at firſt white, and afterwards aſſumes a ſhining black colour. Upon a more accurate examination, however, this production is found to be an egg only in appearance. When the envelope is removed, inſtead of a gelatinous ſubſtance, the new inſect, furniſhed with all its membranes, is diſcovered. But this diſcovery does not render the fact leſs wonderful. All winged inſects undergo their different transformations after being expelled from the bodies of their mothers, and receive great augmentation of ſize before their metamorphoſis into the nymph or chryſalis ſtate; after which, their growth ſtops. But the ſpider-fly affords an inſtance of an inſect transformed in the belly of its mother, and which grows no more after it eſcapes from its envelope.

But, ſingular as even the common tranſformation of inſects may appear, Mr Smellie endeavours to ſhew, from numberleſs facts, that it is only the throwing off external and temporary coverings, and not an alteration of the original

original form. The diſcoveries of Reaumur have ſhown, that the chryſalis, or rather the butterfly itſelf, is incloſed in the body of the caterpillar. The proboſcis, the antennæ, the limbs, and wings of the fly, are ſo nicely folded up, that they occupy a ſmall ſpace only under the two firſt wings of the caterpillar. Caterpillars may be conſidered, then, as analogous to the fœtuſes of men and quadrupeds. They live, and receive nouriſhment in envelopes, till they acquire ſuch a degree of perfection as enables them to ſupport the ſituation to which they are ultimately deſtined by Nature.

Transformations are not peculiar to animals. In the vegetable kingdom, alſo, forms are perpetually changing. And even the mineral kingdom, our author obſerves, is not leſs ſubject to metamorphoſes. Without attempting a complete inveſtigation of the intentions of Nature in changing forms, a ſubject which, in his opinion, exceeds the powers of human reſearch, he points out, as one great intention, an approach to the perfection of individuals. And he adds, that the diſtribution of life to an immenſity of ſucceſſive individuals, ſeems to be

be another. Were the exiſtence of individuals perpetual, or were it prolonged for ten times the period now eſtabliſhed, life would be denied to myriads of animated beings, who enjoy their preſent limited portion of happineſs.

After many curious remarks on the habitations of animals, particularly of the beaver, the bee, and the termites bellicoſi; after many intereſting obſervations on the hoſtilities, the artifices, the ſociety, and the docility of animals, he concludes this laſt ſubject with ſome remarks on the effects of domeſtication. Climate and food are, he obſerves, the chief cauſes which produce changes in the magnitude, figure, colour, and conſtitution of wild animals. But, beſides theſe, there are others which have influence upon animals, when reduced to a domeſtic or unnatural ſtate. Animals, when at perfect liberty, ſeem to have ſelected thoſe particular zones or regions of the globe which are moſt conſonant to the nature or conſtitution of each particular tribe. There they ſpontaneouſly remain, and never, like man, diſperſe themſelves over the whole ſurface of the earth. But, when obliged by man

man to abandon their native ſoil, they undergo changes ſo great, that, to recogniſe and diſtinguiſh them, recourſe muſt be had to the moſt accurate examination.

But to climate and food, thus changed, another ſtill more powerful cauſe of alteration, is the empire of man, which, he thinks, has perhaps ſtill more influence in degrading and diſfiguring Nature. Thus, Mr Smellie obſerves, that the Mouflon, the ſtock from which our domeſtic ſheep have derived their origin, is comparatively a large animal. He is as fleet as a ſtag, armed with horns and ſtrong hoofs, and covered with coarſe hair. With theſe natural advantages, he dreads neither the inclemency of the ſky, nor the voracity of the wolf. He not only eſcapes from his enemies by the ſwiftneſs of his courſe, but is enabled to reſiſt them by the ſtrength of his body, and the ſolidity of his arms.

How different, ſays Mr Smellie, is this animal from our domeſtic ſheep, who are weak, timid, and unable to defend themſelves? Without the protection of man, the whole race would ſoon be extirpated by rapacious animals, and by winter ſtorms. In the warmeſt climates

mates of Africa and of Aſia, the Mouflon, who is the common parent of the ſheep, appears to be leſs degenerated than in any other climate. Though reduced to a domeſtic ſtate, he there preſerves his ſtature and his hair; but the ſize of his horns is diminiſhed. The ſheep of Barbary, Egypt, Arabia and Perſia, have undergone greater changes; and, in proportion as they approach towards either pole, they diminiſh in ſize, in ſtrength, in ſwiftneſs, and in colour. In relation to man, they are improved in ſome articles, and vitiated in others. Their coarſe hair is converted into fine wool. But, with regard to Nature, improvement and degeneration amount to the ſame thing; for both imply an alteration of the original conſtitution.

After pointing out many changes produced by domeſtication on the ſize and colour of animals, particularly in the Ox, the Dog, and the Hog, he obſerves, that the variations from the original colour are moſt remarkable in our domeſtic fowls. Thus, in a brood of chickens, though the eggs be laid by the ſame hen, and though the female be impregnated by the ſame male, not one of them has the

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ſame colour with another. He concludes with obſerving, that domeſtication not only changes the external appearances of animals, but alters or modifies their natural diſpoſitions. Thus, the dog, when in a ſtate of liberty, is a rapacious quadruped, and hunts and devours the weaker ſpecies. But, according to Mr Smellie, after he has ſubmitted to the dominion of man, he relinquiſhes his natural ferocity, and is converted into a mean, ſervile, patient, and paraſitical ſlave. To this ſentiment, however, we muſt own we cannot altogether ſubſcribe; for, while his change from ferocity to mildneſs ſeems hardly to diminiſh his courage, in place of the ſlave and the paraſite, he is entitled to the appellation of the honeſt and watchful ſervant; nay, even of the generous, affectionate, and faithful friend of man.

Mr Smellie next preſents us with ſome obſervations on the characters and diſpoſitions of animals; particularly pointing out the rapacious, the mild, the timid, the bold, and the generous. Theſe characters, he obſerves, under the influence of domeſtication, may be modified; but the original character impreſ-

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ſed by the hand of Nature, can never, he thinks, be completely obliterated. But beſides the general ſpecific character, among the human race in particular, individual characters are ſtrongly marked, and greatly variegated. In the general expreſſion of the countenances of ſome men, a reſemblance may be diſcovered to goats, ſheep, ſwine, lions, dogs, foxes, owls, hawks, or other animals. Theſe reſemblances, he obſerves, may often be fanciful; but he is inclined to think, that, in general, where the reſemblance is ſtrong to any particular animal, the diſpoſitions of the man have alſo a ſtriking affinity to thoſe of the animal to whom he approaches in appearance.

In treating of the principle of imitation in animals, Mr Smellie endeavours to prove, that it is the neareſt approach to reaſoning and language. He attempts to demonſtrate, that the migration of animals is more common than is generally imagined; and he brings ſeveral arguments to prove, that the ſuppoſed ſubmerſion of ſwallows is impoſſible. He particularly contends, that no land-animal can ſubſiſt ſo long without reſpiration; and he conſi-

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ders their plumage, and the ſpecific gravity of the animals themſelves, as another ſtrong argument againſt their ſubmerſion. What he views as the principal objects of migration, are food, temperature of air, and convenient ſituations for breeding.

After ſome obſervations on the longevity and diſſolution of organized bodies, among which Mr Smellie has collected many of the beſt authenticated inſtances of extraordinary longevity in Britain; he concludes this learned, ingenious, and entertaining work, with ſome remarks on the progreſſive ſcale or chain of beings in the univerſe. From man, to the minuteſt animal that can be diſcovered by the microſcope, the chaſm ſeems to be infinite: But that chaſm is, he obſerves, actually filled up with ſentient beings, of which the lines of diſcrimination are almoſt imperceptible. Even among mankind, which is a particular ſpecies, the ſcale of intellect is extenſive, as abundantly appears from comparing an enlightened philoſopher with a brutal Hottentot. Still, however, Nature obſerves, for the wiſeſt purpoſes, her uniform plan of

gradation. Were all men philoſophers, the buſineſs of life could not be executed; and neither ſociety, nor even the ſpecies, could long exiſt. Induſtry, various degrees of knowledge, different diſpoſitions, and different talents, are the great bonds of ſociety.

Our knowledge, he obſerves, of the chain of intellectual and corporeal beings, is very imperfect; but what we do know, gives us exalted ideas of that variety and progreſſion which reign in the univerſe. The whole univerſe he conſiders as linked together by a gradual and almoſt imperceptible chain of exiſtences, both animated and inanimated. And, were there even no other argument in favour of the Unity of Deity, this uniformity of deſign, this graduated concatenation of beings, ſeems to him to be perfectly irrefragable.

While he conſiders man as ſtanding at the head of animals in this world, he is of opinion, that no ſentient being, with ſuperior mental powers, could poſſibly live and be happy on earth. Let man, therefore, ſays he, be contented: His ſtation in the univerſal

ſal ſcale of Nature is fixed by Wiſdom. Let him contemplate and admire the works of his Creator: let him fill up his rank with dignity; and conſider every partial evil as a cauſe or an effect of general good. This is the whole duty of Man.

XIX.

A Treatiſe on Putrid Inteſtinal Remitting Fevers; in which, the Laws of the Febrile State, and Sol-Lunar Influence, being inveſtigated and defined, are applied to explain the Nature of the various Forms, Criſes, and other Phænomena of theſe Fevers: and thence is deduced and inſtituted, An improved Method of Curing them. By Francis Balfour, *M. D. Soc. Reg. Med. Ed. S. H.* 8vo, Edinburgh.

THE ingenious author of the treatiſe now before us, publiſhed, ſome years ago, a ſmall tract at Calcutta in Bengal, in which he endeavoured to call the attention of the medical profeſſion to the influence of the Moon in fevers. For an account of that work, we may refer our readers to a former volume of theſe Commentaries, (Vol. IX. Decade I.) The public, however, are now preſented with this doctrine

doctrine on a more extended ſcale, and confirmed by additional reaſoning and obſervations, the reſult of five years longer reſidence in India, and in a ſituation which afforded extenſive opportunities of attending to the courſe of diſeaſes, in actual practice. Without, however, reſuming any part of the account which we have formerly given of this doctrine, we may only, in general, obſerve, that the author firſt endeavours to inveſtigate and define the laws of the febrile ſtate, and of the Sol-Lunar influence, from the phænomena; that he next attempts to employ the laws of the febrile ſtate, and Sol-Lunar influence, to explain the nature of the various forms and criſes of putrid inteſtinal remitting fevers, and other phænomena; and that he concludes, with employing the knowledge thus obtained of the nature of theſe diſeaſes, to deduce and inſtitute an improved method of curing them. Referring ſuch of our readers as wiſh particularly to examine the proof here offered of this new doctrine, to the work itſelf, we ſhall here content ourſelves with giving ſome account of the general rules of practice which he deduces from thence.

When putrid inteſtinal remitting fevers take place, in their mild and ſafe form, without local infection, he propoſes the following general rules for the cure.

1. That the contagious matter muſt be evacuated, if poſſible, before the mucus of the ſtomach and inteſtines be infected and corrupted; or before an abſorption, ſufficient to excite and confirm the diſeaſe, has taken place, by vomiting, purging, and ſweating, with the forms of emetic tartar that are beſt ſuited to theſe ſeveral purpoſes.

2. That, when the firſt attempts to ſtop the fever at the beginning, by immediate evacuations with emetic Tartar, have been made; and when it appears to be eſtabliſhed and confirmed, the time of the nocturnal meridional paroxyſms muſt be dedicated, during the four or five firſt days of the Fever, to the taſk of looſening and detaching the mucus from the coats of the inteſtines, by repeated doſes of Calomel, taken at bed-time; and theſe muſt likewiſe be exhibited, for the ſame purpoſe, during the courſe of the diſeaſe, whenever they appear to be required by the ſtate of the bowels.

3. That

3. That the time of the ſucceeding intermeridional intervals muſt be employed, during the four or five firſt days of the Fever, in diſcharging the mucus which has been looſened and detached by the doſes of Calomel, with whatever other fæces have been collected in the courſe of the night, by a laxative ſolution of Sal. Cathart. Amar. *&c.* of which ſmall doſes muſt likewiſe be continued every morning, or every ſecond morning, in the courſe of the diſeaſe, to prevent the collection and remora of any putrid and offenſive matter, and its future abſorption.

4. That every poſſible means muſt be employed to prevent the readmiſſion of contagious effluvia into the body, by renewing and correcting the air in which the patient breathes, *&c.* and by a proper change of his linens and bed-clothes.

5. That the body muſt be refreſhed and nouriſhed; particularly in the courſe of the day after the operation of the morning laxative, and before the approach of the nocturnal exacerbation, by ſmall cupfuls of panada given at proper intervals.

6. That, being aſſured that the lunar periods will certainly aggravate the meridional paroxyſms, we are on no account to procraſtinate, at the beginning of the diſeaſe, the exhibition of the medicines preſcribed for clearing the bowels, from any idle hope that it will vaniſh of its own accord; but, on the contrary, are to proceed with all the expedition we can, and are likewiſe to be careful to avoid every irregularity that may increaſe the violence of the fever, and concur with the natural tendency of this period.

7. That we are not to be alarmed by a continuation of the fever, or by any moderate aggravation of the ſymptoms that may take place at the lunar periods; but to proceed ſteadily, according to the method we have propoſed, without changing our plan, or harraſſing our patient with a conſtant change, and trial of unneceſſary and painful remedies, knowing that all will terminate well, and in good time, in one of the interlunar intervals.

8. That we muſt co-operate with the natural tendency of the commencement of the interlunar interval to reſolve the ſpaſm; and

that

that we muſt encourage the diſcharge of the morbific particles circulating in the blood, by the natural ſecretions; and muſt act upon this plan during the whole of the interlunar intervals.

9. That if the ſymptoms of the febrile ſtate have not perfectly diſappeared at the end of the interlunar interval, we are to be on our guard to avoid every irregularity that may concur with the natural tendency of the lunar period to renew the fever.

10. And that, if the fever ſhould revive in the lunar period, it is to be treated upon the principles and rules that have been explained, making proper allowance for the change that has taken place in the patient's ſtrength.

After delivering theſe general rules, which he thinks ſhould direct us in treating the milder and ſafer forms of putrid inteſtinal remitting fevers, without local affection, he lays down the following rules for the management of thoſe which are more violent and dangerous.

1. That the rules already propoſed, in treating the mild and ſafe forms of theſe fevers, for ſtopping the fever, if poſſible, in the very beginning,—for evacuating the bowels effectually

fectually with calomel and the laxative ſolution,—and for giving nouriſhment, are to be obſerved ſtrictly during the two firſt days of ſuch forms as may threaten to be violent and dangerous: That, on the morning of the third day, immediately after the operation of the morning laxative, in order to check putrefaction, ſuppreſs the violence of the meridional paroxyſms, and give ſecurity againſt a failure of ſtrength, or any unfavourable turn in the fever, the Peruvian bark is then to be exhibited in ſubſtance, and to be continued for two days, in ſuch doſes, that twelve drams, or two ounces, may be thrown in before the expiration of the ſecond day: That then the calomel is to be repeated at bed-time, and the laxative in the morning: That, immediately after the operation of the morning laxative, the bark is to be again reiterated for two days, juſt as before: That the calomel and laxative are again to be repeated; and ſo on, until the fever give way: After which, it is ſufficient to ſupport the effect of the powder, by a few doſes of the decoction given daily; and to repeat the laxative ſolution every ſecond or third day, as occaſion may require.

2. That

2. That, to prevent the bark from being thrown up, or paſſed by ſtool, and alſo to make nouriſhment ſit upon the ſtomach, and to procure eaſe and repoſe, opiates are to be given freely.

Dr Balfour next proceeds to treat of putrid inteſtinal remitting fevers, with local affection. And here, it may be remarked, that he conſiders all the diſorders he had met with in India, under the form of dyſentery, and moſt of thoſe under the form of pleuriſy, peripneumony, acute rheumatiſm, and many other local affections attended with fever, as nothing more than ſo many different caſes of putrid inteſtinal remitting fevers, accompanied with different local affections, and therefore to be diſtinguiſhed from each other in this reſpect alone. Theſe, as well as the putrid fevers without local affection, he divides into ſuch as are mild and ſafe, and ſuch as are more violent and dangerous.

For the cure of the firſt of theſe, he propoſes the following general rules.

1. That they are to be treated exactly according to the rules laid down for treating the mild

mild and ſafe forms of putrid inteſtinal remitting fevers, without local affection.

2. That the whole body, and eſpecially the parts affected, are to be better defended from cold, than when there is no local affection; and other means uſed to promote and ſupport a gentle perſpiration.

In the more violent and dangerous forms, the following are the rules which he lays down.

1. That they are to be treated exactly according to the general rules laid down for curing the more violent and dangerous forms of putrid inteſtinal remitting fevers, without local affection.

2. That the whole body, and eſpecially the parts affected, are to be more carefully defended from cold than when there is no local affection; and other means uſed to promote a general perſpiration.

3. That bleeding and bliſtering are to be adminiſtered, when indicated by the violence and obſtinacy of the local affection, eſpecially when it is ſeated in any vital or important part; taking care to obviate the failure of the general ſtrength, which is apt to ſucceed the loſs

loſs of blood, by an immediate exhibition of Peruvian bark, wine, and nouriſhment.

Theſe different ſets of general rules, we need hardly obſerve, although not ſtanding in contradiction to the practice hitherto commonly employed in the putrid remitting fevers of warm climates, are yet, in ſome degree, immediately deduced from the theory of lunar influence; and if that theory be well founded, we need not add, that the obſervance of them muſt be productive of the moſt beneficial conſequences in practice. How far this planetary influence, however, is founded in nature; or, if founded, how it is to be explained, we cannot pretend to ſay. Indeed this Sol-Lunar influence, Dr Balfour himſelf aſſumes, from obſervation, as an eſtabliſhed principle or law of nature, without pretending to ſay, whence it proceeds, where it exiſts, or how it operates. As far as our obſervation goes, and ever ſince the publication of Dr Balfour's former treatiſe, we have not been inattentive to this ſubject, neither meridional paroxyſms, nor lunar exacerbations, are ſo diſtinctly marked as clearly to demonſtrate any Sol-Lunar influence, in this country at leaſt. The concurring

concurring teſtimony, however, of many practitioners of accuracy and obſervation, from India, would lead us to conclude, that there it is much more manifeſt. And it cannot, as ſome have conjectured, be explained from the influence of high tides producing marſhes, ſince many of the obſervations confirming it, particularly thoſe of Dr Balfour himſelf, were made at Banaris, and other places not leſs than three hundred miles diſtant from the reach of tides. Whatever, therefore, may be the caſe in this part of Europe; yet ſtill Dr Balfour's obſervations may lead to a new and improved ſyſtem of medicine, in thoſe climates where Sol-Lunar influence is found to prevail.

XX.

XX.

An Account of a particular Change of Structure in the Human Ovarium. By Matthew Baillie, *M. D.* Vide *Philoſophical Tranſactions of the Royal Society of London, Vol. LXXIX. for the year* 1789. 4to, London.

THE ovaria in women, Dr Baillie obſerves, are ſubject to a great variety of changes from their natural ſtructure. Many of theſe are exactly ſimilar to what take place in other parts of the body; but there is one change, which he conſiders as peculiar to them, and the nature of which, he thinks, has not hitherto been well aſcertained. This change of ſtructure is a converſion of the natural ſubſtance of an ovarium into a fatty maſs, intermixed with hair and teeth.

We have already, in a former part of this volume, preſented our readers with a ſingular hiſtory

hiſtory of this kind, and with the obſervations and ſentiments of an ingenious anatomiſt reſpecting it; and we have here before us another caſe of the ſame kind, which, though varying in ſeveral particulars, is, in its circumſtances, not very diſſimilar. This caſe, which occurred to another diſtinguiſhed anatomical teacher, is here communicated to the public, with thoſe reflections which it ſuggeſted to him.

Though many caſes of this kind are to be met with in books of diſſections, yet few have ventured to offer any conjectures on the mode of their formation. But, in general, they have, Dr Baillie obſerves, been conſidered as imperfect attempts at the growth of a fœtus in the ovarium, in conſequence of the connexion between a male and a female. This conjecture reſts, he admits, on circumſtances of ſtrong probability; but he thinks it is liable to many powerful objections. And, among other particulars, from the following caſe, he is led to believe, that the ovaria in women have ſome power within themſelves, of taking on a proceſs which is imitative of generation, without any previous connexion with a male.

In

In a female child about twelve or thirteen years old, which was lately brought to Windmill Street for diſſection, Dr Baillie found the right ovarium converted into a ſubſtance, doughy to the touch, and about the ſize of a large hen's egg. Upon cutting into this ſubſtance, he found an apparently fatty maſs, intermixed with hair and an excreſcence of bones. This ſtartled him very much, as he had always been led to believe, that ſuch appearances were a ſort of imperfect conception; and, the circumſtances altogether being very ſingular, he was led to pay particular attention to them.

The fatty maſs was of a yellowiſh white colour, in ſome places more yellow than in others; it was very unctuous to the feeling, and conſiſted of ſhortened and ſeparated particles, not having the ſame coaleſcence which the fat has generally in the body. It became very ſoft when expoſed to the heat of a fire, and ſunk into a portion of paper on which it was ſpread, ſo as to make it more tranſparent. When the paper to which it was thus applied was expoſed to the flame of a candle, it burnt with conſiderable crackling.

The hair with which the fatty ſubſtance was mixed, grew out of the inner ſurface of the capſule containing it, in ſome places in ſolitary hairs, but chiefly in ſmall faſciculi, at ſcattered irregular diſtances. Beſides theſe, there were looſe hairs involved in the fatty maſs. The hairs were ſome of them of conſiderable length, even to three inches; were fine, and of a light brown colour. They reſembled much more the hair of the head than what are commonly found on the pubis, and correſponded very much in colour to the hair of the girl's head.

There aroſe, alſo, from the inner ſurface of the capſule, ſome veſtiges of human teeth. One appeared to be a canine tooth; another to be a ſmall grinder; two others to be inciſores; and there was alſo a very imperfect attempt at the formation of another tooth. Theſe were not fully formed, the fangs being wanting; but, in two of them, the bodies were as complete as they are ever found in common circumſtances. They were each of them incloſed in a proper capſule, which aroſe from the inner ſurface of the ovarium, and conſiſted of a thick white opaque membrane.

Attached

Attached to the capſules of three of the teeth, there was a white ſpongy ſubſtance. The membrane of the ovarium itſelf was of ſome conſiderable thickneſs, but unequal in the different parts. It was very ſmooth in its inner ſurface, and more irregular externally. The uterus was ſmaller than it is commonly at birth; was perfectly healthy in its ſtructure; and, upon opening into its cavity, it exhibited the ordinary appearances of a child's uterus at that period. The left ovarium was very ſmall, correſponding to the ſtate of the uterus. From this it appears, that the uterus had not yet received an increaſe in bulk, which is uſual at the age of puberty. The hymen was entire, ſuch as is commonly found in a child of the ſame age; and there was juſt beginning a lanugo upon the labia, not more than is often found on the upper lip of a boy of fifteen years old.

From this ſingular appearance, the circumſtances of which have been now related, Dr Baillie next proceeds to draw ſome concluſions. It naturally, he obſerves, ſtrikes the mind as being very different from any irregular ſubſtance formed by diſeaſe. It took place in a

part of the body which is ſubſervient to generation, and where a complete fœtus is ſometimes formed. This might ſeem to lead to the concluſion, that the production of hair and teeth in the ovarium was a ſort of imperfect impregnation. But he thinks there are reaſons, at leaſt equally ſtrong, for believing that ſuch productions may ariſe from an action in the ovarium itſelf, without any ſtimulus from the application of the male ſemen.

In the caſe which has juſt been related, the uterus was as ſmall as at birth; and the left ovarium correſponded to the ſtate of the uterus. It had not been ſtimulated, nor did it appear capable of being ſtimulated, by the application of the male ſemen. This he conſiders as a ſtrong circumſtance; for a preparation is ſtill preſerved in the collection of Windmill Street, made by the late Dr Hunter, where an ovum was formed in one of the Fallopian tubes, and the uterus was enlarged to more than twice its unimpregnated ſize. From this he concludes, that when impregnation takes place out of the cavity of the uterus, that viſcus ſtill takes a ſhare in the action, and undergoes ſome of the changes of impregnation.

nation. And, to the ſame concluſion reſpecting the action of the uterus in the formation of an extra-uterine fœtus, he is led alſo by other preparations, particularly from one, preſerved alſo in Dr Hunter's collection, where a fœtus was formed in the ovarium, in which the uterus was increaſed to more than twice its ordinary ſize, was very thick and ſpongy, and had its blood-veſſels enlarged in the ſame manner as an impregnated uterus. But, in the preſent caſe, the uterus had undergone no change.

Dr Baillie farther remarks, that we are not to conſider the formation of teeth in the ovarium to be a quicker proceſs than it uſually is in the head of a fœtus. In this inſtance, however, the teeth having advanced fully as far as they in general are at ſome months after birth, their growth muſt, he thinks, have begun at leaſt more than twelve months before the death of the child; which, in his opinion, brings their commencement to an earlier period than impregnation can be believed to have taken place.

From all theſe circumſtances, Dr Baillie is inclined to ſuppoſe, that the formation of hair

and teeth was not here the conſequence of any connexion with a male, but aroſe from ſome action of the ovarium itſelf, in which the uterus did not participate. And, as ſome additional confirmation of the probability of this opinion, he obſerves, that hair is occaſionally found in parts of the human body which are altogether unconnected with the function of generation. Hairs have often been found in encyſted tumours; and Dr Baillie particularly mentions ſeveral preparations of this ſort in the collection of Mr John Hunter. All theſe circumſtances, he thinks, clearly prove, that hair may be formed without any ſpecies of generation.

But hair is as much a peculiar ſubſtance as teeth. If the one, therefore, can be preternaturally formed in the ovarium, no good reaſon can, he thinks, be aſſigned, why the other may not alſo be formed there. The action producing the one, is not, he obſerves, better underſtood than that producing the other. Teeth, therefore, he thinks, may probably be formed by a peculiar action taking place in the ovarium, as well as hair.

To add ſtill farther weight to this opinion, he obſerves, that many of the adult teeth are formed in a child after birth; and that, therefore, their formation depends on an action taking place in the jaw at a particular period, and not on original growth. Teeth are ſometimes, alſo, occaſionally formed at an advanced period of life. Both theſe proceſſes, he obſerves, take place after the animal has been formed, in conſequence of a certain action being excited in a particular part of the body. There is, therefore, he thinks, leſs difficulty in believing, that the ſame ſort of proceſs may go on in another part of the body not commonly employed in it. And, in his opinion, it is but reaſonable to ſuppoſe, that the ovaria ſhould have a greater aptitude of taking on a proceſs ſomewhat ſimilar to generation, than other indifferent parts of the body, as they conſtitute a part of the organs which are ſo materially concerned in the real proceſs itſelf. From all theſe circumſtances, taken collectively, he thinks it is rendered very probable, that the formation of hair and teeth in the ovarium does not neceſſarily depend, as has been the common opinion, on a connection

between a male and female, but ariſes from ſome action within the ovarium itſelf, which is imitative of generation.

How far the intelligent reader will be diſpoſed to adopt this theory, we will not pretend to conjecture. We muſt, however, obſerve, that we readily agree with the ingenious author of this paper, in thinking, that there is no reaſon for ſuppoſing the generation of hair and teeth, in the fatty ſubſtance found in the ovarium, in the caſe related above, was the effect of any connection with a male; but perhaps a conjecture, more ſimple than any ſuppoſed action of the ovarium itſelf, imitative of generation, may be ſuggeſted with reſpect to their production. Although teeth, in general, appear only after certain periods of life, and in an eſtabliſhed ſucceſſion; yet it is well known, that the rudiments of all of them are diſcoverable in the jaw of a fœtus at a very early period of its exiſtence. The teeth, as the ingenious Mr John Hunter has juſtly obſerved, though deriving their growth and nouriſhment from the ſyſtem, may yet be viewed as aliens to the body. This obſervation is no leſs applicable to the hairs. Each hair, found either

upon

upon the head, or any other part of the body, derives its origin from a particular bulb, as much as a tooth does from its original rudiment. May we not, therefore, ſuppoſe teeth and hair to grow in the ovaria, from ſome monſtrous conformation of parts forming there the rudiments or bulbs of each? and may not this monſtrous conformation be peculiar to the ovaria, from that function for which they are naturally intended? For, although generation is ſtill to be viewed as one of the greateſt myſteries in the animal œconomy, yet there can be no doubt, that the ovaria have a concern in that function; and that thus they are ſubſervient even to the production of a complete fœtus, furniſhed both with hair and with teeth. But it is alone from future obſervations of facts, that even probable evidence, either of this or any other conjecture, can be obtained.

XXII.

XXII.

A Diſſertation on the Climate of Ruſſia. By Matthew Guthrie, *M. D. Phyſician to the Imperial Corps of Noble Cadets at St Peterſburgh, F. R. SS. Lond. & Ed. With two Letters from his Excellency M. Æpinus, Counſellor of State, Knight of the Order of St Anne,* &c. Vide *Tranſactions of the Royal Society of Edinburgh, Vol. II.* 4to, Edinburgh.

IN a former volume of this work, (Vol. II. Dec. II.) the ingenious author of the diſſertation now before us, preſented to the public ſome obſervations on the effects of a cold climate as tending to induce diſeaſes, and particularly as giving riſe to genuine ſcorbutus at land, raging in all its moſt menacing forms. He then alſo hinted a deſign of endeavouring to trace the influence of a cold climate on the human

human body, and its diſeaſes, which he imagined might form a contraſt with the many accounts publiſhed, of late years, relative to the effects of hot climates. This, it will readily be admitted, is a ſubject meriting inveſtigation, both as an object of ſcience in general, and of medicine in particular.

In treating of this ſubject, Dr Guthrie propoſes, in one paper, to give a hiſtory of the Northern climate, and in another to point out its phyſical influence, as it appears in the capital of Ruſſia, St Peterſburgh, where he has reſided for many years. In the diſſertation now before us, we are preſented with his remarks on the firſt of theſe ſubjects; in treating of which, he has had recourſe to the meteorological regiſter, kept in the Imperial Academy of Sciences, as being more to be depended upon than that of any individual. He has adopted the Academy's diviſion of the year into two ſeaſons, Winter and Summer; as, in fact, there are but two in that climate, the one running into the other, without leaving well defined intermediate periods, to anſwer to what are called Spring and Autumn in temperate climates. He follows the plan

of

of the Academic regiſter, in prefixing to each ſeaſon an enumeration of the common phænomena which take place in it; ſuch as, the quantity and duration of froſt, ſnow, rain, &c. And all his calculations are taken from the mean of fifteen years, according to the regiſter of Profeſſor Euler, Perpetual Secretary of the Imperial Academy of Sciences. In that regiſter, De Liſle's thermometer is employed; but Dr Guthrie has added the comparative degrees of Fahrenheit and Reaumur, as being in common uſe in other parts of Europe.

He begins by treating of the Ruſſian Winter, which he thinks deſervedly claims the firſt attention, both from its duration and conſequences. The duration of the Winter is generally from the end of September to the beginning of May; although, occaſionally, there is very pleaſant weather in April, notwithſtanding the morning and evening froſts. But, if Winter is to be defined by the mean term of froſt and ſnow, it muſt be dated from the beginning of October to the beginning of May, comprehending a period of about two hundred and thirty days of the year. The term, however, for which the rivers remain frozen,

frozen, is much ſhorter, and may be reckoned from the twenty-ſeventh of November to the nineteenth of April, including about one hundred and ſixty days of the year.

Dr Guthrie here preſents us with ſome obſervations on the thickneſs, and other phænomena of the ice. By February, he obſerves, the ice has acquired the aſtoniſhing thickneſs of about three quarters of an Engliſh yard; and, what is no leſs ſurpriſing, it has not loſt above a third of this, when it has become ſo weak at the breaking up of the rivers, as not to ſupport the weight of a dog. At this period, from paying peculiar attention to the appearances, he has found the maſs compoſed of a number of long ſolid cryſtals, reſembling in ſome degree the pipes of an organ, each about half a yard long, but almoſt without adheſion; ſo that the maſs ſeems to have loſt little elſe, as he thinks it may be termed, than the cementing principle which bound theſe cryſtals together. The idea of the ice being reduced to a thin pellicle, by the action of the ſun on its upper, and the water on its under ſurface, is, he obſerves, merely a vulgar prejudice. He is inclined to

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ſuppoſe the conducting power of ice, with reſpect to ſound, to be very great; but he has not himſelf made experiments on this ſubject. He gives an extract, however, of a letter from a friend, who had walked out to a great diſtance on the ice, at the time when cannon were diſcharged from a fort. Before hearing the uſual report through the air, this gentleman was ſenſible of a diſagreeable ringing ſound from the ice, much more violent than the report itſelf.

