Surgical and physiological essays. Part III. / By John Abernethy, F.R.S. Assistant surgeon to St. Bartholomew's hospital; and lecturer in anatomy and surgery.

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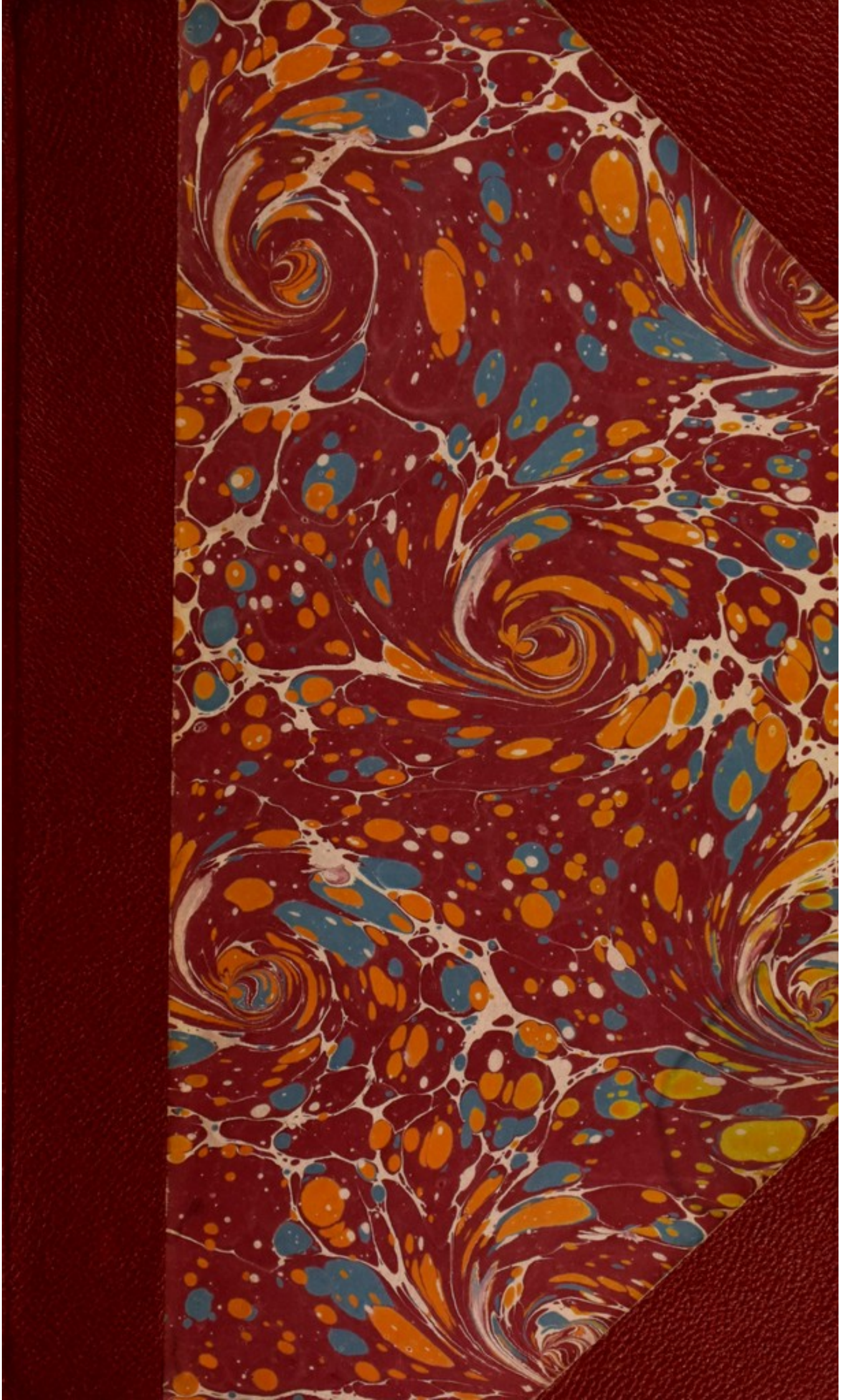

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SURGICAL

AND

PHYSIOLOGICAL

ESSAYS.