Dr Guthrie next preſents us with a regiſter of the weather for the Winter months. The greateſt cold in Ruſſia, is in general about 196 deg. of De Liſle, which is equal to 24 deg. below 0 of Fahr. and commonly obtains in January. The medium cold in the afternoon, is 154 deg. equal to 27 deg. of Fahr. above Zero; and, in the night, it is 162 deg. equal to 23 deg. of Fahr. Dr Guthrie farther remarks, that the thermometer has ſometimes a ſurpriſing range during the Winter, ſo as to produce a change of temperature, in twenty-four hours, from 23 to 57 deg. of Fahr.; a circumſtance which cannot fail to be trying to delicate conſtitutions.

With

With reſpect to the preſſure of the air, the higheſt ſtate of the barometer is 28.87 Paris inches; and this oftener occurs in January. The loweſt, 26.99; and this, again, oftener occurs in November. The mean height is 28.02.

The prevailing wind, during the Winter, is the Weſt; the number of days during which it blows from that point being nearly double thoſe during which it blows from the Eaſt.

The quantity of melted ſnow and rain does not, Dr Guthrie tells us, in the ſix Winter months, amount to more than five Paris inches, although the whole ſurface of the Northern countries is covered with ſnow to a conſiderable depth, over which ſledges are driven, without diſtinguiſhing land from water. Hail, Dr Guthrie tells us, is a rare phænomenon in this ſeaſon; and tempeſts are equally uncommon with hail. The aurora borealis frequently illuminates the hemiſphere, appearing about ſixteen or ſeventeen times during the ſix months of Winter. Paraheliums, or mock moons, are frequently ſeen in the North; and Dr Guthrie is of opinion, that frozen miſts or vapours make theſe phænomena more frequent

quent in Ruſſia, than in the temperate climates.

Dr Guthrie's account of Winter, is concluded with ſome general obſervations on the Winter atmoſphere. The air, he obſerves, though cold, is remarkably pure and elaſtic, ſo as to give a moſt ſurpriſing degree of ſpring and tone to the human frame. At this time, he tells us, the atmoſphere is moſt aſtoniſhingly electric, even more ſo than during violent thunder ſtorms in Summer, if a judgment can be formed from the great power of electric machines, as well as from other phænomena. It might be ſuppoſed, that from the ſeverity of the froſt, the Ruſſians would ſuffer much during the Winter. But Dr Guthrie thinks, that people in eaſy circumſtances, who are not obliged to remain much out of doors, ſuffer leſs in Ruſſia than in moſt other countries; as, in their apartments, there reigns conſtantly a Summer heat, in which flowers blow all the Winter; and, when out of doors, the warm fur dreſs, with the ſkin furniture of the ſledges, keep the body ſo comfortable, that, Dr Guthrie is convinced, leſs cold is felt in driving through the ſtreets of Peterſburgh, in their dry cold air,

air, than through thoſe of Edinburgh or London, during the cold moiſt weather which obtains there for a great part of the Winter; eſpecially as the ſtate of the atmoſphere, in Britain, is often accompanied by bleak winds; while the air in Ruſſia, during their greateſt cold, is generally ſerene and calm.

It has often, Dr Guthrie obſerves, been conſidered as affectation, both in the natives of Ruſſia, and in foreigners who have reſided long there, that they complain of cold, during Winter, in the temperate climates. But when we take into conſideration their mode of living at home, we can readily underſtand why they ſuffer from cold in countries where neither the houſes nor dreſs are calculated to keep it from conſtantly acting upon the body, during a certain period of the year.

Spring, as Dr Guthrie had formerly obſerved, can hardly be ſaid to exiſt in Ruſſia, the ſeaſons of Winter and Summer running into each other, almoſt without any ſenſible intermediate one. Our author thinks it probable, that the ſudden commencement of the Summer, on the finiſhing of the thawing proceſs, may be accounted for, in ſome degree,

by Dr Black's theory of latent heat. For, as water requires a great portion of ſenſible heat to reſume its fluid form, of courſe a large proportion of that heat, furniſhed by the Sun, will be abſorbed until the whole ſnow and ice be diſſolved; but, after this, all the influence of the Sun will be at once received.

The Ruſſian Summer, during a good ſeaſon, preſents exactly the oppoſite extreme to Winter; the former being nearly as hot as the latter is cold. It is, Dr Guthrie obſerves, remarkable, that the thermometer falls to 24½ deg. below the freezing point on Reaumur's ſcale, during the greateſt cold of a Ruſſian Winter, and riſes to the ſame number of degrees above it, during the greateſt heat of Summer. The greateſt height of the thermometer in Summer, by De Liſle's ſcale, is 106 deg. equal to 85 deg. of Fahr.; and this commonly happens in July or Auguſt. The leaſt heat is 144 deg. of De Liſle, equal to 41 of Fahr.; and this commonly happens in May or October. The medium heat of the afternoon, is 127 deg. of De Liſle, equal to 59 deg. of Fahr.; and the medium heat of the night, is 136 deg. equal to 49 of Fahr. The barometer,

meter, at the higheſt, is 28.42, which happens ofteneſt in May; and at the loweſt, 27.50, which happens ofteneſt in September. The medium height is 28.04 Paris inches. The wind which predominates in Summer, as well as in Winter, is from the weſt. The medium quantity of rain which falls in the ſix Summer months, is 11 Paris inches. There is, in general, about eighty rainy days, and ſeventeen foggy ones, during this ſeaſon. About eleven or twelve days are obſerved to be tempeſtuous; two or three to have ſhowers of hail; and there will be about eight or nine appearances of the aurora borealis.

During the courſe of Dr Guthrie's obſervations, he diſcovered a ſingular fact with regard to the heat of the earth. On the 19th of April 1789, when Reaumur's thermometer ſtood at 7 deg. above Zero, he found the heat of the earth, in a ſoft bed one foot from the ſurface, only half a degree above the freezing point; but, next day, he was aſtoniſhed to find it at 5 deg. above it, although the thermometer in the air had not altered its poſition, but was ſtill at 7 deg. nor had the ſun ſhone out in the interval; ſo that this ſurpriſing

change of heat in the earth, ſeems to have been effected by a ſhower of rain, which fell between the two obſervations. This, Dr Guthrie conſiders as a ſtrong confirmation of the hypotheſis, that rain water contains a large portion of latent heat, and probably of electric matter. Hence, he obſerves, it is not ſurpriſing if plants ſhould, under certain circumſtances, as it were, ſtart ſuddenly out of the earth after a ſhower of rain; as they receive ſo large a ſupply, not only of moiſture, but likewiſe of heat, and perhaps a vivifying principle, from the ſtimulus of the electric fluid carried down by the air.

The ſtate of the atmoſphere during the Summer, in Ruſſia, is in general, according to Dr Guthrie, pretty fixed; and the air is very ſerene and clear, both during the day and night, notwithſtanding a heavy dew, which falls from the ſetting to the riſing of the Sun, and which ſerves for watering the plants during the hot dry ſeaſon. Dr Guthrie was much ſtruck with obſerving, that an excellent hygrometer, hung within doors, with the windows open, indicated a greater degree of humidity, on a fine Summer evening, than dur-

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ing the moſt continued rainy weather: ſo much higher is the ſaturation of the air with water, and ſo much greater is its diffuſion through it, than when it falls in the form of rain. He thinks it alſo worthy of remark, that the ſultry debilitating period has a much greater effect on foreigners than on the natives of the North. While foreigners can ſcarcely take any exerciſe out of doors, with the ſun high above the horizon, without feeling a ſpecies of debility, the natives carry on even the hardeſt labour, without much apparent fatigue. This, he thinks, may probably be accounted for by their conſtant uſe of the vapour bath, heated to a degree inſupportable to a foreigner, while, from habit, they can bear it with perfect eaſe. Another circumſtance, which, he thinks, contributes to produce this peculiarity, is their living at home for almoſt eight months of the year, in a conſtant heat, from about 68 to 78 deg. of Fahr. Nay, even during the Summer, the ovens of their cottages are obliged to be pretty conſtantly heated, each peaſant baking his own bread at home, and dreſſing his victuals in them.

To this diſſertation of Dr Guthrie's, are ſubjoined two letters from his Excellency Mr Æpinus, on electrical phænomena. In theſe letters, after recounting ſeveral very remarkable phænomena occurring during intenſe cold weather, he particularly mentions what happened in the caſe of Prince Orloff, and his Imperial Highneſs the Grand Duke. With the former, Mr Æpinus found, that at every time his valet-de-chambre drew the comb through his hair, when at his toilet, a ſtrong crackling noiſe could be heard; and, on darkening the room, by drawing the curtains, the ſparks were ſeen following the direction of the comb in great abundance; whilſt, by this operation, the Prince was become ſo completely electric, that ſtrong ſparks could even be drawn from his hands and face. His Imperial Highneſs the Grand Duke, a few days after this ſcene with the Prince, ſent for Mr Æpinus, to ſhew him a ſurpriſing experiment that he had juſt diſcovered. When Mr Æpinus came, his Highneſs threw himſelf upon his bed, which was covered with a damaſk quilt, laced with gold; and, upon rubbing it with his hands in all directions, the young

young Prince appeared to be ſwimming in fire; as, at every ſtroke, flames aroſe all round him, which, darting to the gold-lace border, run along it, and up to that of the bed, to the very top.

After particularly relating theſe, and ſeveral other curious phænomena, which might be conſidered as ſtriking effects of the electric ſtate of the atmoſphere, occurring during a great degree of cold which had continued for ſeveral weeks, Mr Æpinus enters into much ingenious reaſoning, with a view to explain this diſpoſition of the air. The reſult of all his reaſoning is, that after the great cold in Ruſſia has continued for a certain time, not only air, but alſo ſilk, hair, wool, and ſimilar bodies, are in fact drier than during the reſt of the year, and probably more ſo than in any other part of Europe, unleſs they be dried expreſsly by ſome artificial means. The conſequence of this is, that the bodies above mentioned become ſpontaneouſly much better ideo-electrics in Ruſſia, during the cold weather, than they ever are in any other ſeaſon or climate. Hence theſe bodies have an extraordinary diſpoſition to become eaſily and ſtrongly electric.

After endeavouring, in his firſt letter, to prove, that great cold renders the air dry and pure in a moſt aſtoniſhing degree, and that the heat which it afterwards receives in apartments, renders it drying in a proportion equally ſurpriſing, Mr Æpinus, in a ſecond letter to Dr Guthrie, endeavours to account for another remarkable circumſtance from this cauſe, beſides the electrical phænomena mentioned above. He obſerves, that when a ſevere froſt has laſted for a certain time, without intermiſſion, the Ruſſians in vain ſtrive to prevent feeling its effects on their own bodies, as well as on their furniture. They find themſelves attacked with a diſagreeable ſenſation, which, as far as it can be deſcribed, conſiſts in a ſort of laſſitude, and heavineſs or torpor, affecting both the mind and body, joined to a troubleſome reſtleſſneſs and inquietude. Mr Æpinus thinks it not improbable, that the drying quality of the chamber atmoſphere ſhould produce the ſenſations above enumerated. Perſpiration, he thinks, muſt be much increaſed by this ſtate of the atmoſphere; and this conſumption of excreted fluids may poſ-

ſibly,

ſibly, he imagines, extend to the nobler fluids neceſſary to the functions of the animal œconomy; ſuch as vital ſpirits, if they have any exiſtence. This idea he thinks the more likely, as it is known that the diſſolving power of air is not confined to water alone, but extended to many other bodies.

If this conjecture be well founded, Mr Æpinus obſerves, that there is an eaſy way to prevent the ſort of diſeaſe which he has deſcribed; for, although ſlight and of little conſequence, it may, he thinks, be reckoned a diſeaſe. For removing it, nothing farther is neceſſary, than to give back to the air the humidity of which the froſt had robbed it. And this may be done, either by promoting the evaporation of a certain quantity of water in the room; or, what is a more convenient mode, by hanging up a cloth of a proper ſize, dipped in water, and wetted from time to time.

We need hardly remark, that the obſervations here offered, on the hiſtory of a northern climate, will naturally attract the attention of the inquiſitive philoſopher. And we have no doubt,

doubt, that the obſervations which Dr Guthrie has promiſed on the phyſical influence of this climate, which he reſerves as the ſubject of a future diſſertation, will convey important knowledge to the induſtrious phyſician. It is therefore earneſtly to be wiſhed, that he may ſoon preſent it to the public.

SECT.

SECT. II.

Medical Obſervations.

I.

Obſervations on the Puerperal Fever; more eſpecially as it has of late occurred in the Lying-in Hoſpital of Dublin. By Joſeph Clarke, *M. D. Licentiate in Phyſic of the Royal College of Phyſicians in Dublin, Maſter of the Hoſpital above mentioned, and M. R. I. A.*

1. BY Puerperal Fever, I mean a diſeaſe which generally attacks women on the ſecond or third day after delivery. Its ordinary ſymptoms are, a cold ſhivering fit, acute pain in ſome part of the cavity of the abdomen, and great tenderneſs when preſſed externally; a rapid pulſe; and theſe ſoon ſucceeded

ceeded by conſiderable diſtenſion of the abdominal cavity.

2. During the puerperal ſtate, ſymptoms, ſomewhat ſimilar to theſe, not unfrequently ariſe, and continue rather alarming, till the inteſtines are emptied by purgative medicines. It may be difficult, therefore, in the beginning, to diſtinguiſh puerperal fever from accumulations of fæces in the alimentary canal, eſpecially if joined to an Ephemera, or Weed.

3. When the ſymptoms (enumerated in paragraph firſt) continue beyond the period of twenty-four hours, which is the ordinary duration of an ephemera, and after the operation of purgative medicines, I conſider the exiſtence of puerperal fever as abſolutely aſcertained; and it will be found to prove fatal to a great majority of thoſe whom it attacks.

4. A diſeaſe is deſcribed in the works of Hippocrates, and ſome other old writers, which, in many particulars, reſembles puerperal fever; as may be ſeen in Dr Hulme's excellent treatiſe on this ſubject. But we have no account of this fever appearing as an epidemic in Lying-in Hoſpitals, till the year 1746; ſince which, its frequent occurrence, and fatal

effects,

effects, have made it an object of very ſerious attention among phyſicians; inſomuch, that it has of late become the ſubject of many treatiſes, both in France and England.

5. It may appear, therefore, ſuperfluous, perhaps preſumptuous, in me to draw farther attention to a ſubject ſo hackneyed. I have been induced to do ſo, becauſe the opinions of writers are ſo widely different from each other, both on the theory and treatment of this fever, that the inexperienced practitioner muſt be totally at a loſs what courſe to purſue. Beſides, in ſearching after methods of cure, not one of which has hitherto proved even moderately ſucceſsful, authors have loſt ſight of, and been almoſt ſilent on, the means of putting a ſtop to its progreſs in hoſpitals, or perhaps of preventing its exiſtence entirely. With the view of throwing ſome light on theſe particulars, the following facts and obſervations are, with deference, ſubmitted to public conſideration.

6. To ſhew the importance, and prove the neceſſity of ſuch an enquiry, I beg leave to premiſe a ſhort ſketch of the appearance and effects of this fever in hoſpitals, ſo far as theſe

are

are well authenticated. In the memoirs of the French Academy of Sciences for the year 1746, we are informed, that during the Winter of that year, an epidemical diſeaſe was obſerved to prevail, with great violence, among the lying-in women of the Hotel Dieu of Paris. In the month of February, of twenty ſeized with it, hardly one eſcaped. From the hiſtory and appearances on diſſection, there can be no doubt this fever was ſimilar to that we now call Puerperal.

7. In the year 1760, (which is about eleven years after the firſt inſtitution of Lying-in Hoſpitals in England), the puerperal fever was epidemical in London. From the 12th of June till the end of December, Dr Leake informs us*, that twenty-four women died of it in the Britiſh Lying-in Hoſpital.

8. In the year 1761, Mr White of Manchester ſays †, "A gentleman, whoſe veracity I "can depend on, informs me, that he attended "a ſmall private lying-in hoſpital in London, "in

* Practical Obſervations on Child-bed Fever, laſt page.

† Treatiſe on the Management of Lying-in Women, &c. Chap. VI. Page 165.

" in the latter end of May, June, and begin-
" ning of July; during which time, the puer-
" peral fever was very fatal there. That, to
" the beſt of his recollection, they loſt twenty
" patients in the month of June. They ſome-
" times buried two women in one coffin, to
" conceal their bad ſucceſs."

9. In the year 1770, this fever raged violently in ſeveral of the London hoſpitals. In the Weſtminſter hoſpital†, between November 1769 and May 1770, of ſixty-three women delivered, nineteen had the fever, and fourteen died; which is nearly every fourth woman.

10. In the Britiſh Hoſpital, of eight hundred and ninety delivered in the courſe of this year, thirty-five died, or one in fourteen and a half.

11. In a third hoſpital, which Mr White has not thought proper to name ‡, during the year 1771, of two hundred and eighty-two delivered, ten died, or one in twenty-eight.

12. In the year 1773, the puerperal fever appeared in the lying-in ward of the Royal Infirmary

† Leake's Practical Obſervations, &c. Page 241.

‡ Poſtſcript to Mr White's Treatiſe, Page 305.

Infirmary of Edinburgh, of which the late Profeſſor Young gives the following account: "It began about the end of February, when "almoſt every woman, as ſoon as ſhe was de- "livered, or perhaps about twenty-four hours "after, was ſeized with it; and all of them "died, though every method was uſed to "cure the diſorder. This diſeaſe did not ex- "iſt in the town. I found that the women "in the lying-in ward did not recover ſo well "laſt year as formerly; but ſcarcely any died. "It was this made me think there was a lo- "cal infection, and determined me to ſhut up "the ward till it could be removed. This I "did, after loſing ſix women."

13. In the year 1782, the Royal Medical Society of Paris was ordered, by the King of France, to make a report of a Memoir of the late Dr Doulcet, containing a new method of treating the puerperal fever. This very reſpectable ſociety informs the public, that puerperal fever has made its appearance more frequently than ever in the Hotel Dieu of Paris ſince the year 1774; and that it had always proved fatal to every perſon it attacked. They further report, that, in four months, during

during which this epidemic diſeaſe raged with great fury, near two hundred women were ſaved to ſociety by Doulcet's new method of treatment; of the ſucceſs of which, in this country, we ſhall give ſome account in the ſequel.

14. In the year 1786, a report was publiſhed in Paris, by a Committee appointed by the Royal Academy of Sciences, to enquire into a plan of a new Hotel Dieu. In this report, it is ſtated, that, in the year 1774, an epidemic diſeaſe prevailed among the lying-in women, which committed the greateſt ravages; that it re-appeared every Winter till the year 1781; and that, ſtill, it prevails more or leſs in the cold ſeaſons. Theſe facts are taken from Memoirs communicated to this Committee by Mr Tenon; by which it alſo appears, that all women, ſeized with this epidemic, die; and that, of twelve, ſeven are frequently attacked. Their concluſion is, " L'Hotel Dieu donc perd " quelquefois plus de la moitié des femmes qui " y vont accoucher."

15. The puerperal fever firſt viſited the Lying-in Hoſpital of Dublin in the year 1767, about ten years after it was firſt opened for

the reception of patients. From the firſt of December till the end of May, of three hundred and ſixty women delivered, ſixteen died.

16. Seven years afterwards, this fever reappeared. Of two hundred and eighty women delivered during the months of March, April, and May, in the year 1774, thirteen died.

17. From the year 1774 till the year 1787, this fever was unknown as an epidemic in Dublin. From the 17th of March, in this year, till the 17th of April, one hundred and twenty-eight were delivered in the hoſpital; eleven of whom were ſeized with ſymptoms of puerperal fever, and ſeven died.

18. In November 1788, the ſame fever appeared, for the fourth time, ſince the inſtitution of the hoſpital. During this, and the two ſucceeding months, three hundred and fifty-five women were delivered; ſeventeen were attacked by this fever, and fourteen died.

19. The management of the Lying-in Hoſpital in Dublin having been intruſted to me, during the occurrence of the laſt two epidemics, my obſervations will, of courſe, be principally

cipally confined to them; and, as my deſign is not to make an eſſay on puerperal fever, but to ſupply ſome ſupplementary facts, I hope to be excuſed for paſſing over ſeveral parts of the ſubject with brevity.

20. During Spring 1787, the temperature of the air was in general very cold, with ſharp winds from the eaſt and north-eaſt. Inflammatory diſeaſes were more prevalent among our patients than uſual; particularly, acute rheumatiſm. Some were affected with ſevere pains in the thorax, and difficult reſpiration. In conſequence of theſe complaints, we were obliged to have recourſe to veneſection more frequently, during February and March of this year, than during the twelve preceding months.

21. It was a general obſervation, that our patients recovered ſlowly; or, to uſe the language of the nurſes, it was much more difficult to get them out of bed than uſual. This was peculiarly diſtreſſing, as the admiſſion of poor women was now very numerous, probably on account of the ſeverity of the weather. Contrary to our eſtabliſhed cuſtom, we were ſometimes obliged to put two in a bed,

rather than refuſe admittance to thoſe who ſolicited it at our gates.

22. As a conſiderable time had elapſed ſince our wards had been painted and white-waſhed, I thought it probable, that theſe circumſtances might contribute to the ſlow recovery of our patients. Application was therefore made, in the month of February, to a Board of the Governors of the Hoſpital, for an order to have the wards repaired. It was apprehended that the expence might be conſiderable; and the funds of the charity being then low, the Secretary was deſired to give notice, that he would receive propoſals for doing the buſineſs by contract.

23. While we were thus waiting in expectation of repairs, the puerperal fever began to make its appearance, and in a very treacherous manner. The firſt woman was attacked on the 18th of March, and the ſecond not until the 31ſt; the third, on the 3d of April; the fourth, on the 7th; the fifth, on the 10th; the ſixth, on the 11th; on the 14th, two; on the 15th, two more: and one on the 17th. It was not, then, till the middle of April, that its

its progreſs began to be rapid, and its nature as an epidemic clearly aſcertained.

24. The ſymptoms of this fever correſponded ſo nearly with what Doctor Hulme has well deſcribed, that a very few remarks will ſuffice on this ſubject. It always began with a diſtinct chilline ſs or ſhivering. The pain in the cavity of the abdomen was not more frequent in one part than another; nor was the tenderneſs ſo great as to be much affected by ſuch trifling cauſes as the preſſure of the bedclothes. Little or no vomiting appeared in any ſtage of the diſeaſe; no delirium; no unequivocal marks of putreſcency in any part of the ſyſtem. The pulſe, in general, beat from one hundred and twenty to one hundred and forty ſtrokes in a minute. The lochial diſcharge and ſecretion of milk were not ſubject to any general law. Sometimes they continued regular for a ſhort time, and ſometimes were ſuppreſſed from the beginning. They have never appeared, to me, more deranged in this, than in other diſorders where the circulation of the blood is equally diſturbed.

25. The appearances, on diſſection, of the bodies of ſix patients, who died of this fever,

were not materially different from what have been deſcribed by writers who have ſeen the diſeaſe in hoſpitals. In all our ſubjects, the omentum appeared inflamed, and waſted in ſubſtance, but in no inſtance mortified. I am inclined to think, from numerous obſervations, that thoſe writers who have deſcribed mortification of the omentum, and ſome other parts of the abdominal viſcera, allowed the dead bodies to remain too long after death before they inſpected them. In all our diſſections, the peritoneum appeared every where unuſually vaſcular and inflamed. Next to the omentum, the broad ligaments of the uterus, the cæcum, and ſigmoid flexure of the colon, ſeemed to ſuffer moſt by inflammation. We always met with more or leſs of a turbid yellow, and ſometimes fœtid fluid, floating among the inteſtines; coagulated purulent-like maſſes, adheſive inflammation, glueing the inteſtines to each other, &c. In no inſtance did the appearances of inflammation ſeem to penetrate deeper than the peritoneal coat, on any of the viſcera of the abdomen or pelvis.

26. The moſt probable ſuppoſition which has hitherto been made of the proximate cauſe

of

of this diſeaſe, is, that it conſiſts in an inflammation of the peritoneum; and hence, the noſological name of Peritonitis has been given to it by Doctor Forſter. This hypotheſis appears to me to be more conſiſtent with the appearances on diſſection, and to afford a more rational explanation of them, than has hitherto been given. Why does the omentum appear to ſuffer more than other parts in this diſeaſe? Probably becauſe it is peculiar to it to be compoſed of four folds, or a quadruple peritoneum; and, of courſe, it ought to exhibit appearances of inflammation four times greater than parts ſimply covered by this membrane. Next to omentum, the duplicatures of the peritoneum are moſt affected, and eſpecially the broad ligaments of the uterus.

27. Moſt of our patients, attacked in the year 1787, were admitted in a weakly ſtate, or had tedious and fatiguing labours. Four of thoſe, who died, were caſes of firſt children. Two appeared to be ill during labour, and continued ſo, without intermiſſion, after delivery. One of them died in thirty-ſix hours; and the other lived till the ſixth day. Three were attacked on the ſecond day after

delivery, and died on the ſeventh, or of five days illneſs. One was attacked on the fourth, and died on the tenth. One was very diſtinctly attacked on the ninth day, as ſhe was ſitting by a good fire, and died on the twelfth. Notwithſtanding the ſhort duration of this patient's diſeaſe, from five to ſix pounds of a yellow fœtid fluid were found floating in the cavity of the abdomen, and a great deal of adheſive inflammation.

28. The attic ſtory of our hoſpital, on which all our patients are delivered, is ſeparated into four great diviſions, each conſiſting of a great ward, and two ſmall ones. The former contain ſeven, and the latter two beds each. To each diviſion, a maid-ſervant and nurſe-tender are allotted. I mention theſe circumſtances, in order to render a remarkable fact intelligible, *viz.* one of theſe diviſions did not loſe a ſingle patient by the puerperal fever; whereas the mortality among the other three was nearly equal, though, upon the whole, there was a greater number of women ſick in two of theſe diviſions, which have a ſouthern aſpect.

29. Such

29. Such partial diſtribution of diſeaſe, joined to circumſtances already mentioned, (21. 22.) rendered it probable, that this fever derived its origin from local contagion, and not from any thing noxious in the atmoſphere.

30. Influenced by this probability, we proceeded, on the 17th of April, to ſhut up the two great wards in which diſeaſe was moſt prevalent. The ſick contained in them were put into the adjoining ſmall wards, until their fate was determined; and the remainder were put into the oppoſite great wards. The walls and cielings of the wards evacuated, were white-waſhed without delay. The bed-ſteads and all the wood-work were painted. Every thing belonging to the bedding, that it was poſſible to waſh, was ſcoured, and the remainder expoſed for days to the open air. Great fires were kept on by day, and at night the windows were kept open. In this manner, we went round every apartment in the hoſpital which had been occupied by patients.

31. The conſequences of this practice were extremely favourable. From having been moſt diſagreeably haraſſed by diſeaſe, the hoſpital became remarkable healthy. During

the

the remainder of the year, of nine hundred and ſixty women delivered, we loſt only three: and two of theſe bore twins; a circumſtance which I have elſewhere* proved to leſſen conſiderably the chance of the mother's recovery.

32. During the firſt ten months of the year 1788, one thouſand two hundred and fifty-five women were delivered; of which number, thirteen died. As admiſſion was more promiſcuous and numerous during this than any former period, many were received, labouring under dangerous diſorders; and two were actually in a dying ſtate from miſmanagement. Under ſuch circumſtances, the loſs of nearly one in a hundred could not be conſidered as great. Not one of the thirteen, however, died of puerperal fever.

33. On the 18th of November, one woman was attacked with this fever; on the 8th of December, another; on the 21ſt, two; on the 23d, one; on the 28th and 29th, one each day; on the 31ſt, one; on the 3d of January, one; on the 6th, one; on the 14th, two; and, on the 16th, one. Every one of thoſe, in which the diſeaſe was marked, as deſcribed

* Philoſophical Tranſactions, Part II. 1786.

deſcribed (3.), proved fatal; whereas, of five caſes, attacked on the 4th, 7th, 16th, 20th, and 22d, with doubtful ſymptoms, none died.

34. From the 18th of December till the 23d of January, thirteen women were affected with ſymptoms of general fever, without any appearance of local diſorder in the abdomen. All theſe continued beyond the uſual period of ephemeræ. Two of them only died: one on the 8th, the other on the 17th day from the attack. Many of theſe febrile diſorders, I was inclined to attribute to the fears and apprehenſions naturally excited by the numerous deaths produced by puerperal fever.

35. The ſymptoms of this epidemic did not differ eſſentially from that of 1787. In ſeveral caſes, the pain of the abdomen, and conſequent tumefaction, were leſs ſevere; and hence, probably, it happened, that, in ſome inſtances, the duration of the diſeaſe was protracted to an unuſual length. The days of attack were as follow:

One, four days before delivery.
One on the day of delivery.
Eight on the ſecond day; and
Three on the third.

Their

Their deaths happened as underneath:

Two died on the 2d day.
Three ——— 4th day.
Two ——— 5th day.
One ——— 7th day.
Two ——— 8th day.
One ——— 10th day.
One ——— 11th day.
One ——— 12th day.

36. In ſeveral of the above caſes, the ſtomach and inteſtines ſhewed very unuſual degrees of inſenſibility to the operations of medicines. One took tartar emetic, in ſolution, to the quantity of ſixteen grains, before it operated as an emetic. Another took forty-five grains of ipecacuanha, in doſes of ſeven grains and a half, every hour, to have a ſimilar effect. Not unfrequently, we were obliged to aſſiſt the operation of ipecacuanha, as lately recommended by the Royal Medical Society of Paris, with a ſolution of tartar emetic. In a few caſes, the milder purgatives produced no effect on the inteſtines; and we were obliged to have recourſe to cathartic extract and calomel; to irritating glyſters of decoctions of ſenna-leaves, tobacco, &c. Such

inſenſibility

inſenſibility we always conſidered in an unfavourable light, as marking great derangement in the functions of the nervous ſyſtem. Some patients, during this epidemic, were affected with delirium before death.

37. It was further remarkable of this epidemic, that the ward exempt from ſickneſs, during the preceding attack, was now one of the moſt ſickly; and one of the moſt ſickly, in the firſt, was now one of the moſt healthy, although ſtill under the care of the ſame nurſe-tenders.

38. Having obſerved, from the hiſtorical facts already recited, of puerperal fever, that it ſeldom appeared more frequently in hoſpitals than once in ten or twelve years, I had not the moſt diſtant apprehenſion of its returning in a ſpace of twenty months. The firſt two or three caſes, happening at diſtant intervals of time, were conſidered as accidental. However, obſerving the mortality to continue, although ſlowly, I began to ſuſpect that the beds, from having been in conſtant uſe, might have acquired ſome noxious properties. But as they had been ſcoured a few months before, I hoped that, by expoſing the matraſſes

to

to a ſtrong fire, and then to the open air, they might be ſufficiently purified. The blankets, quilts, &c. were alſo ventilated. Theſe meaſures only ſerved to produce ſome inſidious intervals, during which the diſeaſe ſeemed to abate, (ſee 33.) At length, we were compelled to have recourſe to the ſame expenſive and troubleſome proceſſes of white-waſhing, painting, &c. as before, and with the ſame ſalutary effects. Every ſymptom of fever ſubſided, as our patients were received into clean wards. Of one hundred and fifty, admitted after our refit, ſcarcely one had any ſerious illneſs; and we were tolerably healthy during the remainder of the year.

39. The late Dr Young, of Edinburgh, is the only writer who has recommended meaſures ſimilar to what we purſued, for putting a ſtop to the progreſs of this fever. In a letter to Mr White of Mancheſter, he ſays, "After loſing ſix women, I then waſhed and "painted the wards; cauſed all the bedding "to be removed; and fired gun-powder at "different times in the wards. I had a num-"ber of chaffers filled with cinders, which "burnt all night; and all the windows were "opened

" opened through the day. This operation " laſted about a fortnight, when I furniſhed " the wards with new bedding; put no cur- " tains to the beds; and, by this, put an en- " tire ſtop to the diſeaſe." Why ſimilar meaſures have not been practiſed in France and England, to ſtop the progreſs of puerperal fever in hoſpitals, I am at a loſs to explain.