BY

JOHN ABERNETHY, F.R.S.

ASSISTANT SURGEON TO ST. BARTHOLOMEW'S HOSPITAL;
AND LECTURER IN ANATOMY AND SURGERY.

LONDON:
PRINTED FOR CADELL AND DAVIES, STRAND.

1797.

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TO

WILLIAM BLIZARD, ESQUIRE,

F. R. S. and F. A. S.

SURGEON TO THE LONDON HOSPITAL, &c.

SIR,

I AM induced to preſent the following pages to your notice, as, by this means, an opportunity is afforded me of publicly expreſſing my grateful ſenſe of your friendly attentions to me, at an early period of my life; and alſo of declaring my reſpect for your profeſſional character, in which, a zeal for the promotion of medical ſcience is united to a benevolent earneſtneſs in adminiſtering its aid to the afflicted. Such a character muſt naturally obtain that tribute of reſpect from all, which I individually have great gratification in offering.

I am, SIR,

Your ſincere friend and ſervant,

JOHN ABERNETHY.

ESSAY

ON

INJURIES OF THE HEAD.

SECTION I.

WHEN the Members of the Academy of Surgery in France, and when Mr. Pott in England, ſeverally inculcated to the ſurgeons of their reſpective countries, the propriety and neceſſity of trephining the cranium under various circumſtances conſequent to injuries of the head, they probably recommended a too free and frequent performance of that operation. Such appears to be the opinion of many reſpectable writers who have publiſhed ſince their time; particularly M. Deſault of Paris, Mr. Deaſe of Dublin, and Mr. John Bell of Edinburgh. But al-

though theſe writers unite in cenſuring the frequency of the practice above mentioned, they are very far from being agreed in other reſpects; and many material points ſeem to me to require ſtill further explanation.

Believing that the obſervations which I have had an opportunity of making at St. Bartholomew's Hoſpital, will enable me to throw ſome light on this important and intricate ſubject, I am induced to ſubmit to the public a ſhort account of ſeveral caſes that occurred there, and the inferences which I drew from them.

The difficulties connected with this part of ſurgery are ſufficiently proved by this circumſtance, that, notwithſtanding it has at all times excited the attention of ſurgeons poſſeſſing the greateſt talents, and enjoying the moſt extenſive field for obſervation, much difference of opinion ſtill ſubſiſts, and the practice that ought to be followed in particular caſes, yet remains a matter of diſpute. It is not, indeed, probable, that any part of medi-

cal ſcience can in a ſhort time receive all the improvement of which it is capable; for, in proportion as we advance in knowledge, we are led to remark many circumſtances in the progreſs of a diſorder, which had before paſſed without notice, but which, if known and duly attended to, would clearly point out to us the nature and remedy of the complaint. Hence, the records of former caſes are of much leſs value, as the ſymptoms about which we are now anxious to inquire, have in them been entirely overlooked.

I was led to this remark by reading the Works of Hildanus, Wepfer, Du Queſnay, and others, wherein are to be found a number of intereſting caſes, which I have been precluded from mentioning, as the nature of them cannot be exactly aſcertained in conſequence of this deficiency.

Although I have been for many years attentive to the treatment of perſons who had ſuffered injuries of the head, and alſo to the examination of the parts after death, where

the caſe has terminated fatally ; I ſtill perceive ſo many circumſtances which require inveſtigation, that I entertain no hope of ever being able to obtain, from my own experience, all the information the ſubject is capable of affording. I hope, however, that the hints offered in this Eſſay may have the effect of inducing ſurgeons to pay a cloſer attention to caſes of this kind, and that thus, by their united obſervations, the public may at length become poſſeſſed of that knowledge, which the labours of an individual could never ſupply.

In the accounts which we have of the former practice in France, it is related that ſurgeons made numerous perforations along the whole track of a fracture of the cranium ; and, as far as I am able to judge, without any very clear deſign. Mr. Pott alſo adviſes ſuch an operation, with a view to prevent the inflammation and ſuppuration of the *dura mater*, which he ſo much apprehended. But many caſes

caſes have occurred of late, where, even in fractures with depreſſion, the patients have done well without an operation. To confirm the accounts that have been given of ſuch caſes, and by this means to counteract, in ſome degree, the bias which long-accuſtomed modes of thinking and acting are apt to impreſs on the minds of practitioners, I ſhall relate the hiſtories of five caſes, that occurred at St. Bartholomew's Hoſpital in the ſpace of twelve months; and afterwards offer a few remarks upon the ſubject. The principal circumſtances only of each caſe are related; for, as many examples of the ſame kind are to be found in various ſurgical books, a minute detail of particulars ſeems to be unneceſſary.

Caſes of Fracture of the Cranium with Depreſſion, which terminated favourably, although no Operation was performed.

CASE I.

A woman, about forty years of age, was admitted into the hoſpital for a wound on her

head. About a week before ſhe applied for advice, her huſband had knocked her down with a braſs candleſtick. She was ſtunned by the blow, and lay for ſome time ſenſeleſs; but, on recovering, ſhe felt no other inconvenience than the ſoreneſs occaſioned by the wounded integuments. She had ſuffered ſome ſlight indiſpoſition ſince the accident.

On examining the head, the right parietal bone was found denuded about two inches in extent; a fracture of the ſame length was alſo to be felt; and the bone on one ſide of the fracture was depreſſed about the eighth of an inch.—She remained in the hoſpital a fortnight, without any bad ſymptom occurring, and was then, at her own deſire, diſcharged, although the wound was not perfectly healed.

CASE II.

A boy, about twelve years old, received a kick from a horſe in Smithfield, which ſtunned him; and he was immediately brought to the hoſpital. The integuments of the fore-

head

head were divided by the injury, and the ſuperciliary ridge of the frontal bone depreſſed at leaſt a quarter of an inch below its original level; the depreſſed portion meaſuring about an inch and half in length.

It is obvious that the bone could not be thus depreſſed, without a fracture of ſome part of the baſis of the ſkull occurring at the ſame time, on which account the caſe might be conſidered as more dangerous.—In leſs than two hours he had recovered from the immediate effect of the blow, being at that time perfectly ſenſible. Fourteen ounces of blood were taken from his arm; his bowels were emptied by a purge, and ſaline medicines, with antimonials, were directed to be given. He went on tolerably well for two days, at the end of which time, evident ſymptoms of conſiderable irritation of the brain took place. He now complained of pain in his head; ſlept little; and, when dozing, often ſtarted, or was convulſed in a ſlight degree. To remove theſe ſymptoms, he was bled twice, took opening medicines occaſionally, was kept

quiet, and without light, and was allowed only a ſpare diet. By continuing this plan for about three weeks, he perfectly recovered.

CASE III.

A man, between thirty and forty years of age, received a blow on the forehead from a brick thrown at him, by which the frontal bone was fractured about half an inch above the orbit: the fracture meaſured two inches in length, and the upper portion of the bone was depreſſed about the eighth of an inch. He was not even ſtunned by the blow, and walked to the hoſpital without aſſiſtance, complaining only of ſoreneſs in the wounded integuments. Sixteen ounces of blood were immediately taken from his arm; he was confined (much againſt his inclination) to a ſcanty and liquid diet, and was purged every ſecond day.—This patient did not experience any illneſs; and the wound ſoon healed.

CASE IV.

A boy, about thirteen years old, had a fracture, with depreſſion, of part of the tempo-

ral

ral and parietal bones. By ſimilar treatment, he alſo eſcaped without any material ill conſequence ; but in this caſe, part of the injured bone exfoliated.

CASE V.