40. The preceding facts appear to me fully to warrant this concluſion, that whenever three or four women die of the puerperal fever, within a ſhort time of each other, *local infection* ought to be ſuſpected to exiſt, and particularly in the building; and that the moſt vigorous meaſures ought to be immediately adopted, in order to deſtroy this ſource of the diſeaſe.

41. And, to prevent the generation of ſuch infection, I have no doubt, that Lying-in hoſpitals, whoſe beds are in conſtant uſe, ought to undergo, annually, a refit, ſuch as already deſcribed, excepting only the article of painting. The bedding of every woman who dies, ſhould be inſtantly carried out and ſcoured, before it is replaced. Whenever a ward happens to be empty for a day or two, its beds

beds ſhould be ſtripped, and expoſed to a current of air, night and day, inſtead of the uſual practice of covering them up by blankets, &c.

42. Probably, alſo, a ward more than is actually neceſſary for the ordinary buſineſs of an hoſpital, might be converted to very uſeful purpoſes. It would permit each ward, in rotation, to be in airing, (if the expreſſion may be allowed), for a week, two or three, as might be thought adviſeable. In this way, the ill effects ariſing from conſtant uſe, might probably be prevented. This is a ſcheme which was ſtrenuouſly recommended to a Governor of the Lying-in hoſpital of this city, by the very benevolent Mr Howard.

43. I am perſuaded, that precautions of this nature, if duly attended to, would greatly leſſen the frequent recurrence of puerperal fever in hoſpitals, and they might perhaps deſtroy its exiſtence entirely as an epidemic. It will no doubt continue, occaſionally, to occur both in hoſpitals and private practice, from ſuch accidental cauſes as tend to excite inflammation in the cavity of the abdomen; but that it muſt, of neceſſity, exiſt as an epidemic, I doubt very much.

44. Moſt

44. Moſt writers have poſitively aſſerted, that puerperal fever never affects women till after delivery; and yet, I have dated the attack of ſome of our patients at an earlier period. Several caſes have occurred to me, in which it was clear, that ſome diſeaſe exiſted before delivery; and diſſections after death, have exhibited all the appearances uſually found after this fever. A caſe of this kind occurred ſo long ago as the year 1782, in which the patient died in thirty-ſix hours after delivery. A ſecond caſe happened in the Autumn of the year 1786, where appearances were ſtill leſs equivocal: A patient expired two hours after a tedious labour, apparently exhauſted. On opening the cavity of the abdomen, on the following day, all the ordinary effects of puerperal fever were found very diſtinctly marked.

45. Having ſtated ſome caſes of this very fatal diſeaſe to have terminated ſucceſsfully, the reader may perhaps be anxious to know ſomething of the practice purſued. All I have to obſerve, worthy of communication, in ſuch methods of cure as have hitherto been recommended, will require but a few words.

46. Veneſection, which is ſtrenuouſly adviſed by Leake, Denman, and others, I have never ſeen of any uſe, excepting in a few caſes, where there ſeemed to be a combination of peripneumonic ſymptoms along with peritonitis; and even in ſuch caſes, it only had the effect of alleviating the ſeverity of ſymptoms.

47. Ipecacuanha, exhibited as directed by the Royal Medical Society of Paris, will ſometimes ſeem to do eſſential ſervice; in other caſes, it will evidently do no good. How is this to be explained? We are directed to give ſeven grains and a half the inſtant a patient is ſeized with ſhivering, and to repeat the ſame quantity in an hour. Now, I aſſert, that when a woman in child-bed ſhivers, no man can tell, whether her diſeaſe is to turn out ephemera or puerperal fever. If the former, the ipecacuanha will apparently produce a cure; if the latter, it will ſeldom afford permanent relief. When ipecacuanha operates both as a laxative and an emetic, which not unfrequently happens, it will be found to have better effects than when its operation is merely emetic. But, ſo far from performing a cure in every inſtance, I have no heſitation to affirm, that it will

will not ſucceed in one of ten caſes, where the diſeaſe is epidemic. I find by our medicine-book, that, during the month of January 1789, three ounces and an half of ipecacuanha were conſumed, agreeably to the rules laid down by the Royal Medical Society of Paris; and yet, during this month, the mortality of our patients was very conſiderable.

48. Saline purgatives, and fomentations to the cavity of the abdomen, as adviſed by the late Dr Forſter, and practiſed in the Lying-in Hoſpital of Dublin, ſince he ſerved the office of Aſſiſtant Phyſician therein, appear to me to afford the moſt rational and probable proſpect of relief in puerperal fever. But I can by no means join Doctor Forſter, in ſaying, "That "no diſeaſe, of equally apparent danger, is "nearly ſo obedient to the laws of medicine; "and that all dangerous ſymptoms almoſt con-"ſtantly vaniſh, upon the early and repeated "uſe of the medicines recommended by him." My experience is diametrically oppoſite to theſe aſſertions. When the diſeaſe is epidemic, or produced by infection, no method of cure, yet deviſed, will ſucceed in one of five caſes. On the contrary, when the diſeaſe pro-

ceeds from accidental cauſes, inducing inflammation, there will be reaſon to hope for better ſucceſs, by purſuing ſteadily, for ſome days, the method of cure preſcribed by Forſter. Upon the whole, although I differ, in ſome particulars, from this phyſician; yet I cannot omit this opportunity of recommending to the inexperienced practitioner, ſuch parts of his book* as relate to Puerperal Fever.

* Principles and Practice of Midwifery, p. 295, &c. firſt edition.

II.

II.

Obſervations on the Influenza, as it lately appeared in the Weſt Indies. *By* Mr C. Chiſholm, *Surgeon in St George's, Grenada.*

THE epidemic catarrhal fevers, generally diſtinguiſhed in Europe by the appellation of Influenza, are, I believe, very ſeldom met with within the tropics: for, in a period of twenty-ſix years, that is, from the ceſſion of Grenada till the year 1789, an epidemic catarrh of this deſcription occurred only twice in that iſland; and the duration, extent, and violence of the diſorder, when it appeared, were by no means very remarkable. Taking a general view of the nature of the climate, and not attending to the change of temperature, and direction of the winds, at the commencement of the Winter months, or what is called the dry ſeaſon in the Weſt Indies, colds and catarrhal fevers, one would imagine,

ſhould be infinitely more rare than they are in the Torrid Zone; but attentive obſervation ſhews us, that the occurrence of them ſhould not be conſidered as an extraordinary circumſtance. In fact, they are not; for they always, more or leſs, afflict the inhabitants, in their more ſimple form, at the commencement of the dry ſeaſon. But the univerſality, the duration, and the violence of the epidemic in queſtion, and the changes which it, with the aid of the uncommon diſpoſition of the atmoſphere, which occurred ſoon after it appeared among us, produced in the human conſtitution, are very extraordinary, and have never been equalled in this iſland ſince it became a Britiſh colony.

From a number of coinciding accounts, it appears that this epidemic prevailed throughout all the continent of North America, and in all the Weſt India iſlands, nearly at the ſame time. It appears from the following paragraphs of two New-England newſpapers, that it raged there, and in the other parts of the continent, about the beginning of November; and, at that time, it made its appearance here. "The Influenza, which has raged in the "Southern States, is ſo prevailing in this "town,

" town, (Boſton), that nine-tenths of the citi-
" zens now labour under it *."—" The Influ-
" enza, as it is called, which is now ſo com-
" mon among us, has raged greatly in Europe,
" as well as in the Southern States of Ame-
" rica, and to ſome has proved fatal †." Some veſſels, which arrived here about the end of December, from Halifax in Nova Scotia, New London, Norfolk, and Savannah, from whence they ſailed about three weeks before, confirm theſe accounts. At Martinique, the violence of the diſorder, during the early ſtages of its duration, was more conſpicuous than any where elſe; and its fatality there was more remarkable, as, at that time, in this and the other Engliſh iſlands, the ſymptoms did not ſhew any dangerous tendency.

It is certain, that its progreſs was from thoſe iſlands which had a more direct and immediate intercourſe with the continent of North America, to thoſe farther ſouthward; and we have reaſon to conclude, from that circumſtance, that its rapid propagation was owing to contagion, communicated by ſailors belonging to

* Maſſachuſet's Centinel, November 7th 1789.

† Ditto, — — November 12th ——

the ſmall veſſels which carry on the Iſland-trade. This opinion ſeems to be further ſupported by the manner in which the epidemic made its firſt appearance at St George's and Grenville Bay, the two ſea-ports of Grenada. About the beginning of November, ſome of theſe veſſels arrived at St George's, from St Euſtatius, St Kitts, and Dominica; at all which iſlands, it then raged univerſally. The negro ſailors, who navigated them, were, at the time of their arrival, very much afflicted with it; and, being ſent on ſhore to the houſes of their reſpective owners, were lodged with the domeſtics, and other ſailor negroes, who were then in a perfect ſtate of health. In a very ſhort time, that is, in the courſe of leſs than a week, all theſe were afflicted with it. During a fortnight, or between the time the Influenza firſt appeared in St George's, and the end of the month, its prevalence and univerſality were moſt aſtoniſhing. It attacked, indiſcriminately, the Whites and Blacks, and very few of either colour eſcaped it. But, although thus general, it was not, by any means, at that time, attended with any alarming ſymptom. Its progreſs, from the town to

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the country, was remarkably gradual; and diverging, as from the centre of a circle, it appeared on the eſtates neareſt town firſt, and on the others afterwards, in proportion to their diſtance from it. In one inſtance, however, this gradual progreſſion was not obſerved. Two eſtates, belonging to the ſame proprietor, about eight miles from town, were infected at the time the neareſt began to feel its influence: but the infectious nature of the diſorder, was, by this circumſtance, rendered more evident; for the eſtates I have mentioned, although ſo far diſtant from town, had a conſtant intercourſe with it by water.

It was not till the middle of the month of December, that the diſorder aſſumed thoſe ſymptoms which rendered it ſo extremely dangerous. Hitherto, the conſtitutions of the inhabitants, particularly the Blacks, had ſuffered little. But, the long continuance of the moſt extraordinary ſtate of weather remembered by the oldeſt inhabitant, had now increaſed the inflammatory diatheſis, already generally prevailing, to ſuch a degree, as to render the diſorder, when it appeared on the more diſtant eſtates, extremely dangerous, by the violence,

obſcurity,

obſcurity, and inſidious nature of its ſymptoms. About the middle of January, the diſorder appeared every where, only leaving the conſtitutions of thoſe who had ſurvived it ſo extremely enfeebled, as to render them, for a long time, unfit for their cuſtomary employments.

How far the peculiar diſpoſition of the air was efficient in producing this fatal change in the epidemic, will be ſeen by attending to the following account of the weather, from September till the latter end of January.

Nearly half the month of September was ſhowery, with much thunder and lightning; but there was little wind, and chiefly ſoutherly and eaſterly. The heat was by no means conſiderable; the range of the thermometer, at noon, being from 87 to 80; and, in the morning, from 82 to 79. The barometer changed from 30 to 29.7¾.

Eleven days of October were ſhowery; but the quantity of rain which fell, was not conſiderable, though attended with heavy ſqualls of wind from almoſt every quarter, but chiefly from the north-eaſt. The remainder of the month generally clear, but ſultry, and frequently

quently calm. The thermometer ranged from 88 to 82 at noon; and, in the morning, from 83 to 79; the average of the month being $82\frac{11}{30}$. The barometer changed very little; from 29.9½ to 29.8.

Half November was rainy; and, on ſeveral days, the ſhowers were exceſſively heavy, with violent guſts of wind, and, not unfrequently, with thunder and lightning. The other half was as remarkable for ſultry calms, with ſometimes a clear ſky, but more frequently cloudy. The nights were more remarkable for moiſture than the days. The winds were very variable; but, upon the whole, northerly and eaſterly were the moſt prevalent. The range of the thermometer was from 85 to 81 at noon; and, in the morning, from 81 to 78. The average of the month was $81\frac{12}{30}$. The barometer changed from 29.9 to 29.7.

December, like November, was rainy; but the quantity which fell, the degree of north-eaſterly and north-weſterly winds, and their chillineſs, were infinitely greater. During the mornings, evenings, and nights, the coldneſs of theſe winds was exceedingly piercing; and the peculiar chilling quality of the air was ſuch,

as

as to communicate a ſenſation to the human body, ſimilar to that which is felt on the approach of a paroxyſm of a regular intermittent. The pores were continually ſhut up, by the uncommonly corrugating influence of theſe prevailing winds; and people, in general, were obliged to have recourſe to warm cloathing or exerciſe, to produce that degree of heat and perſpiration neceſſary for the maintaining of a healthy conſtitution. The range of the thermometer, at noon, was from 84 to 78.30; and, in the morning, from 81 to 77. The barometer was higher, on ſeveral days of this month, than any of the preceding; being three days at 30, and generally at 29.9.

January had ſeventeen days rainy, on ſome of which there were heavy ſqualls, chiefly from N. N. E. and E. N. E. The latter part of the month, weather clear, two or three days excepted, with ſoutherly winds. During the firſt two weeks of this month, the diſpoſition of the air was nearly the ſame as that of December; but afterwards it became more temperate. The thermometer was generally low; the range, at noon, being from 81 to 78; and, in the morning, from 78 to 74. The average

of

of the month, was $79\frac{17}{100}$. Towards the end of the month, the barometer was frequently as high as 30; but, in general, it ſtood at $29.9\frac{1}{2}$.

The diſeaſe, as has been already obſerved, made its firſt appearance in St George's, about the beginning of November; at which time, although very general, and very diſtreſſing to the patients, it was not attended with any ſymptom indicating danger. The moſt common way in which it appeared, was the following: It began like an ague fit, with coldneſs, ſhivering, and ſhaking. Soon after, the patient felt a languor, laſſitude, diſinclination to move, acute pain in the head, attended with a ſenſe of uncommon fullneſs and lightneſs in it, flying pains all over the body, and other ſymptoms of fever. Theſe were accompanied, on the following day, with exceſſive oppreſſion at the præcordia; a hoarſeneſs and pain in the throat; a ſneezing and coryza; a watery diſcharge from the eyes, with, ſometimes, conſiderable inflammation of the albuginea; and a conſtant troubleſome dry cough. Sometimes, together with all theſe, the patient complained of uneaſineſs and ſickneſs at the ſtomach, and, not unfrequently,

unfrequently, had very copious ſpontaneous bilious vomitings; which always relieved, eſpecially if a ſweating was produced at the ſame time. Difficult reſpiration, and a general ſoreneſs, were almoſt conſtantly complained of. Theſe ſymptoms afflicted the patient for three or four days, and then diſappeared, in conſequence of ſpontaneous ſweating, or the effect of the medicines adminiſtered to him.

The fever ſometimes appeared in a continued form, but moſt generally in that of a remittent, or intermittent; and, when in the latter, the paroxyſm always came on in the evening, and continued all night. And, although the catarrhal and other ſymptoms continued all day; yet they always, particularly the cough, ſeemed to increaſe in violence, when the exacerbation of the fever took place.

Together with all, or moſt of the ſymptoms enumerated, the patient complained of a pain, ſometimes in the right ſide, in the region of the liver, ſtretching to the oppoſite ſide, or upwards to the ſhoulder and clavicle; ſometimes at the pit of the ſtomach, extending to the ſpine; ſometimes in the left ſide, exhibiting every appearance of pleuriſy; and ſometimes

times frequently ſhifting from the right to the left, and from the left to the right ſide. When theſe pains occurred, the reſpiration, and ſtraitening of the thorax became ſo exceſſive, as to threaten inſtant ſuffocation. It is not a little extraordinary, that although theſe pains indicated topical inflammation, to a violent degree, bleeding was ſeldom uſeful; and, in two or three inſtances, was evidently prejudicial. This circumſtance conſtituted the principal diſtinction between the nature of the diſorder at this early period of it, and when it recurred ſome time afterwards; for we ſhall find, that then, plentiful and frequent bleedings were the only, or the principal remedy to be depended on.

This was the manner in which the diſorder ſhewed itſelf; but it varied frequently: for, ſometimes the patient complained of continued fever, with cough only; at other times, the only ſymptoms complained of, were a pain at the pit of the ſtomach, and dry troubleſome cough, which always increaſed the violence of the pain.

Some fevers occurred at this period, which, though without any catarrhal ſymptom, except

cept the oppreſſion at the præcordia, and watery diſcharge from the eyes, were evidently rendered worſe, by the peculiar diſpoſition of the air at the time. Some, afflicted with theſe, died.

There were alſo ſome inſtances of putrid fever ſhewing itſelf, under the ſemblance of this epidemic. Some caſes, in particular, partook ſo much of the putrid diatheſis, as to render the ſituation of the patients extremely dangerous. In ſuch, I have been induced to adminiſter bark, combined with ſome gentle deobſtruent and diaphoretic, even during the exiſtence of the fever; the ſymptoms running ſo high, as to make a delay of this practice unjuſtifiable. In theſe, the catarrhal ſymptoms were very evidently marked, and occaſioned the loſs of two patients, by their preventing my attending to thoſe of putreſcence.

One caſe occurred, conjoined with Tetanus, which ended fatally in three days. Here the catarrhal ſymptoms, ſuch as cough, coryza, and inflammation of the throat, increaſed the violence of the ſpaſmodic affection to ſuch a degree, as to render the ſtruggle the patient underwent, truly dreadful.

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At the termination of the diſeaſe, there were ſometimes eruptions about the lips and noſe, ſimilar to thoſe which frequently take place at the cloſe of common fevers.

In a few caſes, the paroxyſm of fever roſe ſo high, as to occaſion delirium; but the duration of this ſymptom was very ſhort, and never very alarming.

Except in a few inſtances, the pulſe was not much affected, riſing generally to 94 or 100; nor was it hard, though frequently full. The ſtate of the pulſe, is another characteriſtic diſtinction of the diſorder now, from what it was ſome time after.

Upon the whole, the ſuddenneſs of its attack, the rapid progreſs of the ſymptoms, the ſeeming danger into which they threw the patient, its extenſive prevalence, and the ſpeedy recovery, ſometimes from natural efforts, but more generally from the action of the medicines adminiſtered, were very remarkable, and conſtituted the principal diagnoſtics of the diſeaſe. I have known patients ſuddenly ſeized at noon, with all the ſymptoms of the diſeaſe, even the moſt violent, ſuch as, acute pains in the right ſide, &c. and, on the following

morning, be as well as ever; and this, merely from one bleeding, and a plentiful perſpiration during the night.

But, after the weather became ſo uncommonly tempeſtuous and cold, in the month of December, the inflammatory diſpoſition, which had already been introduced into the conſtitution, increaſed to a moſt alarming degree, and rendered the diſorder, hitherto only a ſingular catarrhal affection, extremely dangerous and fatal. It is extraordinary, that when it ſhewed itſelf in this new and fatal form, it was confined to particular diſtricts and particular eſtates; thoſe adjoining being perfectly exempted from it. And, except in two inſtances, it does not appear that thoſe on which it formerly raged, were, in the ſmalleſt degree, afflicted with it now. Another circumſtance, equally curious, is, that in thoſe eſtates where the influence of the prevailing chilling winds, at this time, was moſt felt, from their greater expoſure to them, the diſorder was moſt fatal.

The ſymptoms it aſſumed, were extremely various. On ſome eſtates, it became either the genuine or anomalous Hepatitis; on others, Peripneumony or Pleuriſy. When it became

became the anomalous hepatitis, the ſame ſymptoms appeared as thoſe which pointed out that inſidious diſorder in the year 1786; and it ran with the ſame rapidity to a fatal termination, as when that fatal epidemic raged. It was not till two patients died, that the diſorder, in this form, was detected; a circumſtance by no means ſurpriſing, when it is conſidered, that the ſick were at the ſame time afflicted with the general ſymptoms of the prevailing catarrh. Diſſection diſcovered it; and, as formerly, copious bleedings and mercury cured it. And, it is very remarkable, that when the mercury continued inactive, the diſorder always proved fatal, notwithſtanding the large bleedings; nor is the aſſiſtance which the latter afforded the former, in giving it a more certain tendency to affect the habit, leſs remarkable.

The peripneumonies and pleuriſies were of a nature very ſimilar to the fatal epidemic of that name, deſcribed by the late Dr Cleghorn. In the caſes of theſe diſorders which proved fatal, the ſymptoms, at the beginning, were not very alarming; but, on the third or fifth day, the oppreſſion at the præcordia, the com-

preſſed ſtate of the lungs, (which ſometimes occaſioned a conſiderable protruſion of the eye-balls, by the patient's efforts to breathe), the exceſſive, and frequently intermittent palpitation, the alternate fluſhing and paleneſs of the face, the ſenſation of approaching ſuffocation, as it were, and the violent exertions made in breathing, exhibited a ſcene, at once dreadful, diſtreſſing, and uncommon. Theſe ſymptoms were generally accompanied with a tremulous or intermittent pulſe; ſometimes, in the ſame patient, ſo ſmall, as to be felt with difficulty; and, at other times, remarkably hard, quick, and full. The fever which attended, was remitting, or one with violent exacerbations in the evening, which continued all night, and, towards morning, were ſucceeded by indiſtinct intermiſſions. The heat of the ſkin was of a moſt diſagreeable, pungent, penetrating nature. On firſt touching it, we were not ſenſible of any uncommon heat; but, on preſſing, and continuing the preſſure for a few ſeconds, a heat, ſuch as I have deſcribed, was felt, which left a very diſagreeable ſenſation for a conſiderable length of time, after withdrawing the hand. In ſeveral caſes, the

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ſtate of the patient was rendered infinitely more diſtreſſing, by a conſtant hard cough, by the want of ſleep, and by the ſitting poſture he was conſtantly obliged to keep himſelf in. Theſe ſymptoms continued to oppreſs the patient, till they were relieved by the large bleedings, or till they terminated his exiſtence, in two, three, or five days from their commencement.

The blood drawn from thoſe who laboured under hepatic inflammation did not always throw up an inflammatory cruſt; but the craſſamentum was always of a firm texture; and the quantity of ſerum was generally very ſmall, in proportion to the quantity of blood drawn. But when the thoracic viſcera were the ſeat of the inflammation, the blood drawn, threw up an inflammatory cruſt of great thickneſs; and I am informed by the medical Gentlemen whoſe practice lies on the windward ſide of the Iſland, where the diſorder was more violent, if poſſible, than on our ſide, that it ſometimes exhibited the appearance of a thick mucilage of gum tragacanth, or very ſtrong ſtarch, containing a very ſmall quantity of red globules or ſerum.

Several patients expectorated freely; but this evacuation was never obſerved uſeful, either in preventing the dangerous ſymptoms, or mitigating them after they appeared. The expectorated matter generally conſiſted of phlegm, mucus, or a mixture of ill formed purulent matter and mucus, ſometimes ſtreaked with blood. There were alſo two or three inſtances of hæmorrhage from the noſe; but the patients obtained no relief from it.

Perſpiration, during the firſt period of the diſeaſe, when it was ſimply catarrhal, almoſt always removed the fever, and the moſt troubleſome ſymptoms; but the cough was not mitigated by it, continuing ſeveral days, and even weeks, after. But, in the laſt period, although copious ſweating frequently came on ſpontaneouſly, and was frequently excited by antimonial medicines, it never relieved in the ſmalleſt degree.

None ſuffered by the diſorder when it appeared in the form of idiopathic hepatitis; but ſeveral died of the anomalous. On opening the bodies of thoſe who died, the liver was found of a monſtrous ſize, filling completely both hypochondria, and compreſſing the lungs

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and heart into a ſurpriſingly ſmall ſpace. Its ſurface had a clouded appearance; and, on ſeveral parts of it, there was a whitiſh kind of matter, in ſome parts formed into thin ſmall cakes, in others looſe and curdy-like. Every other part of the body was in a healthy ſtate.

In the bodies of thoſe who died of the diſorder in the form of peripneumony and pleuriſy, the thorax was always found the only ſeat of the diſeaſe. The lungs, pleura, heart, diaphragm, and even the pericardium, in one or two inſtances, were violently inflamed; and on the ſurface of the lungs, where they did not adhere to the pleura, and of the heart, there was, not uncommonly, a white or greyiſh encruſtation. In general, the left lobe was more diſeaſed than the right; but, in ſome inſtances, both lobes exhibited a livery appearance, all traces of their natural ſtructure being obliterated, and their ſubſtance become ſolid, dark brown, and ſo heavy as to ſink in water. On ſeparating the lobes, where they adhered to the pleura, their ſurface was found beſmeared with a very ſoft unctuous ſubſtance. This ſubſtance was likewiſe obſerved on the

parts of the liver, in the anomalous hepatitis, which adhered to the diaphragm and coſtæ.

Theſe were the moſt remarkable morbid appearances, on diſſection, in the bodies of thoſe who died of thoſe diſorders. There was one patient labouring under catarrhal affection, during the firſt period of the diſeaſe, who died ſuddenly. On opening the body, a polypus was found in the right ventricle of the heart, which almoſt completely filled it up, and extended a very conſiderable way into the pulmonary artery.

When the diſorder firſt appeared here, the exceſſive oppreſſion at the præcordia, and pain and tightneſs in the head, induced me to draw blood very freely. But, ſoon finding this evacuation either unneceſſary or hurtful, I deſiſted from the uſe of it, except in a few caſes, where topical inflammation was diſtinctly marked. I then had recourſe to a very ſimple method of cure, which, in every inſtance except thoſe mentioned, proved ſurpriſingly efficacious. I conſidered the diſeaſe as ariſing from ſuppreſſed perſpiration; and conſequently, judged, that by exciting that diſcharge, I ſhould be able to cure it. The event juſtified

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my opinion. My uſual mode was, to order two or three grains of tartar emetic to be diſſolved in a quart of hot barley-water; the whole of which was to be given to the patient in the courſe of twelve hours, in ſuch quantities at a time as might not diſturb the ſtomach, or, at moſt, only excite a gentle nauſea. In the intervals, after a ſweat broke out, he was to be well covered with blankets, and large draughts of warm barley water were to be given to him, from time to time, with a view to ſupport the ſweat. At the ſame time that this medicine excited a diaphoreſis, it procured a ſtool or two, and ſometimes occaſioned a vomiting, eſpecially when the ſtomach was loaded with acrid bile; both which, forwarded the cure very much. The ſweat was kept up, by theſe means, for twelve hours; at the expiration of which, the oppreſſion at the præcordia, and other diſtreſſing ſymptoms, were totally removed, nothing remaining but ſome degree of debility and cough. To mitigate the laſt ſymptom, I generally made uſe of ſperma ceti, diſſolved in lac ammoniacum, or in powder, with an equal quantity of candy ſugar. The eſtate

Negroes,

Negroes, for this purpoſe, took ſyrup, made of the juice of the creſcentia or calabaſh, which anſwered effectually. When the complaint was, in this manner, removed, the patient ſeldom relapſed, and very ſoon recovered his former health and ſtrength.

This was my general mode of cure. But ſometimes, inſtead of the emetic tartar, I made uſe of Dover's powder, in proportions ſuitable to the ages of the patients, or the Kermes mineral. The laſt medicine I found extremely uſeful, in caſes where the lungs were ſurcharged with phlegm, or where the ſymptoms indicated peripneumonic affection. I generally gave three grains, mixed up in a tableſpoonful of the calabaſh ſyrup, three times in the day. Its uſual effect, was to produce a plentiful diaphoreſis, and a free expectoration. It was ſometimes, however, troubleſome, by bringing on a diarrhœa, which now and then terminated in dyſentery, and almoſt never relieved the catarrhal ſymptoms. In treating patients of a very delicate habit of body, I combined the diaphoretic in nearly the following manner:

℞ Sal,

℞ Sal. Nitri pulv. gr. x.
Kerm. Mineral. gr. ¼.
Pulv. Nuc. Moſchat. gr. iv.
Ol. Cinamom. gtt. i. M. f. p. ſumend. ter in die.

This medicine produced all the above effects, except vomiting, in the degree I wiſhed.

On ſeveral French eſtates, the diſorder was treated by the hoſpital nurſes, or the owners themſelves. The mode they followed, was much more troubleſome than mine, and not always equally effectual. They made up a lohoch, of equal parts of the ol. ricini, juice of the fruit of calabaſh, and molaſſes, to which they added a ſmall quantity of Kermes mineral. Of this, a pretty large doſe was adminiſtered, morning and evening; and, through the day, the patients were made to dilute plentifully with a decoction of barley or rice, and a ſpecies of graſs, called by them *Herbe graſſe*, I believe the Panicum coloratum of Linnæus.

I have already obſerved, that it was ſeldom neceſſary to bleed. A ſtriking inſtance of the inutility of this evacuation, was the following: A robuſt negro ſailor, in the month of November,

vember, had, together with the general ſymptoms of the prevailing epidemic, a violent pain in the right ſide, which rendered reſpiration extremely painful and difficult. Induced, by this, to conſider his complaint as an inflammation of the liver, I directed a large quantity of blood to be taken away. Finding no relief, in the evening the bleeding was repeated; but, after paſſing a very uncomfortable night, the pain in the morning was as ſevere as before. I did not judge it prudent to take away any more, till the ſweating proceſs had been tried. With this view, about two ſcruples of Dover's powder were given him, and repeated every third hour, till a copious diaphoreſis was produced. The inſtant he began to perſpire, the pain abated; and, at the end of twelve hours, all his alarming ſymptoms totally diſappeared.

Except three caſes, where the catarrhal ſymptoms were conjoined with thoſe of putreſcence, that I have mentioned, where polypus in the right ventricle of the heart, and in the pulmonary artery, was the cauſe of death, and the caſe of tetanus with catarrh, I did not loſe a ſingle patient during the firſt period of the diſeaſe,

diſeaſe, although the number of ſick was ſurpriſingly great. I dare ſay, I am within the actual number taken ill of this epidemic, in my practice, when I fix it at fifteen hundred, excluſive of whites; and, of this number, only ſix died, which is only one in a hundred and fifty.

In the month of December, when the uncommon diſpoſition of the air altered the nature of the epidemic in many reſpects, in my circle of practice, it appeared on two eſtates only; but, in the practice of my partner, Doctor William Munro, it became as univerſal as it was before in mine. And, in general, the ſymptoms were ſo obſcure, as to render it difficult to determine on any certain mode of treatment. At firſt, conſidering it as not eſſentially differing from what it had hitherto been, we treated it with diaphoretics, antiphlogiſtics, and bliſters: but we ſoon found ourſelves totally deceived; for many died in a very ſhort ſpace of time. On opening the bodies of theſe, we found thoſe appearances I have already deſcribed. Upon this, we had recourſe to bleeding, as the only remedy to be depended on. We began by taking away eighteen

eighteen or twenty ounces; or till the patient fainted; or till he felt ſome abatement of the pain and oppreſſion. If, after this, the alarming ſymptoms continued, we repeated the evacuation, and continued to do ſo till they were removed. Theſe copious and frequent bleedings almoſt always proved ſucceſsful, when the diſorder was early diſcovered, and attended to. In the pleuretic and peripneumonic complaints, we truſted to no other remedy; and indeed, the little time given us, did not afford room for the uſe of any material medicine. The uſual medicine we gave our patients, when the violence of the diſorder permitted the uſe of any, was compoſed of nitre and camphor, with a ſmall proportion of Kermes mineral, or James's powder. The laſt was frequently given alone; and, although it twice excited a copious perſpiration, the patients were never relieved by it. To ſome, mercury was given; and, when it produced a ſalivation, the ſucceſs was aſtoniſhing. This medicine, however, was not uſed till towards the decline of the diſorder; but, from the evident favourable change it produced, it is more than probable, that, had

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we had recourſe to it earlier, the mortality would have been leſs.

Thoſe caſes, where the diſorder aſſumed the ſymptoms of idiopathic inflammation of the liver, were cured in the uſual way. We bled pretty freely, and excited a ſalivation, which always removed the diſorder. Several of thoſe afflicted with the anomalous hepatitis died before we could diſtinguiſh the nature of their complaint; but, after detecting it, we had recourſe to very copious and frequent bleedings, and excited a ſalivation as ſpeedily as poſſible. When this was effected, we were certain of the patient's recovery; but it ſometimes happened, that the mercury, not being ſufficiently guarded with opium, ran off by ſtool, or remained totally inactive:—In either caſe, the patient ſuffered. But, in the laſt, the effect of bleeding, as has been already obſerved, in aſſiſting the action of the mercury, was very remarkable. Several caſes occurred on one eſtate in particular, on which the anomalous hepatitis was more prevalent than on any other in my practice, where large quantities of mercury, ſometimes one hundred grains, had been given, without producing the deſired effect,

fect, although three or four pounds of blood had been drawn. On repeating the bleeding once more, the mouth became ſuddenly affected; and, next morning, the patient was thrown into a profuſe ſalivation by the mercury already taken. My uſual method of adminiſtering mercury in this diſorder, was the following: After bleeding the patient once or twice very freely, I gave him a pill, compoſed of five grains of calomel, and one grain of opium; and repeated it, according to the urgency of the caſe, two, three, or four times in the day, till the mouth became affected, repeating at the ſame time, occaſionally, the bleedings. In general, ſix of theſe pills, that is, thirty grains of calomel, produced the wiſhed-for effect. Bliſters were alſo uſed, applied to the part where the pain was chiefly felt; and, in the low caſes, where the mercury had no effect, they were applied to the thighs, pit of the ſtomach, and ankles, together with ſinapiſms to the feet: but I cannot boaſt of their efficacy in any ſtage of the diſorder. And, upon the whole, no dependence was put on any remedies but the large and frequent bleedings, and mercury.