A girl, thirteen years old, had a conſiderable fracture, with depreſſion, of the left parietal bone. She was not brought to the hoſpital until ten days after the accident. When admitted, ſhe was feveriſh, had pain in her head, and the little ſleep ſhe got, was very much diſturbed : but, by the uſe of bleeding, with antiphlogiſtic medicines and regimen, ſhe ſoon got perfectly well.

The caſes above related are not offered to notice on account of any ſtriking peculiarity attending them, but merely to ſhew that ſuch are not infrequent, as they all occurred within the courſe of a year. From amongſt a great number of ſimilar caſes, I ſhall ſelect the following one, as the ſymptoms attending it were more violent than ordinary.

CASE

CASE VI.

A lad, ſeventeen years of age, had his head preſſed between a cart-wheel and a poſt; by which accident the ſcalp on both ſides was turned downwards, ſo as to expoſe the lower half of the parietal bones, the ſquamous part of the temporal, and alſo part of the frontal and occipital bones; about a quarter of the cranium being thus denuded of its coverings. The perioſteum was in ſeveral places ſtript off from the ſkull, the ſcalp much bruiſed, and the poſterior and inferior angle of the left parietal bone was beaten in. The depreſſed portion which was viſible, was an inch in length, and more than an eighth of an inch below the level of the cranium; but the fracture extended along the ſquamous part of the temporal bone towards the baſis of the ſkull: it could not, however, be traced, as the temporal muſcle had not been removed from that part by the injury.—The ſcalp being cleanſed, was replaced, retained in its ſituation by ſlips of ſticking-plaſter, and a ſlight preſſure by bandage was applied. The boy was perfectly ſenſible,

ſible, his pulſe regular, and not quickened. He had bled conſiderably from the temporal artery, which had been divided by the accident: eight ounces of blood were, however, taken from his arm; and ſome purging medicine was adminiſtered next morning, which procured three or four ſtools.—The next day *(Friday)*, his pulſe beat nearly 120 in a minute; his ſkin was hot and dry; and he complained of pain in his forehead. Twelve ounces of blood were taken away, and four grains of pulvis antimonialis ordered to be given three times a day. On *Saturday*, the former ſymptoms ſtill continued, and were rather increaſed. The antimonial powder made him ſick, or at leaſt increaſed his diſpoſition to be ſo. Fourteen ounces more of blood were taken from him; the vibratory feel of his pulſe not being altered until that quantity was taken away: the blood, on ſtanding, appeared very buffy. His ſkin, notwithſtanding all this, ſtill remained extremely dry; ſome antimonial wine was given, which produced vomiting. On *Sunday*, his pulſe was evidently lowered by the evacuations he had undergone,

but

but it was ſtill quick, and ſufficiently ſtrong. The pain of his head remained as before. Having a ſufficient number of ſtools, and the ſickneſs ſtill continuing, the antimonial powder was omitted. He was bled, however, in the vena ſaphena, and his feet and legs afterwards immerſed in warm water; during which, he, for the firſt time, perſpired copiouſly. A bliſter was alſo applied to his neck.—The ſcalp united, with only a trifling ſuppuration over the fractured part of the bone; and to this ready union, the lowering plan, by preventing inflammation, ſeems very materially to have contributed. The matter collected over the fracture was diſcharged by a puncture, and the boy got well.

It appears very clearly, I think, from theſe caſes, as well as from a great number of others to be found in books, that a ſlight degree of preſſure does not derange the functions of the brain, for a limited time after its application. That it does not do ſo at firſt, is very obvious; as perſons are often perfectly ſenſible, and free

from head-ach and giddineſs immediately after the injury. Whether it may not produce ſuch an effect at ſome remote period, is not ſo eaſily determined, ſince this cannot be aſcertained but by a continued acquaintance with the perſons who had received the injuries. All thoſe, however, whom I have had an opportunity of knowing for any length of time after the accident, continued as well as if nothing of the kind had ever happened to them. In Mr. Hill's Caſes in Surgery, two inſtances of this ſort are related; and Mr. Hill knew both the patients for many years afterwards, yet did not perceive any inconvenience to ariſe. It deſerves to be mentioned too, that one of the patients was a ſailor, and therefore, probably, led a life of irregularity as well as of exertion. The reſult of caſes of this kind, which I have met with in authors, does not lead to the apprehenſion of any future miſchief: nor is it eaſy to conceive that the preſſure, which cauſed no ill effects at a time when the contents of the cranium filled its cavity completely, ſhould afterwards prove injurious when they have adapted themſelves to its