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I remember one caſe, and only one, where mercury alone had the deſired effect, without bleeding. A negro, belonging to Hugh M'Sween, Eſq; of Grand-Mal eſtate, confined to the yaw-houſe, which is generally at a conſiderable diſtance from the dwelling-houſe and negro-huts, was ſeized with the epidemic in the form of anomalous hepatitis. As the yawed negroes have very little intercourſe with the healthy, nobody knew of his ſituation for ſeveral days. At length, by accident, paſſing that way, another yawed negro called to me, and informed me of the ſituation of Daniel, the ſick man. On ſeeing him, I found him ſo exceſſively reduced by the diſorder, that I did not think it prudent to draw any blood from him. I only directed him to be put on the diaphoretic courſe already deſcribed. On the following day, finding his complaints much the ſame, although he had ſweated very freely, and obſerving that the moſt urgent ſymptoms were, a pain at the pit of the ſtomach, ſtretching to the ſpine, and compreſſing the lungs in ſuch a manner as to render reſpiration exceſſively difficult, and violent headach; I immediately ordered the calomel pill to be given to him,

and repeated three times in the day. This courſe was perſevered in for five days; in which time, he took about eighty grains of mercury. As there was no appearance of ſalivation, and as his complaints continued as violent as ever, with exceſſive debility, ſmall, tremulous, very frequent pulſe, and delirium at times, I directed the nurſe to be very cautious in adminiſtering more mercury. Next day, to his former complaints, were added diarrhœa and increaſed debility. The mercury was diſcontinued altogether, and pills of opium, with wine, and light nouriſhing food, were from time to time given to him. I had every reaſon to conſider my patient as faſt approaching to his laſt. But, two days after, when I again ſaw him, to my utter aſtoniſhment, I found that the diarrhœa had ceaſed; that his gums had become ſore the day before; and that, now, a gentle ſalivation had taken place. The ſalivation continuing, he daily became better; and, in about a fortnight, he was able to walk about a little, having no other complaint but cough.

III.

III.

Hiſtory of a Caſe, in which remarkable Adheſions of the Inteſtinal Canal terminated fatally. *By* Dr Andrew Williſon, *Phyſician in Dundee.*

BARBARA SHARPE, aged ſeventeen years, of a florid healthy complexion, and robuſt conſtitution, was ſeized ſuddenly, on Sunday 23d May laſt, with acute pains all over her abdomen, but more particularly in the left hypochondrium, and ſmall of her back. Theſe continued to increaſe in ſeverity till Monday 31ſt, when I was deſired to viſit her.

She had always enjoyed exceeding good health, never having had any complaint, except that, about two months previous to this attack, ſhe had got a fright, that had occaſioned a ſuppreſſion of the menſtrual diſcharge. which had not again returned.

I found her in very great agony, from the ſharp pains in her bowels, which ſhe could compare to nothing elſe but the piercing of ſwords. She could not ly long in one poſture; but was continually toſſing and rolling about in the bed. Her belly was ſomewhat ſwelled. It felt hard and tenſe, though no fluctuation was perceptible to the touch. The ſwelling extended upwards to the cartilago enſiformis. A hard tumour was diſtinctly felt in the left hypochondrium, which ſhe could not ſuffer to be preſſed. She complained conſtantly of nauſea, and inclination to vomit; ſo that nothing ſhe ſwallowed had been retained on her ſtomach for any length of time. She had been obſtinately coſtive for ſome days, and had taken a few aloetic pills, but with no effect. Her urine was ſcanty, of a deep red colour, with a lateritious ſediment. Her thirſt was great, and ſhe had entirely loſt her appetite. Pulſe ſmall, hard, and rather quick.

I firſt took twelve ounces of blood from her arm, which appeared to indicate an inflammatory diatheſis. I then directed the following nitrous purging powder to be taken, and to be repeated four hours after, if neceſſary.

℞ Pulv.

℞ Pulv. Jalap. drach. ſs.
—— Crem. Tart.
—— Sal. Nitri *aa.* gr. xv. M. p. d.

Water-gruel, acidulated according to her taſte with lemon juice, was ordered for common drink; and a large bliſter was applied on the left ſide of her belly.

June 1ſt. She had one large ſtool after the ſecond doſe of the powder, and complained of much naufea afterwards. The bliſter had riſen well, but had produced no mitigation of the pains, which continued as intenſe as ever. She had frequent vomiting, eſpecially on taking down ever ſo little food. Her belly was always bound. Two table-ſpoonfuls of a ſaline julep, with twenty drops of laudanum in each doſe of the julep, was ordered to be taken every two hours, and an ounce of caſtor-oil at bed-time.

2d. She felt no alleviation of ſymptoms; and the conſtant retching continued. What ſhe vomited was exceedingly bitter, and had a yellow appearance. The julep had cauſed no abatement of the pains in her bowels; and it was repeatedly thrown up, along with much bilious matter. The caſtor-oil was likewiſe rejected. Fomentations and the warm bath,

in various forms, were then tried; but were uſed without affording the ſmalleſt relief. The ſwelling of the abdomen rather increaſes.

Repr. Julap. cum additione Spt. Nitri dulc. drach. ii. A laxative injection to be given in the evening.

3*d*. She ſlept very ill. Two purging injections were exhibited laſt night, without effect. She complains of gripes, nauſea, and intolerable bitter taſte in her mouth. Omitr. Julap. anod. Cap. Decoct. Tamarind. cum triplice Senna unc. iii. omn. hor. ad 4m. vicem, donec alvus dejecerit.

4*th*. No effect was obtained, but vomiting, from every doſe of the purgative. Pulſe, nauſea, and coſtiveneſs, as formerly. She complains much of the pains in her bowels. Repr. enema purgans veſp. et capt. cras mane Bolum ex P. Jalapp. dr. i. Calomel. gr. v. cum Conſ. Roſar.

6*th*. The injection had no effect, though tried in different forms: ſome obſtruction in the gut prevented its being thrown up, as it always returned immediately. Some ſmall effect from the bolus. Abdomen ſtill hard and tenſe—

tenſe—Fricetur probe cum ol. camphorat. mane et veſp.

8*th*. Symptoms continue with unabated violence. Vomiting of bilious matter inceſſant.

℞ Laud. liquid.
Æth. Vitriol.
Spt. Nitr. Dulc. *aa*. drach. iii. M. Capt. cochleare parvulum omn. bihor. ex aq. font. unc. ii.

10*th*. She had taken an emetic of powder of ipecacuanha yeſterday, and had drunk largely of an infuſion of chamomile. The nauſea and retchings, however, continue to day, as formerly. Obſtinate coſtiveneſs remains. No ſenſible effect from the antiſpaſmodic drops. Omittr. Guttæ. Some obſcure fluctuation is perceived in the abdomen for the firſt time. Habt. Bol. Mercur. ut antea. Contr. ol. Camph.

11*th*. Some ſlight operation from the Bolus, which was retained. Urine grows more turbid and ſcanty. Thirſt increaſes.

℞ Pulv. Scillæ ſiccat. gr. ii.
—— Diaromat. gr. iv.
—— Sal Nitri gr. x. M. p. d. f. vi. huj. cupt. i. omn. 6ta. hor. ex Julap. ſalin.

ſalin. unc. ii. Habt. hauſt. anod. h. ſ. ex aq. Cinnam. ten. unc. i. cum Laud. liquid. gtt. L.

13*th*. Retained ſeveral of her powders, which operated twice yeſterday. She threw up her anodyne draught both the nights. Omr. hauſt. anod. Habt. hauſt. ſalin. inter efferveſcentiam. Contr. ol. camphorat.

15*th*. No obvious effect, in ſtopping the vomiting, was produced from the efferveſcing draughts. No remiſſion of ſymptoms has taken place. Omr. hauſt. ſalin. Repr. Pulv. diuret. et Julap. ſalin.

17*th*. The powders were all taken; but without their former good effect. Repeated retchings followed every doſe of them. She has conſiderable bilious vomiting to-day. Repr. Bolus Mercur. mane ſumendus. Conr. ol. camphorat.

19*th*. Retained her bolus; which, however, has not operated. She complains of gripes. ℞ Sal. Glaub. unc. iſs. Cryſtall. Tartar. unc. ſs. ft. ſolutio in aq. bullient. unc. xii. Capt. unc. iv. om. hor. donec alvus reſponderit.

20*th*. She took three doſes of the ſolution yeſterday, but rejected them all. The pains in her bowels increaſe in ſeverity. No operation

tion from the purgative. Repr. Bolus Mercurialis.

21ſt. She threw up her bolus immediately after it was ſwallowed. She obſtinately refuſes to take any more medicines. All the ſymptoms increaſe in virulence. Her fleſh and ſtrength are much waſted. Pulſe regular, but ſinks daily.

22d. This day, the matter ſhe vomited, put on a different appearance: From a yellow colour, it aſſumed a dark browniſh hue, as if mixed with grumous blood, and had a fetid ſmell. She threw up near ſix pounds of this coloured matter in the courſe of twenty-four hours. This appearance of the rejected fluid continued till June 30th, when ſhe calmly expired. Some hours previous to her diſſolution, a purging of a black, pitch-like, fetid matter, ſupervened, which occaſioned the ſwelling of her abdomen to ſubſide very conſiderably; and the tumour in the left hypochondrium entirely vaniſhed.

Upon examination of the body after death, (along with my brother Doctor Williſon, who had ſeen her ſeveral times during her illneſs), we found that a very uncommon degree

gree of emaciation had been produced. The cavity of the abdomen contained about ſix pounds of a dark-coloured ſerous fluid. The omentum had been completely waſted; no veſtige of it could be perceived. We were very much ſurpriſed to find, that a *complete adheſion* of all the inteſtines, ſmall and great, had taken place. They had a livid appearance; and they adhered ſo completely, that it would have been impoſſible to have ſeparated them by the niceſt diſſection. Their convolutions even could ſcarcely be traced; and they ſeemed almoſt as if included in a round bag. The liver was not enlarged nor indurated; but a conſiderable number of red and purpliſh ſpots were detected upon its ſurface. The texture of the parenchyma itſelf was ſound; and there were no marks of ſuppuration having occurred in any part of it. The ſtomach was very ſmall and contracted; but the vaſa brevia had a natural appearance. The ſpleen, the gall-bladder, and its veſſels, were of a natural ſize, and in a healthy ſtate.

IV.

IV.

Account of a ſingular Fracture of the Cranium; and of the Hæmorrhage, from amputation of the Penis, ſtopt by ſlight compreſſion for a few minutes. *By Dr* Thomas Irving, *Phyſician at Lisburne.*

A SOLDIER received a wound in the battle of Preſtonpans in Scotland, which divided about two inches of one of the parietal bones. For this he was put into the Edinburgh Infirmary, and was diſcharged from thence ſeemingly cured, and ſent back, and joined his regiment; which, twelve months after, was ſent on an expedition to the coaſt of France. He was ſent on board the hoſpital-ſhip in the Bay of Biſcay, labouring under all the ſymptoms of oppreſſed brain. The Surgeon-General removed the ſcalp where the wound had been, and diſcovered the diviſion. He intended

intended to have trepanned him next morning, had he not made his exit that night. The ſcull was examined before interment; and the divided part, inſtead of growing together, had ſhot inwards, in form of the teeth of a comb; and the brain appeared in a very diſeaſed ſtate.

A CORPORAL of Dragoons, an able-bodied ſtrong man, ſuppoſed to be near forty years of age, turned Methodiſt; in which he was joined by a ſerjeant's daughter, aged about eighteen years. Her father, who was advanced in life, did not approve of her devoting ſo much time to religious duties; and therefore diſmiſſed her. The corporal, on brotherly-love, took her into his family; and ſhe ſlept in the bed with him and his wife, who at laſt grew jealous, and charged him with criminal communication with the girl, which made him determine on caſtrating himſelf. He afterwards told me, he had learned that there was no danger but from the hæmorrhage; which cauſed him to watch my motions for ſome preceding days, after breakfaſt. At laſt, he found me, on the morning of his operation,

going

going into one of the rooms, to viſit a man ſick in the barracks. I had ſcarcely got into it, when I was called on to the corporal, bleeding to death. I made all the diſpatch poſſible to his room; where I found him ſtanding over a fire on the hearth, bleeding profuſely. I ordered him to preſs with his hand on the wound, until I could get the ligatures ready, which was ſoon done. But, on removing his hand, the hæmorrhage was ſtopped in all parts of the wound, except the dorſum penis, and never returned. I tied a thread round the bleeding artery, until he had a call to urine, which did not happen for ſome hours; and, when the ligature was removed, there was no farther hæmorrhage. He amputated all the ſcrotum and its contents, and left only about an inch of the penis. All the wound healed very quickly, but the ſpongy root of the penis. It was ſome conſiderable time before it entirely waſted away, leaving an orifice in the urethra, level with the ſkin of the pubes; and he was ſoon afterwards able to return to his duty again. The operation was performed with a razor, in the room where his wife and ſome other women were ſitting. He threw the amputated

ed parts into his wife's lap; telling her, he hoped that would convince her of his future intentions. Being often jeered by his fellow-ſoldiers, he embraced an opportunity of being draughted into a regiment of Horſe. He went abroad with them, where he behaved remarkably well; and the young girl accompanied him all the time he was on ſervice.

V.

V.

Hiſtory of an anomalous Caſe, apparently of the Rheumatic kind, terminating fatally. By ——— ———. *Communicated to Dr Duncan.*

ON the evening of the 22d inſtant, I viſited Mr E. of P———, in this county. He was about thirty-ſix years old, of an athletic make, ſanguine temperament, and full habit, and had been in general healthy; recollecting having ſuffered only one fit of ſevere illneſs, in which he ſaid he was deprived of the uſe of his limbs. I conclude, therefore, that his then diſeaſe was the acute rheumatiſm, which the country people here uſually deſcribe in that manner. I found that he had, ſome time before, been expoſed to cold, from ſtanding much on wet ground. His apothecary, (a very ingenious and ſkilful man), was called to him firſt on the 17th inſtant. At that time, the

the patient laboured under a ſevere catarrh, of ſome days ſtanding; with cough; ſymptoms of much pneumonic inflammation; and, among other complaints, a wringing or gulping on deglutition, approaching to a hiccough. Theſe ſymptoms, after one or two liberal bleedings, and the other uſual antiphlogiſtic and emollient remedies, ceaſed almoſt entirely. But, on the 19th inſtant, at night, the patient was ſeized with intenſe pain in the whole of the left leg; and, ſoon afterwards, with the ſame ſort of pain, though in a leſs degree, acroſs both thighs, and in the right leg. The warmth of the bed appeared to aggravate theſe pains ſo much, that he found himſelf under the neceſſity of ſitting up, till near the time of my viſit; when he was again laid in the bed, but with very light covering. He complained much of the pain of his thighs; to alleviate which, he had, ſome time on that day, without the knowledge of his apothecary, rubbed them with bruiſed ſnails and ſalt, this being a remedy of which he had a high opinion. I found, alſo, that he had not paſſed any urine for almoſt thirty hours: He had not ſuffered much painful or preſſing neceſſity to make it; but

but had frequently tried, to no purpoſe. The heat of the ſkin was little above the natural degree; the pulſe ninety; rather hard, and ſufficiently ſtrong; the tongue moiſt. The bowels had been in a lax ſtate. Some tenſion and fullneſs being felt above the pubes, it was thought expedient to introduce the catheter, which was eaſily done; but without the effect of evacuating any urine. I directed a moderate bleeding, which the patient bore extremely well; the pulſe riſing on the evacuation, and the blood throwing up a very tough inflammatory cruſt. I ordered alſo nitre, in as large doſes as the ſtomach (which was not at all irritable) would eaſily bear, and the uſe of bland and diluting drinks; to which a portion of Spiritus Ætheris Nitroſi was now and then to be added.

Very early the next morning, the patient ſent for his apothecary, in order to get ſome relief of his Iſchuria, which was now become extremely painful and alarming to him. He made no longer any complaint of his thighs. His pulſe was advanced to ninety-ſix. The catheter was again uſed, without effect. He again loſt blood, with a free ſtream; which,

however, was buffy only in a ſlight degree, and in ſpots.

About 10 A. M. on the 23d inſtant, I ſaw my patient again, and in far worſe circumſtances than on the preceding evening. He had made no water; the lower part of his belly was full, very tenſe and hard, and extremely painful, on being gently preſſed. He was very reſtleſs. His ſtrength was very much diminiſhed; and he deſpaired of recovery. His upper extremities were rather colder than natural. His pulſe was one hundred and eight, without any hardneſs, and was much ſunk in point of force. He had no pain in the thighs, or indeed any where, except in the bladder and urethra. I now ordered the warm bath to be uſed every ſix hours; and, in the intervals, warm fomentations to be conſtantly applied to the region of the pubes; a bliſter to the perinæum, and alſo one to each of the thighs, near the ſeat of the former pain; a bolus, conſiſting of ſix grains of calomel, and one grain and a half of opium, to be taken every ſix hours; and, once in eight hours, a glyſter of half a pint of warm ſweet oil to be injected. After the firſt bathing, the patient paſſed

paſſed a ſmall quantity of urine; and, after the ſecond, about half a pint was voided. At the ſame time, a ſtool was paſſed, with conſiderable diminution of the ſize and tenſion of the abdomen. Theſe circumſtances, to appearance favourable, very much raiſed the hopes of the patient's friends and attendants. But his ſinking pulſe, and altered countenance, too plainly pointed out the fallacious nature of thoſe hopes. He was, however, again placed in the warm bath, and again voided a conſiderable quantity of urine; but, his ſtrength decreaſing faſt, he became inſenſible in a few hours, and expired on the 24th inſtant, at two o'clock.

Quær. Was this a rheumatic affection, attacking different muſcular and membranous parts in ſucceſſion, and at length fixing on the urinary paſſages?

Did the evacuations uſed, diſpoſe the affection to quit the lower extremities, and attack the bladder?

Did the uſe of the catheter, by producing irritation, exaſperate a complaint, which it was ill fitted to relieve?

Was the uſe of nitre improper, for the ſame reaſon?

Was the change in the appearance of the extravaſated blood, and in the ſtate of the patient's ſtrength, and of his pulſe, the effect of the diſorder's attacking a very irritable part, and thereby depreſſing the vis vitæ?

Without pretending to anſwer theſe queries of our ingenious and learned correſpondent, we ſhall, for the preſent at leaſt, content ourſelves with ſubjecting them to the conſideration of the intelligent reader.

VI.

VI.

Hiſtory of a Caſe of Angina Pectoris, cured by the Solutio Arſenici. *By* Mr Edward Alexander *Surgeon, Halifax, Yorkſhire. Communicated to Dr Duncan.*

December 3d, 1789.

MR LISTER, aged fifty-ſeven, of a corpulent, but irritable habit of body, with a ſhort neck, for theſe laſt four months, has been uſed to be attacked, after walking, with a ſevere pain beneath the inferior part of the ſternum, which, in the beginning, generally ceaſed on ſtanding ſtill. The pain, in a ſhort time, became very excruciating, and frequently increaſed to ſo great a degree, as to threaten immediate deſtruction, always producing a ſenſation of great heat. He continued to be affected in this manner for two months, his appetite and ſpirits being but very indifferent. After this time, his complaint was much aggra-

vated. The pain uſed to ſeize him two or three times in a day, even when he was ſitting ſtill, or uſing no exertion; and invariably came on from walking, or exerting himſelf in the leaſt; but did not now ceaſe upon ſtanding ſtill. It generally remained about ten minutes in his breaſt; and, from thence, uſed to paſs into his arms and back, and to continue for the ſame time there. Beſides, it now conſtantly returned in the night, always after the firſt ſleep, to ſuch a degree, that he was obliged to riſe out of bed, and ſupport himſelf, by leaning againſt the wall of his room. At this time, it commonly remained with him about an hour. Before the pain came on, he was ſometimes affected with a ſenſation of phlegm in his throat, as if he ſhould cough; and has now and then got up a ſmall quantity of phlegm, which always gave him a great deal of eaſe: And he often thought, unleſs he had been able to get up the phlegm, he ſhould have died. It had the appearance of nothing more than common mucus, being of a white colour, and having no ſmell. He ſeldom expectorated in the intervals, though he was afflicted with a cough and difficulty of breathing, which had

ſtuck

ſtuck to him for ſeveral years. His pulſe was always quick and weak, even between the paroxyſms; generally about one hundred, ſometimes more. I regreted very much at not having an opportunity of examining the pulſe during a fit. His ſtools were regular. Any agitation of mind was apt to bring on an attack; and he obſerved, it ſeized him more frequently on an empty ſtomach than a full one. Sometimes, he has felt the pain a little higher up, and, frequently, inclined to the left ſide. He found eaſe from drinking ſtrong mint water, and ſtraitening the vertebræ of the thorax, and bending them backwards and forwards. He could always bear the motion of a horſe or carriage very well.

Being alarmed with his complaint, which had continued for four months, and had now increaſed to a violent degree, he applied to me. Looking upon his diſorder to be Angina Pectoris, which I thought fairly marked, I was deſirous of trying a ſolution of arſenic, made after the receipt of Dr Fowler, as I believed moſt medicines had been uſed with little or no ſucceſs for the removal of ſo dreadful a malady. At the ſame time, I ordered him to

drink wine, or brandy and water, and to eat a little fleſh meat; but to refrain from butter, or any thing which might be apt to diſagree with his ſtomach. The ſolution was given him in the following manner:

℞ Aq. font. unc. i.
Spt. Nuc. Moſch. drach. ii.
Solut. Arſenic. gtt. vi.
Syr. Caryoph. drach. ſs. M. f. hauſt. ſumend. ter die.

He began to take theſe draughts in a forenoon; and, what was remarkable, his pain never attacked him on that day, but returned a little in the night. The day after, I increaſed the doſe to ſeven drops. The ſame happy effect was produced, but ſtill greater; for it now left him in the night, and his pulſe was become much ſlower, though ſtill very quick. Theſe draughts were continued about a fortnight, the doſe being daily increaſed, by one drop to thirteen, adding a little more Spt. Nuc. Moſch. He had no return after the firſt night. His appetite and ſpirits became now much better; he found his ſtrength daily improve; and he thought himſelf better than he had been for twenty years, being now totally

tally free from his complaint in any degree whatever.

Three or four days after leaving off his draughts, he was obliged to take a ſhort journey; and, being very much fatigued with it, his pain returned in the night, but in a very ſlight degree. He took the ſolution for two or three days, and afterwards found himſelf better than ever.

About a fortnight after this time, fearing leſt he ſhould have a return of his complaint, I propoſed to give him the bark; and ordered him the tincture of bark, gentian root, and orange peel, as recommended by Dr Whytte. But this diſagreed with him, and brought on his pain immediately. I then thought it was adviſeable for him to take no more; but ordered him to have recourſe to his draughts. He took them about three or four days; and they again removed his diſorder. It is now upwards of five months ſince he left them off, and he has not experienced the leaſt return of his pain ſince; except in a very ſlight degree, for a day or two, which was at that time removed by the tincture of bark above mentioned; the ſmalleſt quantity of the ſolution of ar-

ſenic

ſenic having, at that time, a moſt violent effect upon him, although, when he took it at firſt, during the violence of his complaint, it had no ſenſible effect. This may, perhaps, at firſt ſeem extraordinary; but, when we conſider the different ſtate of the body at each time, we cannot be ſurpriſed at the different effect of the ſame medicine. In the firſt caſe, the irritability of the muſcular fibre was much diminiſhed; in which caſe, a violent ſtimulus, ſuch as arſenic muſt be, will have a leſs effect. In the latter, the irritability was, comparatively, much increaſed; when arſenic muſt, of courſe, operate more powerfully.

He now enjoys a better ſtate of health than he has done for twenty years before; even his cough and difficulty of breathing, to which he had been accuſtomed for ſeveral years, being removed.

I regreted exceedingly I had not an opportunity of examining his pulſe immediately after he took the draught; but do not doubt that it made it ſlower, as it became much better from the uſe of the draughts. I wiſh it were in my power to give an account of his

pulſe

pulſe at preſent; but am prevented, by his living at a conſiderable diſtance from me.

I have likewiſe given this ſolution, with ſucceſs, in a caſe of Epilepſy, of four or five months ſtanding, and in Convulſive Fits produced by worms. I am very ſorry I did not commit the caſes to paper, as I would have ſent you them.

May not the ſolution of arſenic be of uſe in Aſthma, from its removing the aſthmatical ſymptoms in the above patient, to which he had been accuſtomed for many years?

I muſt not forget to inform you, that I have had another caſe of Angina Pectoris, about a month ago, fairly marked, which has alſo been cured by the Solutio Arſenici. The patient has now been well for more than a week or ten days; and, I have little doubt, will remain ſo.

VII.

Account of the external uſe of Camphor, in Caſes of Bronchocele, and Glandular Indurations. *By* Mr Peter Copland *Surgeon, Swayfield, Lincolnſhire.*

October 30th, 1785.

I WAS deſired to look at a ſwelling in the neck of John H——n's child, of Little Bytham, at whoſe birth I attended ſix days before. Upon examination, I found a tumour, of a doughy ſlippery feel, and without giving pain, occupying the right ſide of the fore-part of the neck. The child was, in every reſpect, in perfect health. Having, ſome time prior, ſeen Dr Underwood's treatiſe on the diſeaſes of children, I determined to make uſe of the application recommended by him for the incipient Bronchocele; and therefore, had oil, ſaturated with camphor, rubbed diligently upon the part, three times a day. In a ſhort

a ſhort time, it was evidently leſſening; and, in a few weeks, it wholly diſappeared, nor has any ſuch appearance taken place ſince.

The 3d of December following, I was aſked to look at a ſwelling in the neck of the mother of this child; when I found a tumour ſituated as the above, having the ſame feel, and without giving pain, but much larger. It, however, was not of long ſtanding; and little attention had been paid to it, till the diſcovery and event of the ſwelling in the child. By a diligent uſe of the ſame application for ſeveral weeks, with the internal uſe of burnt ſponge, in ſcruple doſes, at firſt twice, and laſtly thrice a day, the ſwelling gradually leſſened, till it was juſt to be diſcerned. At that time, ſhe declined uſing her medicines and application: ſince which, no alteration has taken place. The burnt ſponge was taken to the amount of an ounce and a half.

October 26th, 1789. I again viſited the above perſon in labour; and, on viſiting her the third day after, found a ſwelling in the neck of the child, of the ſame nature and ſituation as the former. Till November 22d, no means had been uſed, on account of waiting for

any change that might take place; at which time, it had conſiderably increaſed, but without any other alteration. A ſufficient quantity of the following liniment was now directed to be rubbed for a conſiderable time upon the ſwelling, three times a-day:

℞ Camphoræ unciam unam,
Spiritus Ammoniæ compoſiti,
Olei Olivæ, utriuſque pondere drachmas tres.
Camphoram primum tere cum ſpiritu in maſſam ſemiliquidam; dein oleum adde, et trituram continua, donec perfecte ſolvatur camphora.

Before the above quantity was uſed, the ſwelling diſappeared; and, at this time, there is no appearance of return.

Some time before theſe caſes occurred, I met with a caſe of Bronchocele, in a girl about thirteen, of ſome years ſtanding. The oily ſolution of camphor, uſed two months, with ſcruple doſes of ammonia muriata, taken three times a day, to the quantity of two ounces, and a plaſter of ammoniacum with quickſilver, applied afterwards, appeared to have no ſort of effect. This patient had taken, previous

to

to my ſeeing her, an ounce or two of burnt ſponge, uſing for a doſe as much as could be taken upon a ſixpence two or three times a day; and the ſame medicine was repeated ſoon after the other means were laid aſide. At this time, the neck does not appear ſo full as formerly; but I am inclined to think, that while the general frame has been enlarging, the ſwelling has been at a ſtand; as, upon examination, it appears of the former ſize.

In Mr Lane's caſes *, was the burnt ſponge taken up in part by the abſorbents of the mouth? If ſo, Might not calomel be employed, in the more obſtinate caſes, by rubbing it on the internal parts of the mouth, in Mr Clare's way? And might not the following ſuggeſtion of an ingenious phyſician be adopted? "Forte et conveniunt," ſcilicet veſicantia, "ad tumores præternaturales cyſticos "curandos; ut in Bronchocele, quæ ſæpe cyſ- "tidum collectio eſt; etiam et glandulæ intu- "meſcentia in initio †."

In

* Medical Commentaries, Decade II. volume III.

† Diſſert. Medic. Inaugural. de Veſicantium uſu in variis Morbis Tractandis. Auctore Henrico Donly, Lugd. Batav. 1784.

In a woman, aged ſeventy-three, the left maxillary gland was extremely hard, and ſo much enlarged, as to be immoveable. By the uſe of the camphorated ſolution, it was reduced in three weeks.

A young man applied to me, on account of an enlarged inferior inguinal gland, which had once or twice before afforded a partial ſuppuration, and which was now ſomewhat painful. By the continued application of the ſolution, with the internal uſe of calomel, and occaſional laxatives, it diſappeared; ſince which, there has been no return.

About twelve months ago, I was applied to by a woman, aged forty-five, for a hard and painful ſwelling, with a trifling diſcharge, about the ſize of a hazel nut, ſituated under the chin. It was of ſome ſtanding, and had repeatedly, after having been painful, diſcharged matter in ſmall quantity. The liniment was directed to be uſed, as above; and in a ſhort time the ſwelling was removed.

I have been induced to pay attention to the external uſe of camphor, not only from the recommendation of the above gentleman, but from my having ſeen, ſome years ſince, an indolent

dolent tumour, ſituated on the lower part of the ankle of a perſon much accuſtomed to walking, removed by Steers's opodeldoc, a ſtrong preparation of camphor, conjoined with volatile alkali. I am not able to determine between the merit of the oily ſolution, and that of his formula; only, the latter is ſuppoſed to diſappear more readily in the friction. Would a ſpiritus ammoniæ puræ unite more intimately with the oil? and, in that caſe, might the efficacy of the application be increaſed?

I can add, from undoubted and reſpectable authority, that an indolent tumour, ſituated on the inſide of the wriſt of a child, which was ſuppoſed to have ariſen from a frequent lifting of the child by the hands, was removed by the continued application of a poultice made with freſh urine.

VIII.

The Hiſtory of an Aneuriſm of the Aorta Deſcendens, appearing under the form of a Tumour at the Scrobiculus Cordis. By Dr Thomas Concanen, *Phyſician at Dundalk.*

THE Reverend Thomas V———, aged thirty-eight, about ſix years ago perceived a ſmall tumour, near three inches below the cartilago enſiformis, which, on account of his remarkable corpulency, and the good ſtate of his general health, did not attract his attention to any great degree. About two years after, however, his appetite became much impaired, and his ſtrength conſiderably diminiſhed. The tumour now became evident, as an emaciation had proceeded with rapid ſtrides. In this ſituation he remained till about eighteen months ago; when, from the increaſed ſize of the ſwelling, and the alarming

ing ſtate of other ſymptoms, he was obliged to have recourſe to the advice of Dr Gernon, a phyſician in this town. When this gentleman was called in, to his other complaints were added an obſtinate obſtipatio, and a ſevere vomiting, the contents of which were of a blackiſh colour, and of a tolerably thick conſiſtence. The Doctor preſcribed remedies, with a view to ſtop the vomiting, and to counteract the coſtiveneſs. Theſe, however, did not anſwer his expectations; for when the former was checked, the latter ſymptom became more ſevere; and ſo on, *vice verſa*. In this manner was palliation attempted, till ſix months more had elapſed; at which period, a conſiderable thirſt ſupervened. His urine was diminiſhed in quantity, and his ankles became ſwelled at night, and were obſerved to retain pits on preſſure. In the morning, however, the ſwelling, if not totally gone, had in a great meaſure diſappeared. Theſe dropſical ſymptoms (the thirſt excepted), after having continued for ſome months, went off ſpontaneouſly; for the ſeverity of the vomiting prevented the exhibition of medicines.

This account of his complaints I received from Dr Gernon, and the reverend Gentleman himſelf, on the 6th of July 1788, when he applied to me for my opinion. His thirſt was now immoderate, to indulge which, he drank cooling fluids; his appetite ſo much impaired, that, to uſe his own expreſſion, he ate only to ſupport the tottering remains of life. The vomiting took place to an exceſſive quantity, and in quality ſimilar to the deſcription previouſly given to me by Dr Gernon; his ſleep, diſturbed and interrupted; his pulſe 92, and ſmall, feeble, and irregular; and, to cloſe the deſcription, the emaciation had advanced ſo rapidly, that I could with eaſe examine the tumour. After having placed him in an horizontal poſition, I found it in the place formerly mentioned, but ſomewhat inclining to the left; the ſize extremely large indeed, and of an irregular roundiſh ſhape.

On the firſt view, and from recollecting the dropſical ſymptoms with which he had been formerly affected, I was ſomewhat induced to think, that his diſeaſe was an encyſted dropſy. However, the paleneſs of his countenance, the great diminution of ſtrength, the ſudden diſ-

appearance

appearance of the dropſical affection, without the employment of medicines; all concurred to make me give up an opinion which I had formed rather haſtily. In this ſuſpenſe, I took a ſecond view of the tumour; and was ſurpriſed to find it poſſeſſed of an evident pulſation. Some idea of an *aneuriſm* of the deſcending aorta then ſtruck me; and in this I was fully confirmed, by finding, on examination, that the pulſation of the tumour was ſynchronous with that of the radial, carotid, and temporal arteries. Dr Gernon, from my ſtatement of theſe circumſtances, did not heſitate in concurring with me in opinion. The ſingularity of the fact, is, in my opinion, the only objection that can be made againſt its veracity. Dr William Hunter, if I recollect rightly, has deſcribed one in the Medical Obſervations; and the appearances, on diſſection, remove even the poſſibility of a doubt. Though, from motives of delicacy, we did not aſk permiſſion to inſpect Mr V———'s body, yet the manner of his death, which happened about thirteen days after I was firſt called in, affords a pretty convincing, though not an abſolutely certain proof, that we were not deceived in

our opinions. About three days before his demiſe, he did not imagine his complaints aggravated; yet he died ſuddenly, and ſo unexpectedly, that his friends were by no means prepared for the event. It is almoſt unneceſſary to add to this hiſtory of his caſe, that nothing effectual could be done by his phyſicians. We, in brief, adviſed him to avoid every ſpecies of irritation, to uſe no extraordinary efforts or exerciſe, and to confine himſelf to a ſpare, cool diet. Thoſe cautions muſt appear of weight to every medical practitioner.

IX.

IX.

Hiſtory of a ſingular Caſe, of an intermittent affecting the right Temple; and of a remarkable Tumour in the Abdomen, ſucceſsfully treated. By Mr Samuel Davidſon, *Surgeon at Rothbury, in Northumberland.*

WILLIAM B———, labourer, aged forty-one, applied to me for advice, on the 9th of January 1789. Fourteen days before, he received a ſtroke on the right eye with a piece of wood, of which he ſoon recovered. About a week ago, he was ſeized with a ſhivering paroxyſm, which continued for two hours, and was ſucceeded by a ſevere pain in the right eye and temple, which goes off by a ſweat in the ſpace of two hours. The cold fit, and pain, attack periodically, about nine o'clock, and the paroxyſm continues till twelve o'clock. When the pain comes on, he is deprived of the ſight of that eye; and for

the remainder of the twenty-four hours, he is free from every complaint. His eye is much inflamed; and he is coſtive.

I ordered an emetic to be taken before the attack of the next paroxyſm; which however did not mitigate it.

Applic. hirud. No. IV. temp. dextr.

Capt. ſal. Glaub. unc. ſs. ſtatim ex aq. fervente.

Applic. Veſicat. pone dextr. aur.

℞ Tart. Emet. gr. ¼. Aq. bullient. unc. i. Tinct. Opii gtt. xxv. M. Capt. mane aggred. paroxyſm. feb.

12*th*. The pain continued yeſterday in the eye, till night. Had five ſtools. The paroxyſm began at eleven o'clock, A. M. this day. He took the draught, which, he thinks, mitigates the paroxyſm.

Capt. Pulv. Cort. Peruv. drach. i. 2da quaque hora.

13*th*. The paroxyſm continued with great ſeverity till twelve o'clock at night. Had a return of the fit at eleven o'clock this forenoon.

Cont. Pulv. Cort. et adde ſingul. dos. Pulv. Rhei gr. iij.

14*th*.

14*th*. The fit of ſhorter duration yeſterday. The pain in the eye came on as uſual; and is worſe this day, and much inflamed.

Rep. Pulv. Cort. Peruv. ſine Rheo.

Capt. Bol. cum Calomel. gr. v. h. s. ad duas vices.

16*th*. The diſeaſe has yielded nothing to the courſe he has been following.

Applic. Veſicat. Cap.

Cap. Pulv. Dov. ſcr. i. aggred. paroxyſm.

18*th*. Sweated much yeſterday with the powder, which prevented the paroxyſm. This day the pain is as ſevere as ever.

Rep. Bol. cum Calomel. gr. v. h. s. et Pulv. Dover. mane.

Rep. medicament. ad duas vices.

Applic. hirud. iij. juxta part. affect.

19*th*. Coſtive for four days. The chilly fit began, and did not take the powder.

℞ Pil. Aloet. drach. ſs. Calomel. ppt. gr. xx. M. f. Pil. vi.

Cap. ij. h. s. omn. noct.

Mitt. ſanguin. ex arter. temporal. ad unc. vi.

20*th*.

20*th.* Leeches were tried, but did not fix. The powder prevented the pain.

Perg. cum Pulv. Dover.

21*ſt.* Has a fit this day.

Rep. Pulv. Dover.

23*d.* The paroxyſm came on yeſterday, having neglected the powder; and it continued with great ſeverity the whole day. His mouth is nowiſe affected by the Calomel.

℞ Aq. Minth. pip.—Puræ *aa.* unc. viii.
Pulv. Cort. Peruv. unc. ii.
Sal. C. C. drach. i. M.
Capt. unc. i. 2da quaq. hor. paroxyſm. abſente.

25*th.* The pain returned yeſterday as ſevere as ever. The fit not ſo ſevere.

℞ Pulv. Ipec. ſcru. i. Tart. emet. gr. i.
M. f. Pulv. emet. ſtatim ſumend.
Repet. Miſtur. cum Cort. Peruv.

27*th.* The pain ſtill returns once a day, though not with ſuch ſeverity as formerly.

Rep. Bol. h. ſ.
Rep. Miſt.

February 8*th.* The pain did not recur for three days; but has returned again, ſlightly.

Applic.

Applic. Veſicat. tempor. affect. et poſtea fiat, Fonticul. ope ungt. Epiſpaſt.

Intermitt. Miſtur. Peruv.

14*th*. The pain ſtill returns ſlightly, at times. The eye a little inflamed. The iſſue is healed up; but he found no benefit from it.

Mitt. Sang. ad unc. x.

Sumat. Calomel. ppt. gr. v. h. ſ. in form. bol.

℞ Infuſ. Senn. unc. iiſs. Tart. Solub. drach. i. M. capt. mane.

20*th*. The pain and inflammation are now quite gone, and the paroxyſm removed entirely.

I attribute the cure of this caſe to the Bark and Calomel.

Case II.

Mrs D——, aged twenty-ſix, a widow-lady, the mother of two children, was affected with a ſwelling under the left ear, which began firſt to appear about the month of May 1788, and gradually

gradually increaſed in ſize till the month of November 1789. It had every appearance of a ſcrophulous tumour, and was about the bulk of a gooſe egg; but did not come to ſuppuration. Notwithſtanding the increaſe of this tumour, ſhe enjoyed pretty good health and ſpirits.

I was called to her on the 16th of November 1789; when I found her complaining of great pain in the right ſide of the abdomen, attended with nauſea, vomiting, and thirſt. Her pulſe was ſmall, and beat one hundred and thirty ſtrokes in a minute. She was alſo coſtive, and had been ſo for two days.

On farther inquiry, ſhe informed me of a tumour ſhe had felt for four months paſt, ſituated about an equal diſtance between the umbilicus and the ſpine of the os innominatum on the right ſide. This tumour, which was at firſt very ſmall, continued increaſing till the time I was ſent for, without much pain or uneaſineſs, except at times; but which were never very ſevere, and always of very ſhort duration.

On examining the tumour, it felt deep-ſeated, hard, moveable, and of ſize ſufficient to fill the whole length of the hand, with a gradual

dual decreaſe of its bulk, towards the os innominatum and umbilicus. The pain in the tumour, during this attack, was ſo excruciating and exquiſite, that ſhe could not ſuffer the weight of the bed-clothes on the part. Her catamenia had been always regular; except that, for a few months paſt, they had appeared in ſomewhat leſs quantity.

Ten ounces of blood were taken from her directly; but the blood had no buffy coat. I next ordered her repeated doſes of aloetic pills, with opium and laxative glyſters, to remove the coſtiveneſs; and alſo a ſaline julep, to abate the vomiting. Leeches were applied to the tumour; and afterwards it was rubbed with a liniment of camphor and vitriolic æther. In the courſe of four days, the nauſea and vomiting, and the pain, gradually diminiſhed, by obſerving a ſtrict adherence to theſe medicines; but there was no decreaſe of ſize in the tumour.

After the ſymptoms were abated, I ordered her gentle exerciſe, the cold bath, and put her under a courſe of cicuta, conjoined with the Peruvian bark. By perſiſting in the uſe of theſe medicines for three months, the tumour

mour gradually decreaſed; and, at the time of writing this account of her caſe, ſhe enjoys good health and ſpirits, without any return of the tumour. It is proper to obſerve, that the tumour under her ear always remained, and is ſtill the ſame, without coming to ſuppuration.

X.

X.

Hiſtory of a ſingular Dropſical Affection of the Scrotum, terminating fatally. Communicated in two Letters from Mr Patrick Maxwell, *Surgeon to the 54th Regiment, to Dr William Robertſon, Surgeon to the 42d Regiment, and by him to Dr Duncan.*

Auguſt 28. 1788.

THE patient whoſe caſe I am now to deſcribe to you, was a gentleman about the 35th year of his age. He had always enjoyed uninterrupted health, and was very active. He ſhewed no appearance of any dropſical diatheſis, nor were there any ſymptoms of the abdominal viſcera being ſcirrhous, or any way diſeaſed. In the year 1775, when in the iſland of Antigua, he was ſuddenly ſeized, in the night, with a violent pain in the region of the kidney, without being able to aſſign any cauſe for it. He was alſo affected with a great degree

gree of fever, vomiting, and purging: His ſcrotum, alſo, on the ſame night, ſwelled much, and was very painful. The affection of the kidney, which, I ſuppoſe, depended on inflammation, yielded to the common method of treatment; but the ſwelling of the ſcrotum baffled every external and internal remedy that had been applied; and many had been uſed, by the advice of different medical men. He had been ſubject to ſeveral attacks of the diſeaſe in the kidneys, in the Weſt Indies; but, for four years before I ſaw him, he had no return of it.

After giving this account of the origin of his diſeaſe, he ſhewed Mr Paddock, late ſurgeon to Thomſon's American dragoons, and me, his ſcrotum, which, at that time, was enlarged to about the ſize of a child's head. It was very much corrugated, and quite red. We could diſtinctly trace a fluid all through its cellular ſubſtance. We could, at the ſame time, eaſily feel the teſticle, and other contents of the ſcrotum, not enlarged; nor was there any appearance of their being diſeaſed, or at all concerned with the anaſarcal look or feel. He ſhewed us, that by bathing the ſcrotum in cold water, which he did very frequently in the

the courſe of a day, it was very conſiderably and inſtantaneouſly diminiſhed. He alſo told us, that in the morning when he got up, it was nearly of the natural ſize. This we accordingly found to be the caſe; but we could not perceive where its contents went at that time. He felt no fulneſs in the region of the bladder, or in any contiguous part; he had no pain, at any time, from the ſwelling; he performed all his natural functions regularly and unimpaired; and his complaint was inconvenient only from its bulk. He ate and ſlept well, and attended his buſineſs as if he had had no complaint whatever.

After conſidering his caſe, we told him, that it ſeemed to us to be a local diſeaſe of the ſcrotum, unconnected with the ſyſtem. We propoſed to make ſeveral ſcarifications to carry off the water, or whatever the fluid might be, hoping it would not again accumulate, and imagining, that in conſequence of a degree of inflammation taking place, it might contract and heal, on the ſame principle as happens in the inciſion for the Hydrocele; but, if this ſhould not be the caſe, we imagined, that when the fluid was evacuated, if it ſhould appear that

the contents of the ſcrotum were not concerned, we might with ſafety lop off part of it, or we might brace it by tonic applications, and ſtrengthen the ſyſtem in general, by the cold bath, Peruvian bark, and the like.

Our plan was agreed to, and we met to execute it. On the firſt inciſion being made, inſtead of limpid water, oozing out gradatim from the cells, as is common in anaſarcous ſwellings, and as we expected, there was a large and continued ſtream of a fluid that reſembled equal parts of blood and milk, intimately mixed. The diſcharge of this fluid, at that time, amounted to upwards of three pints. When diſcharged, it firſt coagulated, and then ſeparated into two parts. The craſſamentum ſeemed evidently to be blood; but the fluid part ſo exactly reſembled milk, that it was impoſſible to diſtinguiſh it from milk by the appearance. It had no ſmell, and the taſte was a little ſaltiſh.

We viſited him on the evening after the operation, and found him as well as uſual. He had not ſuffered any pain; he was not affected with any fever; and, in ſhort, no alteration whatever had taken place. The appearance

pearance of the ſcrotum was the ſame. We removed the lint from the ſcarification; upon which, the diſcharge again began, in a continued ſtream as before; and there was evacuated more than a pint of the ſame fluid mentioned above.

Next morning, we found that matters continued in every reſpect the ſame. On moving the dreſſings, the diſcharge of more than a pint of the ſame fluid again took place; and, by the ſame means, a ſimilar diſcharge was induced, both before dinner and at bed-time. In this manner, for the ſpace of twelve days ſucceſſively, we continued to draw off from three to four pints a day, which amounted to a great quantity. When we found the ſource of the diſcharge inexhauſtible, we directed him not to take off the lint; and, in conſequence of its remaining twenty-four hours without being removed, the inciſion was healed.

There has now been no diſcharge for upwards of a month; and the appearances at preſent are the ſame as they were the day before the inciſion. I am perſuaded, that if a puncture were now to be made, it would diſcharge

as freely as ever, and exactly the ſame fluid. It muſt appear extraordinary, that he never found himſelf in the leaſt degree weakened by ſo conſiderable a diſcharge, but went about as uſual, without any uncommon inconvenience; and he would at preſent, without heſitation, ſuffer a freſh inciſion. He took no medicine, but a little Peruvian bark, which he now continues to do. We took a little blood from his arm, to ſee the appearance of the circulating fluid, and we found it natural.

March 18th, 1789.

The patient, of whoſe caſe I wrote you an account, in my letter of the 28th of Auguſt 1788, unfortunately died ſome weeks after the date of that letter. We had an opportunity of examining the body after death. But I think we have ſtill to lament, that it proved one of thoſe caſes which baffles all our theories, however ingenious and plauſible. At leaſt, I confeſs I have not found any, which, to me, furniſhed a ſatisfactory account for the peculiar appearances, or which led to any uſe in practice.

Mr

Mr B. continued free from complaints, and as well as uſual till the 19th of September. At that time, I was from home; and am indebted for the two following days reports to my friend Mr Paddock, who attended him all along with me. According to Mr Paddock's account, he ſuddenly began to complain of nauſea, foreneſs of his bones, pain in the region of the kidneys, and in the teſticles. His ſcrotum was much diſtended, with a great degree of heat, which generally accompanied it in its relaxed ſtate. He was coſtive, and his pulſe quicker than uſual, but not full. A cathartic was ordered for him, which operated well in the evening; the nauſea was gone, and the pains abated.

Mr Paddock was ſent for early in the morning of the 20th, and found him very reſtleſs. He had ſlept but little during the night, and complained of ſevere pain in his breaſt, and difficulty of breathing. His pulſe was quick and full. He was blooded to twelve or fourteen ounces, and had volatile liniment to rub on the pained parts. The following powders were alſo directed for him. ℞ Sal. Nit. drach. i. Tart. Emet. gr. iſs. M. f. Pulv. et

divid. in doſ. vi. quar. cap. un. ſecunda quaq. hor. In the evening, he was ſtill reſtleſs; the pain of his breaſt was eaſier, but the powders did not produce any perſpiration. The heat of his ſcrotum was intenſe; and it was diſtended to an enormous ſize.

In this ſituation, a freſh ſcarification was made in the ſcrotum, by which, at leaſt, a pound and a half of the ſame fluid, as formerly deſcribed, was drawn off. A ſolution of Sach. Saturn. and Opium in water, was alſo directed to be applied cold to the parts. As often as he applied this, it afforded him ſome relief, though perhaps not more than cold applications, in general, had always done. In the evening, his pulſe was feeble, and he ſhewed evident marks of irritability. He was ordered ſome ſago, wine, and had an anodyne.

On the morning of the 21ſt, I viſited him, with Mr Paddock. We found that the pain of his breaſt ſtill continued ſevere; his ſkin was dry and parched; his pulſe weak; his ſcrotum diſtended; and he complained of feeling his teſticles as if contracted. We directed a ſmall quantity of opium to be added to the powders, and renewed the diſcharge, by

only

only removing the dreſſings; and we ordered the cold application to be continued. In the evening, we found him ſtill very weak. He had not ſlept any, nor had there been any obvious perſpiration. We ordered the anodyne to be repeated, and recommended wine with all his nouriſhment, of which he took a conſiderable quantity, particularly of Sago, Cuſtard, and Gruel.

On the morning of the 22d, ſtrong ſymptoms of irritability marked all his actions; his pulſe was hardly to be felt at the wriſt; he had frequent partial cold ſweats, and nauſea at his ſtomach at times. His ſcrotum alſo was very much diſtended. We drew off from it more fluid, and ordered him ſmall doſes of James's powder, at intervals of two hours. In the evening, they had not produced any viſible effect; but, about ſeven o'clock, a cold ſweat was univerſal over his body, which, with other marks of approaching diſſolution, continued till eleven, when he expired.

On diſſection, the ſcrotum was, I may ſay, the only part that ſhewed marks of diſeaſe; and that, not more than it had done for the many years that he laboured under this com-

plaint, feeling little inconvenience, except from its ſize. It was very much thickened, and greatly corrugated. It had always been obſerved to be much diſtended by heat and exerciſe, and evidently contained a fluid in its cells. It was ſuddenly contracted by cold applications, and reſt; and then the fluctuation diſappeared. We never could diſcover where the fluid went, or the ſource from whence it was ſupplied. The teſticles were of the uſual ſize. One, we thought, was a little inflamed; but, excepting that, the whole contents of the ſcrotum were in a perfectly natural ſtate. The bladder, kidneys, and other contents of the abdomen, ſhewed not the leaſt ſign of diſeaſe, or the leaſt appearance of being, in any degree, connected with the diſcharge.

There was not any accumulation of a fluid of any kind, or any relaxed or dropſical appearance of any of the contained or containing parts of the abdomen, or of the thorax, which was alſo examined. There was no preternatural thickneſs at the ring, no uncommon ſac, no unuſual connection, which we could diſcover, between the cells of the ſcrotum and abdomen. The fluid never appeared

to be encyſted, but always diffuſed, though confined to the ſcrotum. Every other part ſeemed perfectly ſound. Thus, the appearances after death did not diſcover to us any thing to account for the peculiar nature or cauſe of this diſcharge.

SECT.

SECT. III.

MEDICAL NEWS.

IN our laſt volume, we gave ſome account of a moſt important undertaking which was begun at Edinburgh; the rebuilding of the College. We had, at that time, ſingular ſatiſfaction in being able to mention, that the foundation-ſtone of this new building was actually laid on the 16th of November 1789: and it now affords us no leſs pleaſure to be able to inform our readers, that the progreſs made in this undertaking is already very conſiderable. The walls on the eaſt and north ſides of the intended ſquare, are already raiſed to a conſiderable height. But the greateſt progreſs

is made at the north-weſt corner, which is intended for the new Anatomical Theatre. The foundation-ſtone of this part of the building was laid on the 31ſt of March laſt; and a bottle, hermetically ſealed, containing the following inſcription, was depoſited under the foundation-ſtone by Dr Monro.

THEATRUM HOCCE ANATOMICUM,
CONDITUM EST ANNO ÆR. CHRIST. M.DCC.XC.
DIE M. MARTII 31MO,
CONSULE THOMA ELDER,
ARCHITECTO ROBERTO ADAM,
MEDICINÆ ANATOMIÆ ET CHIRURGIÆ PROFESSORE,
ALEXANDRO MONRO, M. D.
ALEXANDRI FILIO.

Ab anno 1720 ad annum 1790, Anatomiæ et Chirurgiæ operam dederant Studioſi 12,800.

Ab anno 1720 ad annum 1759, Profeſſore Alexandro Monro, Patre, 4431.

Ab anno 1759 ad annum 1790, Profeſſore Alexandro Monro, Filio, 8369.

Primo

Primo Decennio, ab anno 1720 ad annum 1730, adfuerunt Studioſi	-	-	670
Secundo Dec. ab anno 1730 ad annum 1740,			1090
Tertio Dec. ab anno 1740 ad annum 1750,			1476
Quarto Dec. ab anno 1750 ad annum 1760,			1327
Quinto Dec. ab anno 1760 ad annum 1770,			1942
Sexto Dec. ab anno 1770 ad annum 1780,			2870
Septimo Dec. ab anno 1780 ad annum 1790,			3425
			12,800

Hæc, propria manu, ſcripſit Alexander Monro, Anatomiæ et Chirurgiæ Profeſſor, Die M. Martii 31mo, Anno P. C. N. 1790, Edinburgi.

In the plan of the new Anatomical Theatre, every attention has been beſtowed to afford the utmoſt poſſible accommodation for teaching this fundamental branch of the healing art. And although the Anatomical Theatre in which Dr Monro at preſent teaches, be more commodious than almoſt any other part of the old College, in conſequence of its being an additional detached building, erected only twenty-ſix years ago, yet his ſtudents will hereafter poſſeſs many advantages which they have never hitherto enjoyed; for Dr Monro will now be furniſhed, not only with a commodious

modious claſs-room, but alſo with excellent preparation-rooms, diſſecting-rooms, and many other conveniences. Such is the progreſs already made in this part of the new College, that the Theatre itſelf, and all the adjoining buildings connected with it, will certainly be ready for the reception of the ſtudents by the commencement of the next Winter Seſſion, in October 1791.

Conſiderable progreſs is alſo made in the building of ſome of the other medical claſs-rooms; all of which, according to the plan of the new College, are ſituated on the north ſide of the intended ſquare. And, if the Truſtees be not diſappointed of that aid from the public, which they with ſome degree of confidence expect will be afforded to an object of ſuch great national utility, the whole of the teaching-rooms intended for the Profeſſors of Medicine, and Medical Philoſophy, will be completely finiſhed by the commencement of the Seſſion beginning in October 1792.

As, however, the funds of the Univerſity of Edinburgh are totally inadequate to the accompliſhment of this undertaking, a voluntary ſubſcription has been ſet on foot, with the view

view of aiding it. And it is no inconſiderable proof of the encouragement which Science meets with in the preſent age, that the ſum already ſubſcribed amounts to 18,019l. 3s. 7d. Sterling, and 322l. 10s. Jamaica currency. Among the liſt of ſubſcribers are to be found, not only the names of inhabitants of Edinburgh, and of pupils of the Univerſity, but alſo thoſe of many reſpectable characters at a diſtance.

Medical men of the firſt eminence, have, in particular, been forward in promoting this undertaking. Among others, we may mention the diſtinguiſhed names of Sir George Baker, Dr Warren, and Mr John Hunter of London, whoſe example, in different reſpects, is well worthy the imitation of medical practitioners in general. The early countenance and encouragement given to this undertaking by Drs Wall and Thomſon, Medical Profeſſors in the Univerſity of Oxford, is a proof, that, among liberal and enlightened minds, no other rivalſhip exiſts in Science than what tends to its advancement. We are alſo informed, on reſpectable authority, that among others whoſe good offices have been exerted in ſupport of this undertaking, that

eminent

eminent philoſopher Dr Watſon, the preſent Biſhop of Llandaff, deſerves to be particularly mentioned.

We have no doubt, that in due time theſe illuſtrious examples will be followed by all who are really intereſted in the advancement of Science. And we cannot more ſtrongly recommend this undertaking to our medical readers, than in the words of a worthy and learned phyſician, who, in a letter to a correſpondent on this ſubject, expreſſes himſelf in the following terms.

" I have with great pleaſure paid into the " hands of Meſſrs Drummond, my ſubſcrip- " tion for rebuilding the College of Edin- " burgh. I have not the honour to call " Edinburgh my Alma Mater; but I ac- " knowledge obligations to her, in common " with the whole profeſſion of phyſic. And " I truſt, there will not be found a practi- " tioner of any deſcription, who will think " himſelf ſo unconnected with the firſt medi- " cal ſchool in Europe, as to withhold his " aſſiſtance on the preſent occaſion."

It cannot, however, be alleged, that this ſcheme has met with a warm and cordial reception

ception from every body. Nor can the coolneſs of ſome people at a diſtance ſeem wonderful, when it is conſidered, that not a few opulent inhabitants of Edinburgh, have not yet given any aid to this undertaking; and plauſible reaſons have not been wanting for their delay. By ſome it has been alleged, that the former buildings, though many parts of them were confeſſedly in ruins, and patched up from year to year at a very conſiderable expence, may yet have done well enough for ſome time to come; that even ſuppoſing a new College to have been abſolutely neceſſary, yet that the plan now adopted is by much too expenſive; that this plan cannot be executed for leſs than one hundred thouſand pounds, and that of courſe it will never be completed; that a great deal of unneceſſary expence is intended to be beſtowed in erecting ſplendid houſes for all the Profeſſors, and lodgings for ſtudents; and that it is folly to think of now erecting any building for the purpoſes of Science, which can compare with thoſe reared in times of monkiſh ignorance and arbitrary power, when the craft of prieſts, or the will

of

of a monarch, could command almoſt any ſum which the ſubjects poſſeſſed.

We need hardly obſerve, that it muſt appear to every candid reader, that ſome of theſe objections are by no means ſolid. But it may not be improper to add, that others, which may ſeem at firſt ſight to be of ſome weight, are by no means founded in truth.

In place of 100,000 l., the truſtees are aſſured that the whole will be executed for leſs than 60,000 l. It is no part of the plan, to build rooms for lodging ſtudents; and thoſe Profeſſors who formerly reſided in the town, muſt ſtill find lodgings there for themſelves. It is indeed intended, that the Principal of the Univerſity, and thoſe few Profeſſors who had formerly houſes in the College, moſt of whom teach three or four hours every day, and cannot therefore reſide at a diſtance, ſhall have houſes in the new College, as they had in the old one. But although theſe houſes, viewed altogether, and in conjunction with the public buildings to which they are attached, form an elegant external appearance, yet in reality, each taken by itſelf, is but a ſmall houſe; and it is by no means intended, that

they ſhall be finiſhed in an expenſive manner.

When it is conſidered, that nearly one third of the ſum neceſſary for finiſhing the whole of the building has been ſubſcribed in the ſpace of one year, there is certainly reaſon to hope, that in no long time, the remainder may be obtained. Thoſe who are ambitious of the name, and entitled to the character, of being Friends to Science, and Citizens of the World, will not be backward in giving ſome aſſiſtance towards the accompliſhment of this undertaking. Even the medical pupils of the Univerſity alone, now in affluent and independent circumſtances in different parts of the Britiſh dominions, amount to ſome thouſands; and as we are perſuaded, that no ſet of men retain a more grateful remembrance of the benefits they have derived from their ſtudies at Edinburgh, ſo we truſt that none will ſhow greater exertions in promoting a plan ſo conducive to the future fame of its Univerſity, and to the advancement of Medical Science.

It is the boaſt of the preſent age, that at no period in the hiſtory of mankind, has Science been more liberally cultivated than at preſent; and

and when we reflect, that arbitrary power, and monkiſh ignorance, have raiſed many fine fabrics as nurſeries of Science, it will certainly be a diſgrace to this age, if poſterity ſhall be able to ſay, that the voluntary contributions of a free and enlightened people could not rear the walls of one College, which, though its buildings, which were always contemptible and inconvenient, have now fallen into a ſtate of abſolute ruin, has been long, and of late more than formerly, frequented by a numerous concourſe of ſtudents, not only from every quarter of the Britiſh dominions, but alſo from many foreign countries.

In a future volume of this Work, it is our intention to publiſh an Alphabetical Liſt of the Medical Subſcribers; and we truſt, there will be but few of the reſpectable pupils of the Univerſity of Edinburgh now living, whoſe names will not appear as aiding her with their countenance and ſupport on the preſent occaſion.

This undertaking is conducted by a reſpectable body of Truſtees, conſiſting principally of official people at the head of different incorporated bodies about Edinburgh, particularly

thoſe connected with Divinity, Law, or Phyſic. Subſcriptions are received, and receipts for the money ſubſcribed, are granted, by the different public Banks at Edinburgh; and by Meſſrs Drummond and Company, Charing-croſs, Meſſrs T. Coutts and Company, in the Strand, and the Honourable Thomas Harley, Cameron and Son, in the city, London.

* * * *

It is now many years ſince the illuſtrious Haller turned the attention of phyſicians to the irritability of the muſcular fibre; and we need not remind the well-informed reader, of the controverſies which ſubſiſted between him and the late celebrated Dr White of this place, reſpecting its cauſe; and particularly, whether it was to be conſidered as a primary, inherent quality of the animal fibre, and dependent on its gluten, as was ſuppoſed by the former; or was to be viewed as being entirely derived from the nervous influence, as was the

the opinion of the latter. But although their difference of ſentiments with reſpect to it, gave riſe to much ingenious ſpeculation, yet neither the one nor the other ventured to ſuppoſe, that it was to be conſidered as the cauſe of every diſeaſe to which the animal body can be ſubject.

This, however, is a doctrine which has of late been ſtrenuouſly ſupported by ſome very ingenious Students at this place, who have not been deficient in adducing plauſible arguments to give it at leaſt the appearance of probability. Our readers may recollect, that, in our laſt volume, we gave an account of a paper upon the irritability of vegetables, read before the Natural Hiſtory Society of Edinburgh, by Mr John Gahagan; in which that Gentleman endeavoured to prove the ſimilarity of that irritability which plants poſſeſs, to the irritability of animals; and concluded, that ſince plants, poſſeſſed of irritability, but without a brain and nerves, exerciſe moſt of the functions of vitality, it is probable, theſe functions in animals are equally independent of nervous energy. In the paper mentioned above, Mr Gahagan is diſpoſed to aſcribe almoſt every phænomenon of the living body,

both in a ſtate of health and diſeaſe, to irritability, which he conſiders as a primary, eſſential property of the muſcular fibre, and altogether independent of the nervous power.

Since that period, the Gentleman above-mentioned has taken the degree of Doctor of Medicine at the Univerſity of Edinburgh; and in his inaugural diſſertation, De Inflammatione, he has ſtrenuouſly ſupported the ſame doctrine with much ingenuity. In another inaugural diſſertation alſo, publiſhed at Edinburgh at the ſame term, by Dr Henry Bowles, this doctrine of irritability is ſupported by much acute reaſoning. Both theſe Gentlemen acknowledge their obligations for the doctrine, as they have delivered it, to Mr Edward Aſh, their fellow-ſtudent at this place, lately appointed by the Univerſity of Oxford to one of the Radcliffe Travelling Fellowſhips, and at preſent proſecuting his ſtudies abroad. Dr Bowles, in particular, mentions, that a more full explanation of this doctrine may ſoon be expected from Mr Aſh himſelf. But it is not improbable that his intention may have been interrupted, by the change which has taken place in the courſe of his ſtudies.

Among

Among other gentlemen at Edinburgh, who were ſtrenuous advocates for this doctrine, we may mention Dr Girtanner from Switzerland, whoſe name is already favourably known to the medical world by different publications, and particularly by his Treatiſe on the Venereal Diſeaſe, of which an analyſis was given in our laſt volume.