altered

altered ſize and ſhape. Severe illneſs, indeed, does often intervene between the receipt of the injury and the time of its recovery; and many ſurgeons might be inclined to attribute this to preſſure; but it equally occurs where the depreſſed portion is elevated; ſeveral inſtances of which I ſhall have occaſion to relate, and many others are to be met with in authors. This is a circumſtance which nothing but very extenſive experience can ſhew in a true light. If, for inſtance, a ſurgeon who was prepoſſeſſed with the opinion that elevation of the bone is neceſſary in every inſtance of depreſſed cranium, ſhould have acted upon this opinion in the firſt, third, fourth, and fifth caſes, and afterwards have employed proper evacuations, his patients would probably have had no bad ſymptoms, and he would naturally have attributed their well-doing to the mode of treatment which he had purſued: yet theſe caſes did equally well without an operation. If the ſame ſurgeon had been witneſs to the diſturbance which aroſe in the ſecond and ſixth caſes, he would, without doubt, have attributed them to the

continu-

continuance of preſſure made by the bone; yet theſe caſes alſo did well by medical treatment only: and when the ſymptoms which come on thus, are of the inflammatory kind, they may generally be removed by the ſame means. Many caſes alſo are to be met with in books, and ſome are related in the ſubſequent part of this Eſſay, where not only great but even fatal miſchief enſued, notwithſtanding the brain was relieved from preſſure at an early period. Another ſurgeon, prejudiced againſt the uſe of the trephine, might, with equal injuſtice, conſider the miſchief which enſues in certain caſes, as entirely owing to the operation.

The degree of preſſure which the brain can ſuſtain without great injury to the ſyſtem, probably may vary according to the diſpoſition of that organ to be affected by it, the ſuddenneſs of its application, and the direction in which it is made; and although it muſt be very difficult to obtain any preciſe knowledge on this ſubject, yet there is great reaſon to believe that the brain can bear more preſſure without

without injury to it, than was formerly ſuppoſed. The firſt of theſe circumſtances ſeems evident; for in ſome perſons a ſlight preſſure produces ſevere ſymptoms; whilſt, in others, a much greater degree is borne without inconvenience. Where a compreſſing cauſe does not, in the firſt inſtance, occaſion bad effects, if inflammation of the brain enſues, it ſeems then to act injuriouſly; which probably ariſes from the increaſed ſuſceptibility of the brain. We can rarely judge of the effects of preſſure when any part of the cranium is beaten in by a blow; for in that caſe the ſhock generally occaſions ſtupefaction. Internal hæmorrhages, perhaps, afford us the beſt criterion whereby to determine the effects of preſſure on the brain. The ſeventh caſe will ſerve as an illuſtration of this remark, where it appears that a conſiderable hæmorrhage muſt have taken place before it deprived the patient of his faculties; for he walked home, undreſſed himſelf, and went to bed, after the trunk of the middle artery of the dura mater had been ruptured. In caſes of apoplexy alſo, the hæmorrhage is generally very

very large before it produces thoſe conſe-quences which deſtroy life.

The authorities quoted by Morgagni, as well as his own obſervations, ſhew that people may recover from apoplexy even after a conſiderable effuſion of blood has taken place. But as ſuch caſes are uncommon, and as it appears to me that farther confirmation of them would be highly uſeful, I have obtained permiſſion of Mr. Wilſon, to mention a remarkable caſe of this kind, which occurred to his notice.—A gentleman fell down ſuddenly, and re-mained for ſome time in that lethargic ſtate which is uſual in apoplectic caſes; but after-wards gradually recovered his faculties both of mind and body, and continued to exerciſe them very perfectly for two years, when a ſe-cond attack of the ſame kind took place, and deſtroyed him. Upon opening the head, the cauſe of his death became evident; for a large quantity of blood was found in the ventricles, and at the baſis of the cranium. But what ſeemed particularly worthy of attention, was a cavity in the right hemiſphere of the brain,

extending from the front to the back part of the cerebrum, being more than four inches in length, and more than an inch in breadth. Within this cavity were contained flakes of coagulated lymph, and a bloody-coloured fluid, which Mr. Wilſon, whoſe abilities and accuracy of obſervation entitle his opinion to the fulleſt credit, was convinced were the remains of the blood extravaſated at the firſt attack.

Though a ſlight degree of preſſure does not immediately affect the functions of the brain, yet it may act in another way,—it may excite inflammation of that organ, as it does of other parts of the body. Its power in this reſpect, however, will probably leſſen by the part becoming accuſtomed to it; and the caſes on record, where fractures with depreſſion have done well, as well as thoſe of recovery from apoplexy, are proofs, that the cauſe which in the firſt inſtance was injurious by its preſſure, may continue to exiſt without inconvenience. Such caſes ought ſurely to deter ſurgeons from elevating the bone in every inſtance of ſlight depreſ-

depreſſion, ſince by the operation they muſt inflict a further injury upon their patients, the conſequences of which it is impoſſible to eſtimate.—From all, therefore, that I have learned from books, as well as from the obſervations I have made in practice, and from reaſoning upon the ſubject, I am diſpoſed to join in opinion with thoſe ſurgeons who are againſt trephining in ſlight depreſſions of the ſkull, or ſmall extravaſations on the dura mater. In the latter, it is probable the compreſſing cauſe will ſoon be removed by abſorption; and in the former, according to the obſervations of Mr. Hill * and Mr. Latta †, the bone will regain its natural level if the ſubject be young. In adults, however, and eſpecially in perſons of advanced life, this circumſtance cannot be expected; ſo that in them the accommodation of the parts to each other, neceſſary for preventing future miſchief, muſt be effected by a correſponding diminution of the brain.

A circumſtance, however, frequently oc-

* Caſes in Surgery, p. 113.

† Pract. Syſt. of Surgery, Vol. II. p. 172.

curs, that may render the ſurgeon doubtful as to what courſe he ought to purſue; this happens when, at the ſame time that the ſkull is ſlightly depreſſed, the patient labours under the effects of concuſſion. The circumſtances which generally ſerve to diſtinguiſh thoſe two injuries, will be noticed hereafter. At preſent it is only neceſſary to obſerve, that, as the effects of the latter gradually abate, a little delay will enable the ſurgeon to decide upon the nature of the miſchief, and take his meaſures accordingly. Where the patient retains his faculties, nothing farther is neceſſary than a continuance of the antiphlogiſtic plan; and ſhould any diſturbance afterwards take place, the ſame means, employed in a degree proportioned to the urgency of the ſymptoms, will in moſt inſtances be ſucceſsful without elevating the bone. This happened in four of the ſix foregoing caſes, which are related without any view to this particular point.—But if, from a peculiar diſpoſition of the brain to be affected by preſſure, the diſorder of that organ ſhould increaſe; or if, from inflammation of the brain having taken place, the preſſure

preſſure ſhould then appear to be particularly injurious, the elevation of the bone ought not, I think, to be deferred. And from ſome of the caſes related by Mr. O'Halloran, in the fourth volume of the Tranſactions of the Royal Iriſh Academy, it appears that this operation, if not too long delayed, will give effectual relief under ſuch circumſtances.