In a late number of the Journal de Phyſique of Paris, Dr Girtanner has publiſhed at ſome length his ſentiments on this ſubject; and we preſume, that the following view of his opinions will not be unacceptable to our readers. And although we muſt acknowledge, that, as a general ſyſtem, explaining the nature and cure of every diſeaſe, this doctrine appears to us to be liable to numerous and inſurmountable objections, yet we think, that, from its ingenuity, it not only deſerves notice, but may have the effect of turning the attention of phyſicians to the conſideration of irritability, with advantage to medical ſcience.

On Irritability, conſidered as a Vital Principle in Organized Bodies. By Chr. Girtanner, *M. D.*

THE diſcovery of the contraction of the muſcular fibre, on the application of a ſtimulus, or of what the immortal Haller called animal irritability, ought to be conſidered as one of the moſt important that have been made in phyſiology. It ſeems ſurpriſing, that though this diſcovery has been made forty years ago, no one has undertaken to examine it more particularly. Perhaps the reaſon is, that it was not favourably received by the public at the time it was made; and that it has required thirty years to eſtabliſh it, and to defend it againſt phyſicians who attacked and warmly oppoſed it.

Wiſhing to underſtand more properly this ſingular property of the muſcular fibre, and diſſatisfied with what I have found in authors relating to it, I undertook a laborious inveſtigation of the ſubject. I began by making various experiments with various poiſons, the effects of which on the muſcular fibre I attended

tended to. I repeated and multiplied theſe experiments, becauſe I am perſuaded that it is only by the light of experiment that we can penetrate into the ſanctuary of nature, without the riſk of bewildering ourſelves.

I owe much to the works of Fontana; and it is by following the footſteps of that great philoſopher often, by leaving them ſometimes, and by ſhunning the miſtakes into which he has fallen, that I perſuade myſelf I have found the truth.

I ſhall not here ſpeak of the new views of the phyſiology of the human body, and of diſeaſes, which immediately follow from the reſults of my experiments; nor ſhall I enter into a detail of theſe experiments, becauſe they will be related in a work I mean to publiſh in Germany next year. I ſhall only now give ſome detached propoſitions, unaccompanied with the proofs, which may ſerve as a proſpectus of my work, and which may attract the attention of ſome philoſophers.

All organized nature is compoſed of ſolids and of fluids. The ſolid parts of animals and of plants, are compoſed of three ſorts of primitive fibre, *viz.* the earthy, the ſenſible, and irritable

ritable fibre. The earthy fibre, forms the bones of animals, and wood of plants. It is inorganic, inſenſible, inirritable; is ſubject to no other laws than thoſe of inorganized matter, and has no life but in combination with the irritable fibre. The ſenſible or nervous fibre, is that which conſtitutes the nerves in animals. Plants are deſtitute of this ſpecies of fibre; at leaſt it has not yet been diſcovered in the vegetable kingdom. It is totally incapable of irritability or contraction; it is acted upon only by the irritable fibre. Each muſcular contraction produces a change on the adjoining nervous fibre. This change, in the living animal, reaches to the origin of the nerve, in the brain or ſpinal marrow, and is called Senſation.

Thus, every ſtimulus which acts on the living irritable fibre, produces in it, immediately, contraction, and immediately ſenſation; that is, no ſtimulus can act on the nerve, but by the intervention of muſcular fibre. When this latter has loſt its irritability, and is become either paralytic or gangrenous, there can be no ſenſation, although the contiguous nerve ſhould be perfectly ſound. When, on the other

ther hand, by any accident, the nerve is become inſenſible, or has been deſtroyed, the muſcular fibre will continue to contract, upon the application of a ſtimulus; but no ſenſation will follow, becauſe the connection between the muſcular fibre, and the origin of the nerve, is deſtroyed. Senſation and motion are therefore two properties of organized matter, eſſentially different. Senſation is only a ſecondary property, which depends on the irritable fibre, and cannot exiſt without it. Irritability, on the contrary, is a primary property, eſſential to the living irritable fibre, and abſolutely independent of the nerves. I know that this propoſition is contrary to the opinion generally received, which makes irritability depend on the influence of the nerves. I, too, adopted this opinion; but manifold experiments have convinced me that it is erroneous. Not only does the irritable fibre act on the ſenſible, and produce ſenſation; but the ſenſible fibre reacts on the irritable, and produces contraction. This is the cauſe of voluntary motions, of convulſions, and of what are called nervous diſeaſes. The action of the nerves on the muſcular fibre, is in nothing different from that

of

of any other ſtimulus; and I ſhall therefore call it the Nervous Stimulus. The irritable fibre, improperly called the muſcular fibre, pervades all organized matter. On it depends organic motion, ſenſation, and even life; and on it, the bodies that ſurround it continually act, by ſtimulating it, and forcing it to contract. It is of this fibre that I am about to ſpeak, and of the laws that are the conſequence of the irritability it is endowed with.

But, before entering upon this diſcuſſion, it will be neceſſary to prove, that the irritable fibre is univerſally diffuſed through all organized bodies. Its exiſtence is known, and generally admitted, in animals with warm blood; and in ſome that have cold blood, ſuch as frogs, lizards, tortoiſes, ſerpents, eels, and fiſhes. Inſects, worms, and plants, are not leſs endowed with irritability. The ſpiral tongue of butterflies is exceedingly irritable, and contracts upon being ſtimulated, even after having been cut in pieces, and ſeparated from the animal. The irritability of oyſters, of meduſæ, and of polypi, is well known. The nautilus riſes from the bottom of the ſea to the ſurface, by alternately contracting and dilating its irrit-

able

able fibres. The pendant chryſalis of the papilio urticæ is very irritable, eſpecially for a few days after its formation. The ſkin with which the caterpillar was covered, and which it has juſt quitted, acts as a ſtimulus to the newly formed chryſalis, which is ſeen to contract and dilate alternately, till the dried ſkin falls off. Swammerdam ſaw and figured the muſcular fibres, and obſerved their alternate contractions and dilatations in a louſe, and even in the fœtus of a louſe, incloſed in a microſcope. Others have obſerved the ſame in other inſects, and in microſcopic animals.

The exiſtence of the irritable fibre, in the vegetable kingdom, is proved by facts not leſs ſingular. The leaves of the Droſera rotundifolia, and longifolia, contract when touched with the point of a pin, and dilate when the ſtimulus is removed. The leaves of the Averrhoa carambola contract when touched, compreſſed, or pierced. The leaves of many ſpecies of Mimoſa, eſpecially thoſe of the Mimoſa pudica, contract upon being touched, or when expoſed to the action of a burning-glaſs, electricity, ammoniac, muſk, opium, or any other ſtimulus. The ſame phænomena are obſervable

ſervable in the Onoclea ſenſibilis, Oxalis ſenſitiva, Dionæa muſcipula, Hedyſarum gyrans, &c. The parts of fructification are eſpecially irritable. The ſtamina of the Berberis vulgaris, of the Heliotropium, Calendula, Ciſtus appenninus, Lilium ſuperbum, Cactus, Forſkohlea tenaciſſima, and of ſeveral others, contract on the application of a ſtimulus. The ſtigmata and piſtils exhibit the ſame phænomena.

The exiſtence of the irritable fibre, in all organized bodies, being thus proved, there ariſes another queſtion, well worthy the attention of the philoſopher.—Is this irritable fibre the ſame, and ſubject to the ſame laws in every part of nature, or is it differently modified in different animals and different plants? Are effects, ſimilar in appearance, produced by different cauſes? This problem is important, but of difficult ſolution. In the deduction of general rules from ſome particular phænomena, we are in danger of bewildering ourſelves in the labyrinth of analogy, where ſo many talking philoſophers have loſt themſelves, becauſe they have preſumed to enter it without the clue of experience. This has been my guide; and, after repeated experiments

ments and obſervations, I conſider it as demonſtrated, that the irritable fibre is the ſame, and ſubject to the ſame laws, throughout all organized nature. This truth being diſcovered, has preſented to me an ample harveſt, which the ſickle of the philoſopher has never touched.

There are three kinds of irritable fibre: the ſtraight, which is found in the muſcles of animals, in the leaves, ſtamina, and ſeveral other parts of plants: the ſpiral fibre, found in the arteries, veins, lymphatic veſſels, inteſtines, and, in general, in all the veſſels, and cylindric or conic muſcles of animals or plants: the circular fibre, or what we call ſphincters. The ſtraight fibre contracts in length, or is ſhortened in contraction; the two ends approaching one another, at the inſtant it is touched, or any of its parts, by a ſtimulus. The ſpiral fibre, in contraction, diminiſhes the diameter of the veſſels which it forms. The contraction does not take place, at the ſame inſtant, through the whole length of the fibre, as in the preceding; but is communicated ſucceſſively to its different parts. The contraction begins at the place to which the ſtimulus is applied,

applied, and is continued in the direction of the ordinary motion of the fibre, to its termination. By this contraction, which is alſo called periſtaltic motion, the fluids contained in the veſſels are impelled forwards, and circulation goes on. This circulation takes place in vegetables as well as in animals, and is carried on in both by the periſtaltic motion, which is the effect of the irritability with which the fibres are endowed. The circular fibre, when it contracts, cloſes the opening of thoſe veſſels, at the end of which it is generally placed.

The fluids of animals and plants are endowed with irritability, as well as the ſolids. Their irritability conſiſts in coagulability; and that coagulability of the fluids is ſubject to the ſame laws as the irritability of the fibre. This is a new diſcovery, which is the foundation of many important truths.

The degree of irritability in the ſolids and fluids, changes continually, and differs according to the age and ſyſtem of the animal or plant, and according to the ſex, organization, and ſize of the different individuals. It is alſo accumulated by the abſtraction of habitual

ſtimuli,

ſtimuli, and is exhauſted by the application of ſtimulants too frequently repeated, or too ſtrong.

We may remark three different ſtates of the irritable fibre, or three different ſtages of irritability of which it is ſuſceptible. 1*ſt*, The ſtate of health, peculiar to each individual, which I ſhall call the tone of the fibre. 2*d*, The ſtate of accumulation, produced by the abſtraction of habitual ſtimuli. 3*d*, The ſtate of exhauſtion, produced by the action of too ſtrong a ſtimulus.

The ſtate of health, or tone of the fibre, conſiſts in a certain quantity of the irritable principle neceſſary to its preſervation, or in an equilibrium between the acting ſtimulus and the irritability furniſhed by the lungs and the circulation. When the ſum of the ſtimuli acting on the fibre is not ſtrong enough to deprive it of all its exceſs of irritability, the irritable principle is accumulated in the fibre, which is then in a ſtate of accumulation; and ſtimuli produce contractions much ſtronger than when the fibre was in tone. When the ſum of the ſtimuli acting on the fibre is too great, the fibre is deprived, not only of its ex-

ceſs of irritability, but alſo of a part of the irritable principle neceſſary to its tone; or rather, the fibre loſes more irritability than it receives, and is, conſequently, in a ſtate of exhauſtion, either temporary or irreparable. In a ſtate of temporary exhauſtion, the fibre loſes its tone, and ſuffers a defect of irritability. A ſtimulus applied at this time, will not make it contract, unleſs it be very ſtrong. After ſome time, the irritable principle will be again accumulated in the fibre, and it will then contract. It is only by degres, however, that it recovers its irritability.

This, I venture to affirm, is a fact as new as it is important; and it explains a great number of phænomena hitherto inexplicable. The motion of the heart, the menſtrual flux; the periodical motions of animals and plants, as well as their periodical diſeaſes, are explained by it; that is, they are explicable only on this principle, that a ſtimulus, though always preſent, and continuing to act on the fibre, produces no ſenſible effect, till the irritability of the exhauſted fibre is again accumulated. The total or irreparable exhauſtion of the fibre conſiſts in the loſs of all its irritability, which

is

is called gangrene. The fibre changes colour; becomes livid or black; becomes ſubject to the laws of unorganized matter; begins to decompoſe, and become putrid. A very ſtrong ſtimulus will, by its action, reduce a fibre to this ſtate in a ſhort time. Such is, for inſtance, the ſtate of the fibre killed by ſtrong poiſons, by the bite of the rattleſnake, &c.

The irritability of many inſects, and of moſt plants, is irreparably ſpent by the ſtimulus of the venereal act; ſo that they die immediately after the work of generation is performed. The irritable fibre, from the firſt moment of its exiſtence to its diſſolution, being conſtantly ſurrounded by bodies which act on it, and on which it reacts, by its contraction; it follows, that during the whole period of life, the irritable fibre is in continual action; that life conſiſts in action, and is not a paſſive ſtate, as ſome authors have maintained.

Beſides, external objects having no immediate action on the nerves, but acting on them, and producing different ſenſations only by the intervention of the irritable fibre; it is clear, that the ideas which we have of external objects are not agreeable to thoſe objects, but

are changed and modified by the irritable fibre which tranſmits them to us. Hence objects appear different to us, according to the different ſtates of that fibre. The irritable fibres in any individual, whether animals or plants, compoſe a ſyſtem of fibres, the integrant parts of which act continually on the whole, while the whole reacts on particular parts; ſo that any ſtimulus which acts on one fibre of the ſyſtem, will deprive it of a part of its irritability; but that loſs will ſoon be repaired by the ſyſtem, and each fibre will furniſh, in proportion, a part of its irritability to ſupport the loſs ſuſtained by any ſingle fibre. Thus, a weak ſtimulus, continually acting on a part of the ſyſtem, ſuch as ſlow poiſons, the abuſe of ſpirituous liquors, a hidden ulcer, &c. in time exhauſt the whole ſyſtem, and cauſe death.

For the ſame reaſon, a very ſtrong ſtimulus, partially applied; ſuch as, a diſtilled water of the Laurocerafus, Opium, the poiſon of the Rattleſnake, will inſtantaneouſly exhauſt the irritability of the whole ſyſtem, and kill the animal. By many experiments, I am certain, that the muſcles of animals killed by ſuch ſti-

muli,

muli, are perfectly deſtitute of irritability. The irritable fibres of a ſyſtem are not all poſſeſſed of the ſame degree of irritability: they have different capacities for the irritable principle, according to their diſtance from the heart. Fibres equally diſtant from the heart, have the ſame capacity; and a ſtimulus which affects one, affects all at the ſame time, and in the ſame manner: hence the ſympathy of parts equally remote. When the irritable fibre has loſt its tone, either from an exceſs or defect of the irritable principle, it is diſeaſed; and the ſyſtem it belongs to, ſuffers, and becomes diſeaſed, by ſympathy.

All the diſeaſes, whether of animals or plants, may be referred to two claſſes: *1ſt*, Diſeaſes of accumulation, proceeding from the accumulation of the irritable principle, from the diminiſhed action of habitual ſtimuli. *2d*, Diſeaſes of exhauſtion, proceeding from the defect of the irritable principle, by the increaſed action of habitual, or the addition of new ſtimuli. Medicines cure diſeaſes, by acting on the irritable fibre, either by exhauſting its irritability in caſes of accumulation, or by diminiſhing the action of habitual ſtimuli, in caſes

of exhauſtion. The effects of poiſons are explicable in the ſame way. Poiſons, medicines, and, in general, all ſurrounding bodies, act only on the irritable fibre; and therefore, affect the ſyſtem exactly in the ſame manner. Fontana concludes, after having made ſix thouſand experiments, that the poiſon of the viper kills animals by acting on the blood. But frogs, that live a long time after the heart is cut out, and which are conſequently deprived entirely of blood, are killed as quickly by the poiſon of the viper as if their blood had not been let out.

Thoſe ſtimuli, which I call habitual, becauſe they are more or leſs in continual action on the irritable fibre, are heat, light, food, air, the circulation of the blood, the generative and the nervous ſtimulus. As long as the action of theſe ſtimuli is in proportion to the degree of irritability in the ſyſtem, and as long as the ſum of their action is nearly equal to the ſum of the irritable principle abſorbed by the lungs, and diſtributed by the circulation, the whole ſyſtem will be in health,

and

and the fibres which conſtitute it will be in tone. When one of theſe ſtimuli, or ſeveral of them, act with greater force than ordinary, or when the fibre becomes more irritable, while the degree of their action is the ſame, the exhauſtion of the ſyſtem, and ſome one of the diſeaſes which are the conſequence of it, will follow. The abſtraction of one or ſeveral of theſe ſtimuli, will produce an accumulation of irritability in the ſyſtem; and ſome one of the diſeaſes which are the conſequence of this will follow.

If my principles be true, medicine, which has hitherto been an art of mere conjecture, will be brought, in time, to the certainty of calculation; and, after tables ſhall be conſtructed to expreſs the force or intenſity of the ſtimulus, the degree of irritability in the fibre, and the certain ſigns by which theſe may be known, the calculation will be ſo ſimple and eaſy, that it will make a part of education. Beſides, the irritable fibre being the ſame throughout all organized nature, there will then be no diſtinction between medicine,

the veterinary art, and agriculture; but theſe ſciences will be confounded, and form only one, under the name of Univerſal Phyſiology. The art of pharmacy, and of writing preſcriptions, will become uſeleſs. A bottle filled with alcohol, or liquid laudanum, will be ſubſtituted to the enormous quantity of drugs contained in the ſhops of the apothecaries. The traffic in medicines—But hold—By continuing my predictions, I ſhall expoſe myſelf to ridicule; for, as Helvetius ſays, "Every idea "too remote from our ordinary views and man-"ner of thinking, appears ridiculous. We "never value any ideas but ſuch as are con-"ſonant to our own, becauſe ſelf-love prompts "us to admire ourſelves in others."

The

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The following letter from Mr Butt, of Bartlett's Buildings, London, dated London, 20th July 1790, and accompanied with ſome quantity of the Auguſtura Bark, has been ſent to the Phyſicians of the Royal Infirmary and Public Diſpenſary of Edinburgh, and, we preſume, to the Phyſicians of many other medical charities in Britain.

"SIR,

"Though the Bark which I take the "liberty of troubling you with a ſpecimen of, "be not entirely new, and though it has al- "ready been publiſhed in different papers in "the London Medical Journal, yet it is not "generally known, and is far from poſſeſſing "that celebrity which it really deſerves. It "wants the aſſiſtance of Gentlemen, who are "able, who are eminent, and who are ſolici- "tous to advance whatever may be found par-

"ticularly

" ticularly uſeful in medicine. I therefore " beg leave to introduce this Bark to your " notice. To the accounts given in the Me- " dical Journal it may be added, that this me- " dicine is found a ſpecific in agues; and that " it is, on the authority of Mr Bruce, who " has been applied to, the Brucea Antidyſen- " terica of Kew Gardens. I deſire your in- " dulgence only to obſerve farther, that a " very large quantity of this medicine, not " leſs than 15,000 lb., has found its way into " this country, through the medium of Meſſrs " Bourdieu, Chollet, and Bourdieu. It is " really the produce of Africa, and ſo entered " at the Cuſtomhouſe, but was conſigned to " them from the Weſt Indies. Another par- " cel of 1200 lb. was brought to Liver- " pool, immediately from Africa. Both par- " cels are in my poſſeſſion; and the account " given with each importation is, that this " Bark is found very ſuperior to that of Peru " in the cure of fevers.

" If you favour this medicine with your at- " tention, what you may want of it is very " much at your ſervice. And that you may " be ſecure of having the ſame article, through

" whatever

" whatever channel it may ſuit you to pro-
" cure it, each parcel will be ſealed up, and
" ſigned with the name of J. Butt."

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A correſpondent in London informs us, that Dr Pearſon read a paper to the Society of Phyſicians, at their quarterly meeting on Wedneſday October 28th 1789, in which he related experiments, made with the view of diſcovering the ſubſtances, and the proportion of the ingredients, in the celebrated Fever-Powder of the late Dr James. The compoſition and mixture of this medicine, ſhewn by the analyſis, Dr Pearſon found to agree in every particular with the ſynthetic experiments. And the preparation of James's Powder, was aſcertained to be preciſely the ſame with the Pulvis antimonialis of the Pharmacopœia of the London College.

Having ſhewn, by a full induction of facts, the identity of theſe two medicines, Dr Pearſon

gave

gave a hiſtory of the introduction of James's Powder into practice in England. He finds the preſcription for it in Schroder, Ludovicus, Michaelis, Hartman, Potterius, and Frederic Hoffman; and probably it was the invention of Baſil Valentine. Baron Schawanberg, the perſon who ſold the liquid ſhell, appears to have introduced in London the ſame medicine as the Fever-Powder of Dr James; and Mr Lile, who had the receipt from Schawanberg, prepared this powder for fevers, which has ever ſince been made under the name of Lile's Powder. The ſame medicine is ſaid alſo to be the Fever-Powder prepared by Baron Schawanberg's widow, and ſtill ſold by Mr Spiers, a druggiſt in Southampton-Street.

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In the fourth volume of the Hiſtory of the Royal Society of Medicine of Paris, the following account is given of a new remedy which has been ſucceſsfully employed againſt Venereal

real and other obſtinate complaints, extracted from a letter written by M. le Chevalier d'Arbaleſtrier, Major de la Place de Mont-Dauphin, to M. Sabarot de la Verniere.

" It is now three years ſince an American officer, a friend of mine, ſent me a plant from Canada, very ill preſerved, which was named La Cardinale bleue, or the Lobelia ſyphilitica. He had ſeen the ſavages employ it for the cure of Syphilis. The ſurgeon-major of the hoſpital of this place requeſted to accompany me, when I went out in ſearch of it. In the Alps, about the ſame height with Canada, we found a plant, which had conſiderable reſemblance to that ſent me by my friend. It is a Phyteuma. The ſurgeon I have mentioned, has made trials of it with ſoldiers ſubjected to ſyphilis; and they have been radically cured by means of it in the ſpace of three weeks. Warts, chancres, &c. have diſappeared without the leaſt operation.

" This Phyteuma is then antivenereal; but it is, beſides this, very efficacious in the treatment of chronical diſeaſes which depend upon vitiated lymph. A woman in the neighbourhood,

hood, affected with a fiſtulous ſore on her breaſt, with ſwelling of the axillary glands, was put upon the uſe of this Phyteuma for three weeks. She got rid of her complaint, and is at preſent in perfect health.

" The freſh plant is given, for a doſe, to the extent of three ounces in decoction. This produces a copious diſcharge by urine, even more than by ſtool. It produces the ſame effect as particular mineral waters. Patients are ordered the ſame regimen as in caſes of lues. This ptiſan has been given for the ſpace of forty days; it has purged the patient three or four times a day, without diminiſhing the ſtrength. All the ſymptoms in that caſe have diſappeared, more than ſix months ago; and the perſon on whom this trial was made, is fat and fair. If future experience ſhall confirm the expectations I have formed, it muſt be acknowledged that this will be a diſcovery intereſting to humanity. But the plant is a very rare one."

The Society add, in a note ſubjoined to this extract from M. d'Arbaleſtrier's letter, That the information appears to them ſo intereſting

as

as to deſerve publication, that theſe reſearches may be followed out by others. Perhaps, we may add, that it is to be regreted, that no information is given reſpecting the particular ſpecies of the Phyteuma which was here employed for medical purpoſes. Of the numerous ſpecies referred to this genus by Linnæus, one only, the Phyteuma orbicularis, or Horned rampions, is a native of Britain. But as this is not an Alpine plant, it is highly probable it was not the ſpecies here employed.

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In the ſame work from which we have extracted the above, there is alſo an extract of a letter from M. Bajon at Cayenne, to Mr D'Aubenton, in which we have an account of the Gout being cured by means of the commotion excited by the Gymnotus, or torporific eel.

" I muſt inform you of a very ſingular fact, with regard to the torporific eel. An inhabitant.

tant of this place, named Mr Brifaud, was, ſome years ago, attacked with a gouty pain in the right foot. It began always in the great toe, and then affected the whole foot to the heel, where it ſeemed to fix. After having remained ſome time in this foot, it paſſed to the left foot; there it began alſo in the great toe, and paſſed in the ſame manner to the heel; and after having remained for ſome time in this foot, it diſappeared for ſome months. While this pain laſted, the foot was always a little ſwelled, particularly at the ancle, and he could not walk without great difficulty, and barefooted, becauſe he could not put on either ſhoes or ſtockings.

" Although he had for ſome time felt a return of his uſual pain in the right foot, he yet reſolved to go out a hunting in a canoe upon a river. He left a negro on ſhore with his dogs, to try to raiſe deer, or ſome other game, whoſe practice it is to throw themſelves into the water, when they find they are purſued by dogs. Being impatient at having met with no game, Mr Brifaud reſolved to land, though lame and ſuffering a great deal of pain in his foot, from the hopes that he would make the

dogs

dogs hunt better than the negro. He had ſcarcely landed, before he ſaw ſome wild hogs. To follow them, he was obliged to paſs a ſmall marſh, on which there was about a foot, or a foot and a half of water. In this he was ſtruck by a torporific eel, which produced a very violent commotion in both knees. After a moment's reflection, however, he purſued his route; and his negro having taken a hog, he returned to his canoe by the ſame road. But before arriving there, he perceived that he walked with leſs uneaſineſs, and that he no more felt the pain of his foot.

When he had arrived at his houſe, he ſaw with ſurpriſe that the ſwelling had diſappeared; that he walked with the utmoſt eaſe, and without feeling the leaſt pain. He then tried to put on ſtockings and ſhoes: in this alſo he ſucceeded, and walked as if his foot had never been in the leaſt affected. He then believed that the pain would follow its ordinary courſe, and that it would paſs to his left foot. But the agility of this foot alſo, and the abſence of pain, and of a ſlight ſwelling which uſually preceded it, ſoon convinced him of his cure.

Some days afterwards, he recounted to me all theſe particulars: and more than eight months have now elapſed, without his having felt the ſmalleſt return of pain in his foot. I am very ſenſible, that, from a ſolitary caſe, no concluſions can be drawn. But may it not ſuggeſt a trial of electricity, in the cure of gouty complaints?

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The death of the juſtly celebrated Dr Benjamin Franklin, has perhaps called forth a greater number of high compliments, and diſtinguiſhed honours to his memory, than were ever paid to any philoſopher, at leaſt of modern times. As a philoſopher, to whom medicine ſtands deeply indebted, we ſhould conſider ourſelves as highly culpable if we omitted mentioning him in this work, and that too in the moſt honourable terms. But without aiming at any thing original, on a ſubject already laboured by the moſt able pens, and with regard

gard to which we have no opportunities for particular information, we truſt that it will be eſteemed no unacceptable communication by many of our readers, to be preſented with the following account of him, extracted from an eulogium pronounced by the Duke de Rochefoucault, before one of the moſt reſpectable Societies in Paris.

Benjamin Franklin, born at Boſton in 1706, was placed at a very early age under one of his brothers, who was a printer, where he made a rapid progreſs in this art, ſo uſeful to mankind; and contracted an attachment for the preſs, which continued as long as he lived.

At Paſſy, ſo celebrated by being the place of his retreat, he frequently invited Meſſrs Didot, Pierres, and other diſtinguiſhed artiſts of the capital, with whom he converſed on their profeſſion, contributing to its improvement by that penetrating and inventive genius which he diſplayed in ſcience and politics. This genius was the diſtinguiſhing character of the man we lament. Whatever engaged his attention, was conſidered by him under every point of view; and new ideas always re-

ſulted from this examination. Scarcely emerged from infancy, the young Franklin, a journeyman printer, was a philoſopher, without being conſcious of it; and, by the continual exerciſe of his genius, prepared himſelf for thoſe great diſcoveries, which in Science have aſſociated his name with that of Newton, and for thoſe political reflections which have placed him by the ſide of a Solon and a Lycurgus. Ill-treated by his brother, he left Boſton, and procured employment, firſt in a printing-office at New York, and afterwards at Philadelphia, where he ſettled.

America was not then, what it is now. Agriculture, and a few of the ruder arts, almoſt excluſively occupied the unpoliſhed people by whom it was inhabited. The religious fanaticiſm which had conducted thither the firſt Engliſh emigrants, left traces that ſometimes diſturbed its tranquillity, particularly in the Northern Provinces, and confined the education of the inhabitants to a narrow circle, of which Superſtition was frequently the centre. Penſylvania, however, whoſe legiſlator, though a fanatic, cheriſhed liberty, was in this reſpect more happily ſituated for the reception

of

of improvement. Soon after his arrival at this place, Franklin, in concert with other young men, eſtabliſhed a ſmall club, where every member, after his work was over, and on holidays, brought his ſtock of ideas, which were ſubmitted to diſcuſſion. This ſociety, of which the young printer was the ſoul, has been the ſource of every uſeful eſtabliſhment, calculated to promote the progreſs of Science, the mechanical arts, and particularly the improvement of human underſtanding.

A newſpaper which iſſued from his preſs, was the mean he employed to draw the attention of his countrymen. There he anonymouſly hazarded propoſals, at firſt looſe, but afterwards more preciſe and definite. He ſet on foot ſubſcriptions, which were the more readily filled, as every ſubſcriber might conſider himſelf the chief of an undertaking, the author of which was not named. It was in this manner that public libraries were founded; that houſes of education, ſince grown up to celebrated colleges, aroſe. It was in this manner that the Philoſophical Society of Philadelphia, no contemptible rival to thoſe of Europe, was formed; that aſſociations for ornamenting, clean-

ing, and lighting the ſtreets of the town, and for preventing fires, were eſtabliſhed; and that commercial ſocieties, and even military corps for the defence of the country, were incorporated. Nothing was foreign to the genius of Franklin; and his name, which his modeſty endeavoured to conceal, was always placed by his countrymen in the liſts, and frequently at the head of thoſe different bodies, who were almoſt all deſirous of retaining him as their honorary chief; when higher employments called him from his country, which he was deſtined to ſerve more effectually as its agent in the metropolis of Britain.

He was ſent to England in the year 1757. Celebrated for his aſtoniſhing diſcoveries reſpecting the nature, effects, and identity of thunder and electricity, and the means of guarding againſt its ſtrokes, his fame had arrived before him. The letters by which he had announced theſe diſcoveries, had long remained unnoticed by the Royal Society of London; but they were at length read: and for ſome years all the learned of Europe had been informed, that in the New World exiſted

a philoſopher

a philoſopher who was worthy of their admiration.

The ſtamp act, by which the Britiſh Miniſter wiſhed to familiarize the Americans to pay taxes to the mother country, revived that love of liberty which led thither their foreſathers, at that time a deſert. The colonies formed a Congreſs, the firſt idea of which had been communicated to them by Franklin, at the conferences at Albany in 1754. The war which was juſt terminated, and the exertions made by them to ſupport it, had given them a conviction of their ſtrength: They oppoſed this meaſure.

The Miniſter gave way, but preſerved the means of renewing his attempts. Once cautioned, however, they remained on their guard. Liberty, cheriſhed by their alarms, took deep root; a ſalutary fermentation agitated their minds, and prepared for the revolution, men, whoſe names it has rendered juſtly celebrated; Hancock, Samuel and John Adams, the ſage Jefferſon, Jay, Green, and the great Waſhington: and finally, the rapid circulation of newſpapers, for the introduction of which they were indebted to the printer of Philadel-

phia, united them together to reſiſt every freſh enterprize.

In the year 1766, this printer, called to the bar of the Houſe of Commons, underwent that famous interrogatory which placed the name of Franklin as high in Politics, as it was before in Natural Philoſophy. From that time he defended the cauſe of America with a firmneſs and moderation becoming a great man; pointing out to Miniſtry all the errors they had committed, and the conſequences they would induce. Till the period when the tax on tea, meeting the ſame oppoſition as the ſtamp act had done, England blindly fancied herſelf capable of ſubjecting by force three millions of men, determined to be free, and at the diſtance of two thouſand leagues.

Every man is acquainted with the particulars of that war; its fortunate reſult to the whole univerſe; the part taken in it by France, under a King, who, protector of the liberties of America, has ſince meritoriouſly obtained from the French nation the title of Reſtorer of the Liberty of his own Country; and the brilliant ſervices of that youth, whoſe name, glorioufly connected with that revolution, has

acquired

acquired freſh luſtre in a revolution ſtill greater.

But every man has not equally reflected on the bold attempt of Franklin as a legiſlator. Having aſſerted their independence, and placed themſelves in the rank of nations, the different Colonies, now the United States, adopted each his own form of government; and, retaining almoſt univerſally their admiration of the Britiſh conſtitution, framed them on the ſame principles, variouſly modelled. Franklin alone, diſengaging the political machine from theſe multiplied and admired counterpoiſes that rendered it ſo complicated, propoſed the reducing it to the ſimplicity of a ſingle legiſlative body. This grand idea ſtartled the legiſlators of Penſylvania; but the philoſopher removed the fears of a conſiderable number, and at length determined them to the adoption of a principle which the National Aſſembly has made the baſis of the French conſtitution.