I truſt, that nothing which I have ſaid will be conſtrued as inſinuating that every depreſſion of the ſkull may be left unelevated. There certainly are degrees of this injury which it would be highly imprudent to treat in this manner. Whenever the patient retains his ſenſes perfectly, I ſhould think it improper to trephine him, unleſs ſymptoms aroſe that indicated the neceſſity of it. The caſes which I have related will, I believe, juſtify me in entertaining this opinion, and in thinking that the contrary practice is now carried, by ſome ſurgeons, to a prejudicial extreme.

SECTION II.

Injuries of the Head attended with Extravaſation of Blood upon the Dura Mater.

In the three following caſes the ſkull was broken, and depreſſed at the part which covers the middle artery of the dura mater, by which means that veſſel was lacerated. The attention of ſurgeons has not been ſufficiently directed to this event, although it is of the utmoſt importance; for the life of the patient might often be ſaved, if the nature of the accident were known, and the bone ſpeedily perforated.—Theſe caſes likewiſe diſplay, in a very ſtriking manner, ſome of the effects cauſed by great preſſure on the brain.

CASE VII.

A man was knocked down by the iron hooks of a crane, which fell upon his head from a conſiderable height. He was ſtunned at firſt, but ſoon recovered his powers of mind and body ſo far as to walk home, undreſs himſelf, and go to bed. A ſurgeon was ſent for, who,

who, on his arrival, found the man ſenſeleſs, and in a deep apoplectic ſtate. The patient was immediately brought to St. Bartholomew's Hoſpital, when the functions of life ſeemed nearly ſuſpended, as he was almoſt without ſenſation, his breathing being ſlow, irregular and ſtertorous, with an unequal, intermitting pulſe, and cold extremities.—The ſcalp covering the right parietal bone was wounded; and on dividing it more extenſively, a fracture with depreſſion was diſcovered, running obliquely acroſs the anterior and inferior angle of the parietal bone, over the temporal bone, and extending to the baſis of the cranium, before the maſtoid proceſs. Several perforations with the trephine were made along the courſe of the fracture, and the depreſſed portion taken away. A ſurpriſing quantity of congealed blood was found upon the dura mater; the coagulum being not leſs than an inch and half in thickneſs, and ſix or ſeven inches in circumference. On the removal of this coagulum, the brain, which had been indented by its preſſure, remained in the ſame ſtate as before, nor did it ever regain its ori-

ginal level; ſo that the patient experienced but little benefit from the operation, and he died about twelve hours after receiving the blow.

The dura mater, in this caſe, was not torn through in any part; ſo that the blood could not have come from any veſſel within that membrane. The ſource of ſuch a profuſe hæmorrhage, however, could not be doubtful, when it was known that the fracture croſſed, and had probably wounded, the principal artery of the dura mater; yet that veſſel did not bleed after it was expoſed.

CASE VIII.

A boy, about fourteen years of age, fell from a ſcaffold near two ſtories high, and pitched on his head. When brought from Iſlington to the hoſpital, he appeared to be almoſt in a dying ſtate. The anterior inferior angle of the parietal, and part of the frontal bone, were found depreſſed. A piece of the cranium being taken out with the trephine, I diſcovered beneath it a large quantity of coagulated

agulated blood; I therefore made the next perforation nearer to the trunk of the principal artery of the dura mater, from which I concluded that this hæmorrhage had taken place. Having gently removed ſome of the coagulum, and introduced my finger into the aperture which had been made, I paſſed it as far as the ſecond joint, before I could touch the dura mater. Fluid arterial blood now guſhed out in ſuch quantities as to keep the bone covered on which I was next to trephine. I ran no riſque, however, in performing the operation; for the dura mater was depreſſed ſo much that it could not be injured. But to guard againſt even the poſſibility of ſuch an accident, I introduced my finger between the dura mater and ſkull, and then perforated the bone with the trephine. Having thus removed a third piece, which was directly over the principal artery, I took out about four ounces of coagulated blood; upon which the dura mater quickly roſe to its original level, and the hæmorrhage from the wounded artery ceaſed. I now entirely removed the depreſſed portion of bone, and thus