Having given laws to his country, Franklin returned again to ſerve it in Europe; not by repreſentations to the metropolis, or anſwers at the bar of the Houſe of Commons, but by treaties with France, and ſucceſſively with

with other powers, which, though governed by deſpots or monarchs, liſtened to the voice of the American ſpeaking liberty.

Some years previous to this, I became acquainted with him, in a journey I made to London: and permit me, Gentlemen, to recal to my mind the happineſs I felt, when, on his arrival at Paris, I conducted to his houſe M. Turgot, then Ex-Miniſter, and ſaw thoſe two excellent men, both ſo deſerving of the admiration and regret of mankind, embrace for the firſt time. Franklin, at leaſt, completed a long career; but Turgot, taken from the world at the age of fifty-four, ſaw not his country made free. It was he who wrote under the portrait of Franklin that beautiful verſe,

Eripuit fulmen cœlo, mox ſceptrum tyrannis;

the laſt hæmaſtich of which was a prophecy that was ſpeedily accompliſhed. The viciſſitudes of fortune experienced by the Americans, ſometimes gave conſiderable anxiety to their illuſtrious negociator; but his great mind, encouraged by the bravery of his countrymen, by the firmneſs of the Congreſs, and, above

above all, by the genius, virtues, and talents of the immortal Waſhington, did not give way to fear. He did not, however, flatter himſelf, that peace would ſo ſoon finiſh the courſe of that happy revolution; and when I embraced him the day on which he ſigned the articles, "My friend," ſaid he to me, with an air of perfect ſatisfaction, "could I have hoped, "at my age, to have enjoyed ſuch a happi- "neſs!"

Whatever attractions an abode in France had for him; whatever pleaſure he taſted in the ſociety of thoſe friends he had made; however great was the danger of ſo long a voyage, to a man of ſeventy-nine, tormented with the ſtone, it was neceſſary for him to reviſit his country. He ſet off in 1785; and his return to America, now become free, was a triumph, of which antiquity can furniſh us with no example. He lived five years after this period. For three years, he was Preſident of the General Aſſembly of Penſylvania. He was a member of the laſt Convention that eſtabliſhed the new form of Fœderal Government; and his laſt public act, was a grand example for thoſe who are employed in the legiſlation

giſlation of our country. In this Convention, he differed, in ſome points, from the majority; but when the articles were ultimately decreed, he ſaid to his colleagues, "We ought to have "but one opinion: the good of our country "requires that the reſolution be unanimous:" and he ſigned.

His almoſt continual ſufferings, for the two laſt years of his life, had altered neither his mind nor his diſpoſition; and, to the laſt moment, he retained the uſe of all his faculties. His will, which he made during his reſidence in France, and which has juſt been opened, begins in theſe words: "I Benjamin Frank-"lin, Printer, now Plenipotentiary in France," &c. Thus dying, he did homage to the art of printing; and the ſame ſentiment induced him to inſtruct his grandſon, Benjamin Beach, in this art; who, proud of the leſſons of his illuſtrious maſter, is now a printer in Philadelphia.

He never wrote a work of any great length; Almoſt every thing written by him, on ſubjects of natural philoſophy, conſiſts of letters to Mr Collinſon, of the Royal Society of London, and to ſome other men of learning in Europe.

Europe. They have been tranſlated into French by Mr Barbeau du Bourg; but perhaps a new tranſlation will be demanded. His political works, many of which are unknown in France, conſiſt of letters, or ſhort tracts: but all of them, even thoſe of humour, bear the marks of his obſerving genius, and mild philoſophy. He wrote many for that rank of people who have no opportunity for ſtudy, and whom it is of ſo much conſequence to inſtruct; and he was well ſkilled in reducing truths to uſeful maxims, eaſily retained, and ſometimes to proverbs, or little tales; the ſimple and natural graces of which, acquire a new value, when aſſociated with the name of the author.

The moſt voluminous of his works, is the hiſtory of his own life, which he commenced for his ſon, and for the continuation of which we are indebted to the ardent ſolicitations of M. le Veillard, one of his moſt intimate friends. It employed his leiſure hours during the latter part of his life; but the bad ſtate of his health, and his ſevere pains, which gave him little reſpite, frequently interrupted his work; and the two copies, one of which

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was ſent by him to London, to Dr Price and Mr Vaughan, and the other to M. le Veillard and me, reach no farther than 1757. He ſpeaks of himſelf, as he would have done of another perſon; delineating his thoughts, his actions, and even his errors and faults: and he deſcribes the unfolding of his genius and talents with the ſimplicity of a great man, who knows how to do juſtice to himſelf, and with the teſtimony of a clear conſcience, void of reproach.

In fact, Gentlemen, the whole life of Franklin, his meditations, his labours, have all been directed to public utility; but the grand object he had in view, did not ſhut up his heart againſt private friendſhip: he loved his family and his friends; he was beneficent. The charms of his ſociety were inexpreſſible: he ſpoke little, but he did not refuſe to ſpeak; and his converſation was always intereſting, always inſtructive. In the midſt of his great occupations for the liberty of his country, he had ſome phyſical experiment near him in his cloſet; and the Sciences, which he rather diſcovered than ſtudied, afforded him a continual ſource of pleaſure. His memoirs, Gentlemen, will

will be publiſhed as ſoon as we receive from America what additions he may have made to the manuſcript in our poſſeſſion; and we then intend to give a complete collection of his works.

His name will be celebrated among the different aſſociations of politics and of literature. Innumerable eulogiums will be written or pronounced on him; and you doubtleſs expect, with impatience, that of the virtuous orator, M. de Condorcet, organ of the Academy of Sciences, in which the moſt honourable praiſe will be beſtowed, by him who beſt knows how to appreciate the worth of Franklin. The eulogium to which I allude, will forerun the award of hiſtory, which will place this illuſtrious name amongſt the moſt eminent benefactors of his ſpecies; which will trace the incidents of his life; pourtray the anguiſh of his fellow-citizens, who believed, that in him they loſt a father and a friend; and which, after recounting the honours that America has conſecrated to his memory, will alſo regiſter in its kalendar the ſplendid homage which the National Aſſembly of France has paid to his memory, as an incident, equally honourable

able to the nation, which thus diſplayed its love of virtue; and to the man, who merited this mark of their attention.

To this ſplendid eulogium on the celebrated Franklin, we cannot pretend to make any additions. But, as a ſpecimen of the manner in which Dr Franklin wrote, and in which he thought, we may conclude this account with an epitaph which he prepared for himſelf, when he was a printer at Boſton, and which was intended to be put upon his tombſtone. It was firſt publiſhed in a newſpaper which he then conducted; and it has ſince been reprinted in various periodical publications.

THE BODY OF
BENJAMIN FRANKLIN, PRINTER,
LIKE THE COVER OF AN OLD BOOK,
ITS CONTENTS WORN OUT,
AND STRIPT OF ITS LETTERING AND GILDING,
LIES HERE FOOD FOR THE WORMS:
YET THE WORK SHALL NOT BE LOST;
FOR IT SHALL, AS HE BELIEVED, APPEAR ONCE MORE,
IN A NEW
AND MOST BEAUTIFUL EDITION,
CORRECTED AND REVISED
BY THE *AUTHOR.*

In

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In a former volume, we had occaſion to mention the death of that eminent and amiable phyſician, Sir William Watſon of London. The following account of him, will, we preſume, not be unacceptable to our readers.

Sir William Watſon was born in St John's Street, near Smithfield. His father was a reputable tradeſman in that ſtreet, and died, leaving him very young. When he had attained a proper age, he was ſent to Merchant Taylors' ſchool; and from thence he was bound apprentice to Mr Richardſon, apothecary, in 1730.

In his youth, he had a ſtrong propenſity to the ſtudy of natural hiſtory, and particularly to that of plants. This led him to make frequent excurſions in the morning, ſeveral miles from London; ſo that he became early well acquainted with the loci natales of the indigenous plants of the environs of London; and

during his apprenticeſhip, he gained the honorary premium given annually by the Apothecaries Company to ſuch young men as exhibit a ſuperiority in the knowledge of plants, in thoſe excurſions made by the demonſtrator of the Chelſea garden, and inſtituted for the purpoſe of initiating the apprentices of the Company in a ſcience ſo neceſſary to the profeſſion. This premium conſiſted of a handſomely bound copy of Ray's Synopſis, which was afterwards changed for Hudſon's Flora Anglica.

In 1738, Mr Watſon married, and ſet up in buſineſs for himſelf as an apothecary. His ſkill, his activity, and diligence in his profeſſion, ſoon diſtinguiſhed him among his acquaintance; as did his taſte for natural hiſtory, and his general knowledge of philoſophical ſubjects, among the members of the Royal Society, of which honourable body he was elected a member early in the year 1741, his two firſt communications being printed in the XLIſt Volume of the Philoſophical Tranſactions.

Soon after his admiſſion into the Royal Society, Mr Watſon diſtinguiſhed himſelf as a bo-

a botaniſt; and it is but doing juſtice to his memory, to remark, that, even at this period, he may be conſidered as having, in no ſmall degree, contributed to ſuſtain and revive in England the ſtudy of that ſcience; which, after the death of the two Sherrads, and the decline and retirement of Sir Hans Sloane, had begun to languiſh in this country; and he remained a zealous patron and encourager of it. Naturaliſts, from abroad, brought letters of recommendation to Mr Watſon; and they ever met with thoſe civilities from him, which entitled him to their eſteem, and ſecured him the moſt honourable teſtimonies of reſpect in their writings. He ſhewed the utmoſt attention to Profeſſor Kalm, when he was in London in 1748, by introducing him to the curious gardens, and accompanying him in ſeveral botanical excurſions in the environs. The ſame civilities he manifeſted to the preſent eminent Dr Pallas of Peterſburgh, during his abode in England, from July 1761 to April 1762.

Mr Watſon's earlieſt paper on the ſubject of botany, was an account of the celebrated Haller's Enumeratio Stirpium Helvetiæ,

extracted from the Latin, and illuſtrated with a conſpectus of Haller's method, and with various obſervations. This was printed in the Philoſophical Tranſactions, Vol. XLII.

In the ſame volume, and the ſucceeding one, he excited the attention of the curious in this way, by ſome critical remarks on the Reverend Mr Pickering's paper concerning the ſeeds of muſhrooms, which that gentleman having ſeen a ſhort time before, conſidered as a new diſcovery; whereas Mr Watſon ſhewed that they had been demonſtrated ſeveral years before, by M. Micheli, in his Nova Plantarum Genera. But, what attracted the attention of foreign botaniſts in particular, was his deſcription of a rare and elegant ſpecies of fungus, called, from its form, Geaſter. This was written in Latin, and accompanied with an engraving. In the ſame volume, alſo, he inſerted ſome very inſtructing obſervations on the Cicuta, or common hemlock, occaſioned by the death of two of the Dutch ſoldiers at Waltham-Abbey, which happened in conſequence of their eating this herb inſtead of greens.

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The death of two of the French priſoners in 1746, occaſioned by their eating the roots of the Hemlock dropwort, produced from Mr Watſon a paper, which, in an eminent manner, exemplified his ſkill in the knowledge of plants. It abounds with curious and critical obſervations on that plant and the Cicuta viroſa, with which it had been frequently confounded, as both had alſo been miſtaken for the Water parſnip. It is accompanied with an engraving of the plants by Mr Ehret. Some years after, in 1758, Mr Watſon had occaſion to confirm the fatal effects of the hemlock dropwort, by the death of a perſon at Havent in Hampſhire, from having taken the juice of the root inſtead of that of the Water parſnip.

Beſides theſe, Mr Watſon publiſhed many curious and valuable papers in ſucceeding volumes of the Philoſophical Tranſactions, and other periodical works; of which, the limits of our publication will not permit us to give any account. We may only obſerve, that theſe papers, which were principally on the ſubjects of Botany and Electricity, contributed not a

little to ſupport and to extend his reputation, as an ingenious and induſtrious philoſopher, both at home and abroad. And, among other particulars, he obtained much celebrity from an account of the firſt edition of the Species Plantarum of Linnæus, publiſhed in the Gentleman's Magazine for 1754, which drew from that celebrated naturaliſt a highly complimentary anſwer.

All who were acquainted with the extent of Mr Watſon's knowledge in the practice of phyſic, in natural hiſtory, and experimental philoſophy, were not ſurpriſed to ſee him riſe to the higher line of his profeſſion. This event took place in 1757, previous to which he had been choſen a member of the Royal Academy at Madrid; and he was created Doctor of Phyſic by the Univerſity of Halle, under a diploma, bearing date September 6th of that year. The ſame honour was conferred upon him by that of Wirtemberg. Soon after, he was diſfranchiſed from the Company of Apothecaries, and became a licentiate of the College of Phyſicians in 1759.

This alteration in his circumſtances and proſpects, hazardous as it might appear to

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ſome, occaſioned no diminution in his emoluments, but far the contrary. He had, before this time, removed from Alderſgate ſtreet to Lincoln's Inn Fields, where he lived the remainder of his days; and now found himſelf at greater liberty to purſue his ſtudies, and carry on, at more leiſure, the extenſive correſpondence in which he was engaged, both at home and abroad. He kept up a correſpondence with Dr Huxham for many years. Among his correſpondents abroad, we find the names of Peyſonnel, Clairaut, Boſe, the Abbés Nollet and Allamand; and ſeveral additional names may be ſeen in the letters communicated by him to the Royal Society.

In October 1762, Dr Watſon was choſen one of the Phyſicians to the Foundling Hoſpital; which office he held during the remainder of his life. In 1784, he was choſen a Fellow of the Royal College of Phyſicians, and made one of the Elects. In 1786, Dr Watſon had the honour of knighthood conferred upon him, being one of the body deputed by the College to congratulate his Majeſty on his eſcape from aſſaſſination.

As Sir William Watſon lived in intimacy with the moſt learned and illuſtrious Fellows of the Royal Society, ſo he himſelf was one of its moſt active members, and ever zealous in promoting the ends of that inſtitution. For many years he was a Member of the Council; and, during the life of Sir John Pringle, was elected one of the Vice-Preſidents; which honourable office he continued to fill during the remainder of his life. He was a moſt conſtant attender on the public meetings of the Society, and on the private aſſociations of its members, eſpecially on that formerly held every Thurſday at the Mitre, and now at the Crown and Anchor Tavern in the Strand.

Notwithſtanding the great fatigue to which Sir William Watſon was ſubjected in his profeſſional duty, and his laborious exertions in proſecuting his favourite objects, which were equally beneficial to mankind, and honourable to himſelf, he in general enjoyed a firm and ſound ſtate of health. It was ſometimes interrupted by fits of the gout; but theſe ſeldom confined him to his houſe. In the year 1786, the decline of his health was very viſible to his friends; his ſtrength

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was greatly diminiſhed; and he had loſt much of that vivacity which ſo ſtrongly marked his character. He however continued his utility to the very verge of his grave; and died on the 10th of May 1787, in the perfect exerciſe of his ſenſes, and in the full poſſeſſion of that eſteem and regard of his ſurviving friends, which were the natural reſult of his ſhining abilities, added to the uniform propriety of his conduct.

Few men have inherited from Nature more extenſive talents than Sir William Watſon, and few have made a better uſe of them. The wonderful ſtrength and accuracy of his recollection; his intimate acquaintance with men, manners, and the objects of Science; and the penetrating attention which he beſtowed on the ſcientific topics of the day, always enabled him, in a ſuperior degree, to communicate entertaining information; while the eaſy, free, and engaging manner in which he converſed, rendered him a deſirable aſſociate in every ſociety, and occaſioned his company to be courted and frequented by all contemporary philoſophers.

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In the younger part of his life, he was noticed by thoſe reſpectable characters, Sir Hans Sloane, Doctor Mead, Martin Folkes, Eſq; and others of the ſame rank and eminence, who very early introduced him into the Royal Society; and, in the latter part of his life, he enjoyed the friendſhip of Lord Charles Cavendiſh, the Honourable Mr Cavendiſh, Doctors Heberden and Pitcairn, Sir John Pringle, Sir Joſeph Banks, and Sir George Baker, all peculiarly diſtinguiſhed in the philoſophical world, and eminent for their ardent zeal in promoting the cauſe of Science and Literature.

On the continent, his connections were alſo extenſive and reſpectable. He lived in the freeſt habits of communication with the moſt celebrated foreign literati, and maintained a regular correſpondence with the ingenious philoſophers and naturaliſts of every country where the Sciences were cultivated and held in eſtimation. Were proofs of this aſſertion neceſſary, there could be produced to the world, by his worthy ſon and repreſentative, a very copious collection of letters, written to him by the greateſt philoſophers of his time, which are known to contain much matter of

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curious information, and which, if communicated, would be much more intereſting than many of thoſe inſipid collections with which the time and pockets of the public are continually taxed.

As a phyſician, his humanity, aſſiduity, and caution were eminently conſpicuous; and his exact obſervation of the duties of ſocial politeneſs, muſt ever be remembered with pleaſure by all thoſe who enjoyed the happineſs of his acquaintance. The ſmile of benignity was always diſplayed on his countenance; he invariably continued the general, the ready, and obliging friend of mankind; he was reſpectful to the elder and ſuperior, encouraging to the younger, and pleaſant and eaſy to all thoſe with whom he had any intercourſe. The ſame affability and good humour which adorned his character in public life, were preſerved alſo in the boſom of his life, and endeared him to all thoſe who were more immediately around him. He was ſcarcely ever out of temper; was always benignant and kind to his friends and relations whilſt he lived, and equally ſo when he died, as he diſpoſed, by will, of his large fortune, with that juſtice, judgment, and propriety,

propriety, which gave univerſal ſatisfaction to all who were concerned.

Sir William Watſon had a natural activity both of mind and body, which never allowed him to be indolent in the ſlighteſt degree. He was a moſt exact œconomiſt of his time, and, throughout, an early riſer; being up uſually in Summer at ſix o'clock, and frequently ſooner; and thus ſecuring to himſelf daily two or three uninterrupted hours for ſtudy. In his younger days, thoſe early hours were frequently given to the purpoſes of ſimpling; but in his riper years, they were devoted to ſtudy. He read much, and carefully; and his ardent and unremitting deſire to be acquainted with the progreſs of all thoſe ſciences which were his objects, joined to a vigorous and retentive memory, enabled him to treaſure up a vaſt ſtock of knowledge. What he thus acquired, he freely diſperſed. His mode of conveying information was clear, forcible, and energetic, and juſtified the encomium beſtowed upon him by a learned foreigner *, in a letter

* Mr Michel of Berlin——" Watſonius botanicus et phyſicus eſt clarus et perſpicax, homo itidemque humaniſſimus."

ter to a correſpondent. His liberal and communicative diſpoſition encouraged enquiry; and thoſe who wiſhed for information from him, ſeldom departed without it. In his epiſtolary correſpondence, he was remarkably copious and preciſe; and ſuch as enjoyed the privilege and pleaſure of it, experienced, in his punctuality, another qualification which greatly enhanced its value.

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Among thoſe men deſervedly held in the higheſt eſteem, of whom the medical world has been deprived ſince the publication of our laſt volume, we may mention the late Dr George Cleghorn of Dublin, who died on the 23d of December 1789. The account of this eminent and worthy Profeſſor, which we here preſent to our readers, is chiefly taken from Memoirs of him, written by Dr Lettſome of London, whoſe zeal for the advancement of Medical Science, by the tribute of gratitude to the dead, as well as by honorary inducements calling forth the exertions of the living,

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is no leſs conſpicuous than it is laudable and exemplary.

Dr Cleghorn was born of reputable parents, at Granton, in the pariſh of Cramond, near Edinburgh, on the 18th of December 1716. His father died in 1719, and left a widow and five children. George, who was the youngeſt ſon, received the rudiments of his education in the grammar ſchool of Cramond; and in the year 1728, he was ſent to Edinburgh, to be farther inſtructed in the Latin, Greek, and French, where, to a ſingular proficiency in thoſe languages, he added a conſiderable ſtock of mathematical knowledge.

In the beginning of the year 1731, he reſolved to ſtudy phyſic and ſurgery, and had the happineſs of being placed under the tuition of the late Dr Alexander Monro; a name that will be revered in the Univerſity of Edinburgh as long as Science ſhall be there cheriſhed and cultivated.

This great Profeſſor was eſteemed by all, but moſt by thoſe who were more immediately under his protection. It was the lot of young Cleghorn to live in his houſe; and in one of

of his letters, his pupil appeared to dwell with peculiar pleaſure on this circumſtance, obſerving, that his amiable manners and unremitting activity in promoting the public welfare, endeared him to all his acquaintance, but more particularly to thoſe who lived under his roof, and had daily opportunities of admiring the ſweetneſs of his converſation, and the invariable benignity of his diſpoſition.

For five years he continued to profit by the inſtruction and example of this excellent maſter, viſiting patients in company with him, and aſſiſting at the diſſections in the anatomical theatre; at the ſame time, he attended in their turn the lectures on botany, materia medica, chemiſtry, and the theory and practice of medicine; and by extraordinary diligence, he attracted the notice of all his preceptors.

On Dr Fothergill's arrival from England at the Univerſity of Edinburgh, in the year 1733, Dr Cleghorn was introduced to his acquaintance, and ſoon became his inſeparable companion. Theſe twin pupils ſtudied together the ſame branches of ſcience under the ſame maſters, with equal ardour and ſucceſs. They frequently met to compare the notes they had collected from the Profeſſors, and to communicate their reſpective obſervations.

obſervations. Their moments of relaxation, if that time can be called relaxation which is devoted to ſocial ſtudies, were ſpent in a ſelect ſociety of fellow-ſtudents, of which Fothergill, Ruſſell, and Cuming were aſſociates; a ſociety ſince incorporated under the name of the Royal Medical Society of Edinburgh.

Early in the year 1736, when young Cleghorn had ſcarcely entered into his twentieth year, ſo great had been his progreſs, and ſo high a character had he acquired, that, at the recommendation of Dr St Clair, he was appointed ſurgeon in the 22d regiment of foot, then ſtationed in Minorca, under the command of General St Clair. During a reſidence of thirteen years in that iſland, whatever time could be ſpared from attending the duties of his ſtation, he employed either in inveſtigating the nature of epidemic diſeaſes, or in gratifying the paſſion he had early imbibed for anatomy, frequently diſſecting human bodies, and thoſe of apes, which he procured from Barbary, and comparing their ſtructure with the deſcriptions of Galen and Veſalius. In theſe purſuits, he was much aſſiſted by his correſpondent Dr Fothergill, who, he acknowledges,

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was indefatigable in ſearching the London ſhops for ſuch books as he wanted, and in forwarding them by the beſt and earlieſt opportunities.

In 1749 he left Minorca, and came to Ireland with the 22d regiment; and in Autumn 1750 he went to London, where he paſſed that Winter, and attended the lectures of Dr Smellie and Dr William Hunter. During the ſame Winter alſo, he publiſhed the firſt edition of his Obſervations on the Diſeaſes of Minorca, which were originally written in familiar letters, compoſed in very elegant claſſical Latin, addreſſed to Dr Fothergill. In the publication of this work, he was materially aſſiſted by Dr Fothergill. Of this publication, the following eulogium has been pronounced by a competent judge: "It forms a juſt model "for the imitation of future medical writers: "It not only exhibits an accurate ſtate of the "air, but a minute detail of the vegetable "productions of the iſland; and concludes "with medical obſervations important in every "point of view, and, in ſome inſtances, either "new, or applied in a manner which preceding practitioners had not admitted. It is a

" modern practice, for which we are indebted " to Dr Cleghorn, to recommend aceſcent ve- " getables in low, remittent, and putrid fevers, " and the early and copious exhibition of " bark, which had been interdicted, from miſ- " taken facts deduced from falſe theories."

In 1751, the Doctor ſettled in Dublin; and in imitation of Monro and Hunter, began to give annual courſes of anatomy. A few years after his coming to Dublin, he was admitted into the Univerſity as Lecturer in Anatomy. In the year 1784, the College of Phyſicians there elected him an honorary member; and ſince that time, from Lecturer in Anatomy, he was made Profeſſor; and had likewiſe the honour of being one of the original members of the Iriſh Academy for promoting Arts and Sciences, which is now eſtabliſhed by Royal authority. In 1777, when the Royal Medical Society was eſtabliſhed at Paris, he was nominated a Fellow of it. In one of his epiſtles to Dr Cuming, he modeſtly concluded, " My greateſt " ambition is to be reputed a well-meaning " member of ſociety, who wiſhed to be uſeful " in his ſtation, and who was always of opi- " nion,

" nion, that honeſty is the beſt policy, and " that a good name is better than riches."

In another letter to the ſame friend, written in 1785, he ſays, " In the year 1772, in- " creaſing buſineſs, and declining health, ob- " liged me to commit the chief care of my " annual anatomical courſe, for the inſtruction " of ſtudents in phyſic and ſurgery, to my fa- " vourite pupil Dr Purcell, who has not only " kept it up ever ſince, but improved it, ſo as " to advance its reputation and his own. Yet " I ſtill continue to read a ſhort courſe of " lectures, the deſign of which is to give to " general ſcholars a comprehenſive view of " the animal kingdom, and to point out to " them the conduct of Nature in forming their " various tribes, and fitting their ſeveral or- " gans to their reſpective modes of life. This " affords me an opportunity of exciting in my " hearers an eager deſire for anatomical know- " ledge, by ſhewing them a variety of elegant " preparations, and of raiſing their minds from " the creature to the Creator, whoſe power, " wiſdom, and goodneſs is nowhere diſplayed " to greater advantage, than in the formation " of animals."

About 1774, on the death of his only brother in Scotland, he ſent for his ſurviving family, conſiſting of a widow and nine children, and ſettled them in Dublin under his own eye, that he might have it more in his power to afford them that protection and aſſiſtance which they might ſtand in need of. His elder nephew, William, he educated in the medical profeſſion; but after giving him the beſt education which Europe could afford, and getting him joined with himſelf in the lectureſhip, the Doctor's pleaſing hopes were moſt unfortunately fruſtrated, by the young gentleman's death, which happened about 1784. This event was univerſally and ſincerely regreted by all who knew him, on account of his uncommon abilities and moſt amiable diſpoſition.

Dr Cleghorn, with an acquired independence, devoted his moments of leiſure from the ſeverer duties of his profeſſion, to farming and horticulture.

Parva ſeges ſatis eſt. Satis eſt requieſcere tecto;
Si licet et ſolito membra levare toro.

But his attention to this employment, did not leſſen his care of his relations, who, from a grateful

a grateful affection, reſulting from his exemplary conduct, looked up to him with filial duty, conſidering him not merely as a friend, but as a father.

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In the year 1784, the public were favoured with a volume, under the title of Medical Communications, publiſhed by ſome gentlemen in London diſtinguiſhed for their abilities, who had formed themſelves into a Society for promoting medical knowledge. A ſecond volume, we are told, may ſoon be expected from the ſame Society; and if (which there is but little reaſon to doubt) this volume be equal to the former, it cannot fail of being highly acceptable to the public.

The Medical Society of London, inſtituted in the year 1773, to whom the public are already indebted for two volumes of Memoirs, have, we are told, made ſuch progreſs in preparing a third, that it will ſoon be put to the preſs, and will, we hope, ſupport that credit which they have already juſtly acquired.

The Syſtem of Surgery, in ſix volumes, lately publiſhed by Mr Benjamin Bell, ſurgeon in Edinburgh, of which we gave ſome account in our volume of Commentaries for 1788, has met with ſuch a favourable reception, that a very large impreſſion of it is already ſold off; and a ſecond edition, which is now in the preſs, will ſoon appear.

Mr Bell has alſo been for ſome time engaged in preparing for publication another work, a Treatiſe on the Venereal Diſeaſe. This treatiſe is already in ſuch forwardneſs, that it will ſoon be put to the preſs. It will be comprehended in two volumes; the firſt treating of Gonorrhœa, the ſecond of Syphilis. And notwithſtanding the numerous and valuable publications upon theſe ſubjects which have of late appeared, we have little doubt that it will be found well to merit the attention of medical practitioners.

In the year 1781, Dr Alexander Hamilton, Profeſſor of Midwifery in the Univerſity of Edinburgh, publiſhed a very valuable work, under the title of A Treatiſe of Midwifery, comprehending the whole management of female

male complaints, and the treatment of children in early infancy; to which are added, preſcriptions for women and children, and directions for preparing variety of food and drinks adapted to the circumſtances of lying-in women. Of this work an analyſis was given in a former volume of theſe Commentaries, (Vol. VIII. Dec. I.) A new edition of that publication, with many alterations and additions by the learned and experienced author, is now in the preſs, and will probably be publiſhed in a ſhort time.

A work ſome time ago publiſhed at this place, under the title of A Syſtem of Anatomy and Phyſiology, from Monro, Winſlow, Innes, Hewſon, Haller, and the lateſt Authors; 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. This work has already gone through two editions, and a third is now in the preſs. An ingenious and learned phyſician, who at preſent reſides in Edinburgh, has, we are told, undertaken to ſuperintend the publication of this third edi-

tion, and propoſes, we hear, to improve the work by many important alterations and additions.

Mr Andrew Bell, Engraver to his Royal Highneſs the Prince of Wales for Scotland, whoſe intended Syſtem of Anatomical Plates we have already oftener than once had occaſion to mention, has not yet been able to accompliſh his intention of publiſhing his fourth part, containing plates of the ſkin, brain, &c. But he has by no means relinquiſhed his plan. He has, however, been ſo much engaged in preparing plates for the new edition of the Encyclopædia Britannica, that he has made very little progreſs with his anatomical plates ſince laſt year.

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The ſubject propoſed by the Harveian Society of Edinburgh, as their prize-queſtion for the year 1789, was, An enquiry into the nature and properties of thoſe medical products which are obtained from a combination of ardent ſpirits with acids? But no diſſertation,

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of ſufficient merit to deſerve the prize, was tranſmitted to the Secretaries. Their prize-queſtion for the year 1790, is, An experimental enquiry concerning the nature and properties of the Nicotiana Tabaccum of Linnæus; into the different active conſtituent parts of this vegetable, and their uſe in the cure of diſeaſes? Diſſertations muſt be tranſmitted, under the uſual conditions, to Drs Duncan or Webſter, the Secretaries, by the 1ſt of January 1791. Their prize-queſtion of 1791, is, An experimental enquiry concerning the nature and properties of Camphor? Diſſertations upon this ſubject muſt be tranſmitted to the Secretaries by the 1ſt of January 1792.

The Medical Society of London, beſides the Fothergillian medal, which is given to the author of the beſt eſſay in anſwer to the queſtions propoſed by the Society, annually beſtow two ſilver medals; one on the author of the beſt eſſay read before the Society within the year, written by a Fellow; the ſecond, for the beſt eſſay by any other perſon. Two ſilver medals were accordingly preſented in the year 1788; one to Joſhua Walker, M. D. Phyſician

Phyſician to the General Infirmary at Leeds, and C. M. S. for his memoir on the Atrophia lactantium, an endemial diſeaſe, prevalent in and about Leeds in Yorkſhire; the other to Mr John Sherwen of Enfield, Surgeon, and C. M. S. for his hiſtory of the Schirrho-Contracted Rectum, and memoirs on the effects of Emetic Tartar, and Arſenic by abſorption.

The ſilver medals for the year 1789, were adjudged, one to Thomas Percival, M. D. of Mancheſter, for his papers containing experiments on the ſolvent powers of Camphor, and other miſcellaneous communications; and Medical cautions and remarks, particularly relative to pulmonary diſorders: the other to Mr Henry Fearon, ſurgeon, for his paper, intituled, Obſervations on Cancers.

The Preſident and Council of the Royal Society of London, adjudged, for the year 1789, the medal on Sir Godfrey Copley's donation, to Mr William Morgan, for his two papers on the Values of Reverſions and Survivorſhips, printed in the Philoſophical Tranſactions.

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The Royal Society of Medicine, of Paris, have propoſed the following queſtion, as the ſubject for a prize of ſix hundred livres.

Exiſte-t-il des inflammations lentes ou chroniques dans les ſens, ou elles ſont admiſées par Stohl, ou par quelques modernes? Si elles exiſtent, quels en ſont les ſymptomes, et quel en doit être le traitement?

Memoirs, competing for this prize, muſt be tranſmitted to M. Vicq. d'Azyr, Secretary to the Society, by the 1ſt of December 1790.

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About the end of December 1789, Dr William Cullen, after having taught medicine at Edinburgh for many years, with a degree of reputation, which not only did honour to himſelf, but alſo to the Univerſity of which he was a member, being now arrived at his ſeventy-ſeventh year, and finding himſelf unable, from age and infirmities, any longer to diſcharge the duties of his office, ſent a letter to the Patrons of the Univerſity of Edinburgh,

burgh, reſigning into their hands his Profeſſorſhip of the Practice of Medicine.

On this event, Dr Cullen received many honourable teſtimonies of regard from different ſocieties in Edinburgh, who had the beſt opportunities of being acquainted with his merit.

The Lord Provoſt, Magiſtrates, and Town-Council, preſented him, in the name of the Community, with an elegant piece of ſilver-plate, on which was the following inſcription:

GULIELMO CULLEN, M. D.
MEDICO REGIO APUD SCOTOS PRIMARIO,
PLURIMISQUE ALIIS TITULIS CLARO,
MULTIPLICIS DISCIPLINÆ MEDICÆ
PROFESSORI MERITISSIMO,
PER TOTAM TERRARUM ORBEM CELEBERRIMO,
SCHOLÆ MEDICÆ IN ACADEMIA EDINBURGENSI
PER ANNOS XXXIII. DECORI ET COLUMNI,
HANC PATERAM,
UT SUÆ ERGA ILLUM JAM EMERITUM EXISTIMATIONIS
ALIQUID SUPERESSET MONUMENTI,
CIVITAS EDINBURGENA GRATA
DONAVIT. M.DCC.XC.

At

At a general meeting of the pupils of Dr Cullen, reſident in Edinburgh, held in the Hall of the Medical Society, it was unanimouſly reſolved, that a ſubſcription ſhould be ſet on foot, for erecting ſome permanent monument of grateful reſpect to his memory, in the New College. And the four annual Preſidents of the Royal Medical Society for the time being, together with Doctors Joſeph Black, James Gregory, James Hamilton, Andrew Duncan, and Charles Stuart, from the College of Phyſicians; and Meſſrs Alexander Wood and Benjamin Bell, from the College of Surgeons of Edinburgh; were appointed a committee for receiving ſubſcriptions, and ſuperintending the execution of the work.

Addreſſes, expreſſive of the high ſenſe they entertained of his abilities and ſervices, were ſent to him by the Senatus Academicus of the Univerſity of Edinburgh, by the Royal Medical Society, the Royal Phyſical Society, and many others. Without giving a detail of theſe at full length, which would lead to many repetitions, we ſhall here preſent our readers, by way of ſpecimen, with the addreſs of the American Phyſical Society, who may perhaps be

be conſidered as leſs intimately connected with Edinburgh than moſt of the others, as conſiſting principally of gentlemen who are no longer Britiſh ſubjects.

To WILLIAM CULLEN, M. D. Profeſſor of the Practice of Phyſic in the Univerſity of Edinburgh, Firſt Phyſician to his Majeſty for Scotland, Fellow of the Royal College of Phyſicians of Edinburgh, and of the Royal Societies of London and Edinburgh, &c. &c.

SIR,

We the American Phyſical Society of Edinburgh, taught, from our earlieſt infancy, by the uniform example of your numerous pupils, who have always returned from this Univerſity impreſſed with more than a filial reſpect for your worth and merits, and who now fill many of the moſt important ſtations, both civil and medical, in different quarters of the globe, to venerate the illuſtrious name of Cullen; and now, convinced by our perſonal attendance on your highly inſtructive lectures, that your fame and abilities have been by no means

means exaggerated, beg leave, in the hour of your much lamented retirement and indiſpoſition, to approach you with our ſincereſt condolence for the cauſes which have occaſioned them.

Entire ſtrangers to adulation, which would be equally diſguſtful to you, and degrading to ourſelves, we cannot omit this opportunity of thanking Divine Providence, for having raiſed up, in our days, a genius, which, by its native acuteneſs and vigour, was admirably calculated for diſſipating that perplexity, darkneſs, and error, which, at your entrance on life, overſpread every department of Medicine, and cramped the ardour of men in the proſecution of it.

We muſt congratulate ourſelves, and all the lovers of the healing art, that your life, which has been, with unremitting aſſiduity, devoted to the promotion of the intereſts of mankind, has been fortunately prolonged till you have completely emancipated the minds of the Medical world from the ſhackles of abſurd theory; excited by your own example a boldneſs and freedom of inveſtigation, unknown before; formed an indiſſoluble union between Philoſophy

phy and Medicine; and ſeen, with your own eyes, the happy fruits of your labours ſpread as wide as ſcience and civilization extend.

Finally, we expreſs our moſt cordial wiſhes, that the evening of your days may be crowned with as great an exemption from pain and languor, as an advanced ſtate of life admits of; and with all the tranquillity of mind, which a conſciouſneſs of diffuſive benevolence to men, and active worth, inſpires. We are, by order, and in name of the Society,

SIR,

With the higheſt reſpect and veneration,

Your moſt obedient humble Servants,

PETER WARD,
CHARLES BANKHEAD,
WILLIAM CUNINGHAM,
JOHN MUIR,
} Preſidents.

American Phyſical Society's Hall,
Surgeons Square, Jan 13. 1790.

Dr Cullen did not long ſurvive his reſignation of the Profeſſorſhip. He continued to linger, for ſome weeks, under the diſeaſe which incapacitated him from continuing the duties of his office; and at laſt fell a victim to it.

it, on the 5th of February 1790, in the 77th year of his age.

The death of Dr Cullen was ſoon followed by that of his intimate and learned friend, Dr Adam Smith. Though Dr Smith was neither a medical practitioner, nor diſtinguiſhed as a medical philoſopher; and although his publications on the Theory of Moral Sentiments, and on the Wealth of Nations, which have extended his fame over all Europe, may be conſidered as in a line entirely different from the objects of our work, yet we may juſtly obſerve, that, by his death, Science in general, at Edinburgh, ſuffered an irreparable loſs. He died in the month of July 1790, and in the 67th year of his age.

Dr James Baird, Senior Fellow of the Royal College of Phyſicians of Edinburgh, a worthy and amiable man, died in the Summer of the year 1790, in an advanced age.

Mr William Hamilton, Profeſſor of Anatomy in the Univerſity of Glaſgow, died in that city in Spring 1790. It is not many years

ſince Mr Hamilton was appointed to the Profeſſorſhip, as ſucceſſor to his father; and his riſing abilities gave his friends reaſon to entertain the moſt flattering expectations from his future exertions. But their ſanguine hopes were blaſted by his death, which happened at an early period of life.

Dr John Aitken, Fellow of the Royal College of Surgeons of Edinburgh, and well known to the medical world as the author of ſeveral works, particularly in ſurgery, and as an indefatigable teacher of Anatomy, Midwifery, and other branches of the healing art, died on the 22d of September 1790.

Dr Henry Cullen, Fellow of the Royal College of Phyſicians in Edinburgh, and Phyſician to the Royal Infirmary there, died on the 11th of October 1790. Dr Henry Cullen was the ſon of Dr William Cullen, whoſe death we have mentioned above, and was the only one of his numerous family who followed the profeſſion of medicine.

On

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On the reſignation of Dr William Cullen, the Lord Provoſt, Magiſtrates, and Town Council of the city of Edinburgh, appointed Dr James Gregory to be Profeſſor of the Practice of Medicine in the Univerſity, in the room of Dr Cullen; and they appointed Dr Andrew Duncan to be Profeſſor of the Inſtitutions, in the room of Dr Gregory. This new arrangement met with the entire approbation of Dr Cullen; and, indeed, the intentions of the Patrons of the Univerſity were well known to him, before his reſignation was given in.

Dr Joſeph Black, Profeſſor of Chemiſtry in the Univerſity of Edinburgh, and preſent Preſident of the Royal College of Phyſicians, has been appointed by the King, Firſt Phyſician to his Majeſty for Scotland,; that office becoming vacant by the death of Dr William Cullen.

Mr James Towers has been appointed, by the Patrons of the Univerſity of Glaſgow, to be Lecturer in Midwifery there. Mr Towers is

the firſt who has held this office, the appointment being a new one.

Dr James Jeffray has been appointed by the King, to be Profeſſor of Anatomy in the Univerſity of Glaſgow, that office being vacant by the death of Mr William Hamilton.

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During the year 1790, the following gentlemen have been admitted Members of the Royal Society of Edinburgh.

July 25. 1790.

HONORARY MEMBER:

His Excellency Baron Hertzberg, Miniſter for Foreign Affairs, &c. at Berlin.

ORDINARY MEMBERS:

Francis Garden, Eſq; of Gardenſton, one of the Senators of the College of Juſtice in Scotland.

William Farquharſon, M. D., Edinburgh.

William Tait, Eſq; Advocate, Edinburgh.

NON-

NON-RESIDENT MEMBERS:

Sir William Jones, Baronet, Calcutta.

Joſeph Ewart, Eſq; Miniſter Plenipotentiary at Berlin.

Mr Hugh Cleghorn, Profeſſor of Civil Hiſtory, St Andrews.

Jo. Ben. Jachman, M. D., of Koningſberg in Pruſſia.

M. de la Grange, of the Royal Academy of Sciences, Berlin.

Chr. Girtanner, M. D., of Gottingen.

June 28. 1790.

NON-RESIDENTS:

Francis Kinloch, Eſq; of Gilmerton.

Colonel Norman M'Leod, Eſq; of M'Leod.

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Dr William Roxburgh, of Madras, and Dr George Wilſon, of Peterſburgh in Virginia, have been elected Fellows of the Royal College of Phyſicians in Edinburgh; the one on the 13th of February, the other on the 2d of November 1790.

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Dr George Cleghorn, of whom we have already given ſome account, was appointed Anatomiſt to the College of Dublin in September 1753, on the reſignation of Mr Wittingham. He was afterwards appointed to the Lecturerſhip of Anatomy on the 14th of July 1761, in the room of Dr Robinſon. And he was finally, in the year 1785, raiſed to the rank of Profeſſor of Anatomy in that Univerſity, in conſequence of an act of the Legiſlature for eſtabliſhing a complete ſchool of phyſic in Ireland. On his death, this laſt office, now including the two former ones, became vacant. This vacancy was declared in the public newſpapers, as the act of Parliament directs; and the 16th of April laſt was appointed for the election of a new Profeſſor. On that occaſion, the Provoſt, and Board of Senior Fellows, in whom the power of election is veſted, made choice of Dr James Cleghorn, nephew to the former Profeſſor, who had for ſeveral years aſſiſted his uncle, particularly in his private courſes.

State

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State of the Thermometer, Barometer, and Rain, during the year 1789, according to obſervations made at the apartments of the Royal Society of London.

	Thermometer.			Barometer.			Rain.
	High. Deg.	Low. Deg.	Med. Deg.	Higheſt Inches.	Loweſt Inches.	Medium Inches.	Inches.
Jan.	53.0	17.5	35.7	30.75	28.58	29.27	1.345
Feb.	51.0	34	42.5	30.34	28.65	29.70	1.605
Mar.	46.5	26	36.6	30.13	28.94	29.72	1.549
April	62	29	47.2	30.18	29.10	29.77	0.957
May	66	45	56.9	30.27	29.57	29.88	1.103
June	72	50	58.5	30.23	29.40	29.84	3.244
July	71	52	61.9	30.09	29.54	29.85	2.467
Aug.	74.5	54	63.7	30.33	29.70	30.06	1.864
Sept.	74	45	57.3	30.38	29.30	29.88	2.155
Oct.	59	36	49.1	30.29	29.00	29.52	3.253
Nov.	55	28.5	41.0	30.46	28.72	29.70	1.244
Dec.	53	33	43.5	30.56	28.88	29.86	1.190
Whole Year.			49.5			29.79	21.976

* * * *

State of the Thermometer, Barometer, and Rain, from the 1ſt of July 1789, to the 1ſt of July 1790, according to obſervations made about a mile from the city of Edinburgh.

	Thermometer.			Barometer.			Rain.
	High.	Low.	Med.	Higheſt.	Loweſt.	Medium	
1789.							
July	75	53	66	29.75	29.3	29.48	2.63
Aug.	80	60	69	30.11	29.35	30.07	1.63
Sep.	69	52	63	29.91	29.1	29.55	2.04
Oct.	57	50	53	30.07	28.5	29.41	3.37
Nov.	52	38	45	30.2	28.67	29.52	5.23
Dec.	52	37	46	30.15	28.4	29.4	4.00
1790.							
Jan.	50	30	42	30.25	28.48	29.69	1.96
Feb.	54	38	47	30.12	29.4	29.77	1.75
Mar.	55	44	49	30.87	27.21	29.92	0.85
Apr.	55	38	46	30.25	29.25	29.04	2.53
May	61	42	54	30.21	29.1	29.68	2.49
June	73	51	60	30.02	29.1	29.67	2.9
For 12 months	80	30	53	30.37	27.21	29.6	31.38

In

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In our laſt volume we had occaſion to obſerve, that the extraordinary dryneſs of the year 1788, had attracted, in a remarkable degree, the attention even of philoſophers. The rain which fell that year at Edinburgh, as may be more particularly ſeen from examining our laſt volume, amounted only to a little more than twenty inches; while that at London did not ariſe to fifteen inches. But, at Edinburgh at leaſt, in 1789, Nature has done more than repaid her debt; for although, in that year, the rain in London was ſomewhat leſs than twenty-two inches, what fell at Edinburgh amounted to very near thirty; and during the twelve months included between the 1ſt of July 1789, and 1ſt of July 1790, the quantity of rain, as appears from the preceding regiſter, even exceeded thirty-one inches.

SECT.

SECT. IV.

List of New Books.

THE philoſophy of natural hiſtory. By William Smellie, Member of the Antiquarian and Royal Societies of Edinburgh. 4to, Edinburgh.

Tranſactions of the Royal Society of Edinburgh. Vol. II. 4to, Edinburgh.

An inquiry into the ſmall-pox, medical and political: Wherein a ſucceſsful method of treating that diſeaſe is propoſed; the cauſe of pits explained; and the method of their prevention pointed out. With an appendix, repreſenting the preſent ſtate of the ſmall-pox. By

By Robert Walker, M. D., Fellow of the Royal College of Surgeons, Edinburgh. 8vo, Edinburgh.

Elements of natural hiſtory and chemiſtry. By M. Fourcroy, Doctor of the Faculty of Medicine at Paris, of the Royal Academy of Sciences, &c. Tranſlated from the Paris edition 1789, being the third, in 5 volumes 8vo; with an alphabetical, comparative view of the ancient and modern names of chemical ſubſtances. In 3 vols. 8vo, Edinburgh.

Elements of chemiſtry, in a new ſyſtematic order, containing all the modern diſcoveries; illuſtrated with thirteen copperplates. By M. Lavoiſier, Member of the Academy of Sciences, &c. Tranſlated from the French, by Robert Kerr, F. R. & A. SS. Ed., Member of the Royal College of Surgeons, and Surgeon to the Orphan Hoſpital, Edinburgh. 8vo, Edinburgh.

Eſſay on the new method of bleaching, by means of oxygenated muriatic acid; with an account of the nature, preparation, and properties of that acid; and its application to ſeveral uſeful purpoſes in arts. From the French of M. Berthollet: With figures of all the neceſſary apparatus, and explanatory notes. By Robert

Robert Kerr, F. R. & A. SS. Ed. &c. 12mo, Edinburgh.

The anatomy of the abſorbing veſſels of the human body. The ſecond edition, conſiderably enlarged, and illuſtrated with additional plates. By William Cruikſhank. 4to, London.

Hortus Kewenſis; or, A catalogue of the plants cultivated in the Royal Botanic Garden at Kew. By William Aiton, Gardener to his Majeſty. In 3 vols. 8vo, London.

Medical inquiries and obſervations. To which is added, An appendix, containing obſervations on the duties of a phyſician, and the methods of improving medicine. By Benjamin Ruſh, M. D., Profeſſor of Chemiſtry in the Univerſity of Pennſylvania. The ſecond edition. 8vo, London.

A diſſertation on the proceſs of nature in filling up of cavities, healing of wounds, and reſtoring parts which have been deſtroyed, in the human body. Which obtained the prize-medal given by the Lyceum Medicum Londinenſe for the year 1789, and was ordered to be printed for the uſe of the Society. By James

James Moore, Member of the Surgeons Company of London. 4to, London.

An account of the nature, properties, and medicinal uſes of the mineral water at Nottington, near Weymouth, Dorſet. By J. Crane, Phyſician at Dorcheſter. With a view of its well in its preſent ſtate. 8vo, London.

Speculations on the mode and appearances of impregnation in the human female, with an examination of the preſent theories on generation. By a Phyſician. 8vo, Edinburgh.

An account of the various ſyſtems of medicine, from the days of Hippocrates to the preſent time; collected from the beſt Latin, French, and Engliſh authors, particularly from the works of John Browne, M. D. By Francis Carter, M. D. 2 vols. 8vo, London.

A treatiſe on fevers; wherein their cauſes are exhibited in a new point of view; by a proper attention to which, their contagion (accruing from a contaminated air) will be prevented; and a variety of caſes, as, putrid ſore-throats, inflammations, fluxes, influenzas, conſumptions,

conſumptions, as well as low nervous fevers, that terribly affect the ſpirits, may be cured with eaſe. 8vo, London.

A treatiſe on the herb tobacco; pointing out its deleterious, pernicious quality, and its fatal effects upon the human conſtitution, by the great variety of diſorders it occaſions; not only affecting three of the five ſenſes to a great degree, but impairing the faculties of the mind, and even frequently cauſing premature death. By a gentleman of Cambridge. 8vo, London.

A new compendious ſyſtem on ſeveral diſeaſes incident to cattle; wherein the diſorders are orderly deſcribed, and the ſymptoms of each diſeaſe obviouſly laid down; together with a complete number of medicines for every ſtage and ſymptom thereof. There is alſo annexed, An eſſay on the diſeaſes incident to calves, and their curative indications. In the courſe of this work, will be found ſeveral obſervations on the diſeaſes peculiar to horſes, and their proper method of treatment. By Thomas Topham. 8vo, London.

A tale of truth, addreſſed to Arthritics; containing

containing a ſecure, cheap, and certain remedy for the gout. 8vo, London.

Medical eſſays: 1. An eſſay on the principles and manners of the medical profeſſion. 2. An enquiry into the merits of ſolvents for the ſtone; with additions. 8vo, London.

An eſſay on the eriſipelatous ſore throat; to which is added, an account of a caſe of hemiplegia. By Thomas Reeve, ſurgeon, Boteſdale. 8vo, London.

The firſt principles of chemiſtry. By William Nicholſon. 8vo, London.

A deſcriptive catalogue of upwards of eleven hundred ſpecies and varieties of herbaceous or perennial plants, divided into ſix columns; exhibiting, at one view, the names, magnitude, ſoil and ſituation, time of flowering, colour of the flowers, and native country of each ſpecies. To which is added, A liſt of hardy ferns, for the decoration of northern borders, and the moſt ornamental annuals. By John Graefer, botanic gardener to the King of Naples. 8vo, London.

A new diſcovered fact, of a relative nature,

in

in the venereal poiſon. By Jeſſe Foot, ſurgeon. 8vo, London.

Philoſophical Tranſactions of the Royal Society of London, Vol. LXXIX. Part II. 4to, London.

Tranſactions of the Iriſh Academy, Vol. II. 4to, Dublin.

Eſſays, medical, philoſophical, and experimental. By T. Percival, M. D. F. R. S. &c. a new edition, enlarged and improved. 2 vols. 8vo, London.

A ſhort account of the method of treating ſcrofula. By James Rymer. 8vo, London.

Obſervations on animal life, and apparent death. By J. Franks. 8vo, London.

Letter to Sir John Sinclair, on the virtues of the muriatic acid in putrid fevers. By Sir William Fordyce, M. D. 8vo, London.

Thoughts, phyſiological, pathological, and practical. By A. Swainſton, M. D. 8vo, London.

Experiments on the Horley Green Spaw. By T. Garnet, M. D. 8vo, London.

Philoſophical inquiry into the nature and properties of common water. By P. Lewis, M. D. 8vo, London.

Thoughts

Thoughts on the means of preſerving the health of the poor. By the Rev. Sir W. Clerk, Bart. 8vo, London.

A plain and rational account of the effects of animal magnetiſm. 8vo, London.

Obſervations on gangrenes and mortifications. By C. White, F. R. S. 8vo, London.

A treatiſe on putrid, inteſtinal, remitting fevers; in which the laws of the Sol-Lunar influence being inveſtigated and defined, are applied, to explain the nature of the various forms, criſes, and other phænomena of theſe fevers. By Francis Balfour, M. D. 8vo, Edinburgh.

An inaugural diſſertation on the phænomena, cauſes, and effects of fermentation, ſubmitted to examination for the degree of Doctor of Medicine. 8vo, Philadelphia.

A diſſertation on the mixed fever, delivered at a public examination for the degree of Bachelor in Medicine, at Cambridge in America. By William Pearſon. 8vo, Boſton.

A diſſertation on the puerperal fever, delivered at a public examination for the degree of Bachelor in Medicine, at Cambridge in

America. By Peter de Sales la Terriere. 8vo, Boſton.

Memoires de l'Academie Royale des Sciences, années 1786-87. 4to, Taurin.

Notice des inſectes de la France reputés venimeux, tirée des écrits des Naturaliſtes, des Medecins, et de l'obſervation. Par M. Amoreux-fils, Docteur en Medecine de pluſieurs Academies et Sociétés. 8vo, Paris.

Abrégé chronologique pour ſervir à l'hiſtoire de la phyſique. Par M. de Loys. Tom. 3. 8vo, Straſburg.

Memoire qui a remporté le prix en 1789, au jugement de la Soc. Roy. de Med. de Paris, ſur la queſtion propoſée en ces termes: Determiner, par l'obſervations, quelles ſont les maladies qui reſultent des emanations des eaux ſtagnantes. Par M. Beaumés, M. D., &c. 8vo, Paris.

Apologie du jeune. 8vo, Paris.

Vœux d'un patriote ſur la medecine. Par M. Thiery, Docteur-regent de la Faculté de Medecine. 8vo, Paris.

Adreſſe à Noſſeigneurs de l'Aſſemblée Nationale ſur la neceſſité et les moyens de perfectionner

fectionner l'enſeignement de la medecine. Par M. Jadelot, Prof. de Med. 8vo, Paris.

Memoire qui à remporté le prix au jugement de l'Académie de Nancy, 8. Mai 1789. Par M. Bouffey, M. D. 8vo, Paris.

Lettre de M. Crell à M. de la Methrie ſur un nouveau demi-metal. 8vo, Paris.

Sur le phoſphore, dans lequel il eſt traité de ſa combinaiſon avec le ſouffre. Par M. Pelletier. 8vo, Paris.

Sur un maniére de décompoſer l'eau en air inflammable, et en air vital. Par Meſſrs Van Trooſtwyk & Dieman. 8vo, Paris.

Des convulſions dans l'enfance, &c. Par M. Baumés, M. D., &c. 8vo, Paris.

Cours élémentaire de matiére medicale, &c. Par M. Deſbois de Rochefort, M. D. 2 tom. 8vo, Paris.

Phyſikaliſch-chemiſche verſuche und beobachtungen, &c.; *i. e.* Phyſico-chemical eſſays and obſervations. By Sig. Fred. Hermbſtadt. 8vo, Berlin.

Ueber den bildungſtrich, &c.; *i. e.* On the formative propenſity. By Prof. J. F. Blumenbach. 8vo, Gottingen.

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IN-

I N D E X.

A

Page.

ÆJEMELÆUS, Chriſt. diſſertation on the Toxicaria - - - - - 36
Æpinus, M. letters on electrical phænomena . 294
Æther, vitriolic, obſervations on - - 150
Air an all-vivifying element - - 241
Aitken, Dr John, death of - - 498
Alexander Edward, caſe of angina pectoris - 373
American Phyſical Society, addreſs to Dr Cullen - 494
Anatomy, ſyſtem of, new edition, - - 487
Angina pectoris, caſe of - - 373
Anguſtura bark, account of - - 441
Anguſturæ cortex, remarks on - - 184
Anomalous caſe, hiſtory of - - 367
Aorta deſcendens, hiſtory of an aneuriſm of - 386
Arſenic, tartariſed, externally applied, effects of 220
Arſenicum tartariſatum, how formed - - 219
Aſcarides, how cured in Abyſſinia - - 185
Atrophia lactantium, remarks on - - 194

B

Baillie, Matthew, M. D. account of a particular change in the human ovarium - - 271
Baird, Dr James, death of - - 497
Balfour, Francis, M. D. obſervations on the putrid remitting fever - - - 261
Balſam-tree, account of - - - 177
Bankſia Abyſſinica, account of - - 184
Bell, Mr Ben. ſyſtem of ſurgery, a new edition - 486
———— treatiſe on the venereal diſeaſe - 486
Bell, Mr A. anatomical plates - - 488
Black, Dr Joſeph, promotion - - - 499
Blood-letting, topical, its uſe in cancer - 227
Boa Upas, obſervations on - - 38
Bones contained in an ovarium - - 101
Bouſſelin, M. obſervations on necroſis - - 134
Bouza of the Abyſſinians, account of - - 189
Bronchocele, uſe of camphor in - - 380

Page.

Bruce, M. ſelect ſpecimens of natural hiſtory - 173
Brucea antidyſenterica, account of - - 182
Butt, Mr J. account of the cortex Anguſturæ - 441

C

Camphor, its uſe in bronchocele - - 380
Cancers, obſervations on - - - 225
Carrere, M. on the medical properties of lizards - 121
Catarrh, epidemical in Grenada, account of - 325
Caryophylus aromaticus, obſervations on - 47
Chiſholm, C. obſervations on influenza - - 325
Chriſtie, Thomas, obſervations on pemphigus - 95
Cleghorn, Dr George, account of - - 477
Cleghorn, Dr James, appointment of, in the univerſity of Dublin - - - 502
Cleghorn, James, M. D. hiſtory of an ovarium, with teeth, hair, and bones - - 101
Clarke, Joſeph, M. D. obſervations on the puerperal fever - - - - 299
Cloves, account of - - - 47
College of Edinburgh, account of rebuilding - 410
College of Phyſicians of Edinburgh, new members of - - - - 501
Concannen, Thomas, M. D. hiſtory of an aneuriſm of the aorta deſcendens - - 386
Copland, Peter, account of the external uſe of camphor in bronchocele - - 380
Cullen, Dr William, account of his reſignation - 493
Cullen, Dr Henry, death of - - 498
Cuſſo flowers, account of - - - 184
Cyperus papyrus, obſervations on - - 175

D

Davidſon, Samuel, hiſtory of an intermittent affecting the right temple - - - 391
Dickſon, Stephen, M. D., obſervations on pemphigus 86
Dog, effects of domeſtication on - - - 255
Dropſical affection in the ſcrotum, ſingular - 399
Dry atmoſphere, its influence on the human body 296
Dublin Lying-in Hoſpital, account of the puerperal fever in - - - - 299

Page.

Duncan, Dr Andrew, appointment in the Univerſity of Edinburgh - - - - 499

E

Edinburgh College, rebuilding of - 410
Edinburgh, City of, compliments to Dr Cullen on his reſignation - - - 492
Ekman, Jac., diſſertation on oſteomalacia - 16
Electrical phænomena, account of - 296
Electricity recommended in gout - - 450
Emetic tartar, obſervations on its external application - - - - - 209
Epidemical catarrh in Grenada, account of - 325
Epitaph on Dr Franklin - - - 464
Eugenia caryophyllata, deſcription of - 47

F

Fearon, Henry, obſervations on cancers - 225
Fever powder, Dr James's, analyſis of - 444
Fothergill, Anthony, M. D., obſervations on the gummi rubrum aſtringens Gambienſe - - 201
Franklin, Dr, account of - - 451

G

Girtanner, Dr, obſervations on irritability - 424
Glandular indurations cured by the external uſe of camphor - - - - 380
Gout cured by the ſtroke of the gymnotus - 447
Gout, cauſe of - - - 63
Gregory, Dr James, promotion - - 499
Grenada, account of the influenza raging there 325
Guatimala, lizards of, their medical properties - 121
Gum-myrrh, obſervations on the tree furniſhing it - 180
Guthrie, Mathew, M. D., diſſertation on the climate of Ruſſia - - - 282
Gummi rubrum Gambienſe, obſervations on - 201
Gymnotus, its influence in curing gout - 447

Page.

H

Hamilton, Mr William, death of - 497
Hamilton, Dr Alexander, treatiſe on midwifery, new edition - - - 486
Harveian Society of Edinburgh, prize-queſtions 489
Hapel, M. de, obſervations on ſaliva - 111
Haſt. Herm. on the caryophylus aromaticus - 46
Hemorrhage, from amputation of the penis, ſtopped by ſlight compreſſion - - 364
Honours paid to Dr Cullen on his reſignation - 492
Horſe, account of his ſaliva - - 111

I

Imitation, principle of, obſervations on - - 256
Infancy, obſervations on - - 245
Influenza, obſervations on - - 325
Inſtincts, different kinds of - - 242
Intermittent affecting the right temple - - 391
Inteſtinal remitting fever, obſervations on - 262
Inteſtinal canal, remarkable affection of - 355
Irritability, obſervations on - - - 421
Irving, Thomas, M. D., account of a ſingular fracture of the cranium - - - 363

J

James's powder, analyſis of - - 443
Jeffray, Dr James, appointment in the Univerſity of Glaſgow - - - - 500

K

Kino, Gum, obſervations on - 201

L

Lavoiſier, M. de, obſervations on Æther - 154
Lizards of Guatimala, medical properties of - 121

M

Maxwell, Peter, hiſtory of a ſingular dropſical affection of the ſcrotum - - 399
Medical communications, ſecond volume - 485
——— memoirs, third volume - - 485

Monro,

Page.
Monro, Dr Alexander, new anatomical theatre - 411
Morgan, Mr William, prize-medal from the Royal Society of London - - - 490
Myriſtica moſchata, account of - - 54

N

Natural hiſtory, philoſophy of - - 236
Natural hiſtory, ſelect ſpecimens of - - 173
Necroſis, obſervations on - - 134
Nitrous æther, obſervations on - - 151
Nouriſhment, ſuperfluous, cauſe of gout - 63
Nutmeg tree, account of - - - 54

O

Oſteomalacia, diſſertation on - - 16
Ovarium containing teeth, hair, and bones, hiſtory of 101
Ovarium, account of a particular change in its ſtructure - - - - 271

P

Papyrus, account of - - - 174
Pearſon, Dr, analyſis of Dr James's fever powder 443
Pemphigus, obſervations on - - 86
Phyteuma, its efficacy in ſyphilis - 445
Pits in ſmall-pox, method of prevention - 167
Puerperal fever, obſervations on - 299

R

Radloff, Fred., on the myriſtica moſchata - 54
Remitting fever, obſervations on - - 262
Royal Society of London, prize-medal - 490
Royal Society of Medicine of Paris, prize-queſtion 491
Roval Society of Edinburgh, new members of - 500
Ruſſia, diſſertation on the climate of - 282

S

Saliva, obſervations on - - 111
Scirrhous teſticle cured by topical bleeding - 233
Scrotum, ſingular dropſical affection of - 399
Segerſtedt, Alb., on the cauſe of gout - 63

Sherwen,

Page.
Sherwen, J., obſervations on tartar emetic and arſenic - - - - 209
Small-pox, enquiry into - - - - 157
Smellie, William, philoſophy of natural hiſtory - 236
Smith, Dr Adam, death of - - 497
Sol-lunar influence, account of - - 262
Solutio arſenici ſucceſsfully employed in angina pectoris - - - - 373
Syphilis cured by a ſpecies of phyteuma - 445

T

Tartar emetic externally applied, effects of - 209
Tartariſed antimony, obſervations on - 209
Teff of the Abyſſinians, account of - - 188
Temple, right, affected with an intermittent - 391
Topical bleeding curing a ſcirrhous teſticle - 233
Torporific eel, its influence in curing gout - 447
Towers, Dr James, appointment in the Univerſity of Glaſgow - - - - 499
Toxicaria Macaſſarienſis, diſſertation on - 36
Transformation of animals, obſervations on - 249
Tumours removed by cicuta and Peruvian bark - 397

V

Vitriolic æther, obſervations on - - 151

W

Walker, Joſhua, M. D., remarks on the atrophia lactantium - - - - 193
Walker, Robert, M. D., enquiry into the ſmall-pox 157
Watſon, Sir William, account of - 465
Weather, regiſter of, at London - 503
———— at Edinburgh - 504
Williſon, Andrew, M. D., account of a remarkable affection of the inteſtinal canal - - 355
Wooginoos, account of - - - 182

FINIS.