thus uncovered all the dura mater which had been detached; ſo that I could diſtinctly feel its connection with the cranium all round. This ſatisfied me that no more extravaſated blood was left behind.—The lad, who at the beginning lay quite inſenſible, with a feeble, intermitting pulſe, and laborious interrupted reſpiration, became reſtleſs, and expreſſed ſenſations of pain towards the latter part of the operation. Being now aſked, how he found himſelf? he replied, very well; Whether his head ached? he anſwered, no; If he was ſure that he felt no pain? he ſaid he was ſure, and wiſhed we would leave him alone.—I now took twelve ounces of blood from his arm, and he was put to bed, where he paſſed the night quietly. The next morning his bowels were completely emptied by a purge; and ſaline medicines, with antimony, were given, ſo as to keep the ſkin in a gentle ſtate of perſpiration. During the day he was ſleepy, and lay quiet; anſwered queſtions very rationally, and complained of pain and giddineſs in his head.—The third day he was diſturbed, and leſs rational. Eight ounces of blood were taken

taken from him, and a bliſter was applied to his neck. Theſe means relieved him greatly, and he became quite tranquil and collected.—On the ſixth day, ſymptoms of irritation again took place, and were again relieved by ſimilar treatment. The dura mater had granulated, and the whole wound looked healthy. Every thing went on remarkably well until the fifteenth day, when the patient was ſeized with rigor and pain in his head, and the healthy aſpect of the wound was alſo changed. The following day, there was perceived, in the middle of the expoſed dura mater, an aperture, through which a protruſion of the brain aroſe, covered by the pia mater, which retained its natural appearance. In leſs than 24 hours this tumour increaſed to the ſize of an orange; its ſurface was dark-coloured, and irregular, and the pia mater no longer diſtinguiſhable. The following morning the boy died; and his friends had removed the body from the hoſpital before I knew of his deceaſe.

I regretted very much that I could not examine the nature of this fungus or hernia cerebri

rebri, as it was a phænomenon which I had more than once contemplated with ſurpriſe, and the nature of which I was afterwards fortunately enabled to aſcertain.

CASE IX.

A man was knocked down in Smithfield by a brick-bat, thrown at him by ſome villains againſt whom he had appeared as evidence upon a trial. He was immediately brought to the hoſpital; but in a ſtate of profound apoplexy.—The right ſide of the frontal bone, and the lower part of the parietal, were beaten in; the area of the depreſſed piece being about two inches in diameter. After making three perforations in the circumference, I was enabled to remove the depreſſed portion. I then took out a large handful of coagulated blood, which lay upon the orbitary proceſs of the frontal bone, and had ſo preſſed back the anterior lobe of the brain, that I could, with my finger, touch the tranſverſe ſpinous proceſs of the ſphenoid bone. The brain now roſe ſlowly, in conſequence, I ſuppoſe, of the blood

blood gradually finding its way through the compreſſed veſſels; and the man began to ſhew ſigns of returning ſenſe.—He was bled, and his bowels were emptied by a purge. The next day he was ſo far recovered as to give an imperfect account of the accident; but on the third day, he died convulſed.

On diſſection, ſome blood was found between the dura and pia mater, and traces of inflammation appeared on the latter membrane.

Mr. Hill, of Dumfries, relates a caſe (the fifth), where the artery of the dura mater was ruptured without either fracture or depreſſion of the ſkull; and when he trephined a ſecond time, four days after the accident, he found ſo large a coagulum of blood lying upon that membrane, as to make him afraid of removing it all at once: but on taking out a few ounces of it, the patient, who had hitherto lain in a ſtate of apoplexy, looked up, on being ſpoken to, like one awakened from ſleep,—knew, and named every body, and raiſed

raiſed the arm belonging to the oppoſite ſide, which had been paralytic from the time of the accident.

In Mr. Latta's Surgery alſo, a ſimilar caſe (as ſhewn on diſſection) is related, in which an uncommon ſlowneſs of the pulſe, and coma without ſtertor, were the ſymptoms produced.

Theſe caſes ſhew that a fracture of the ſkull is not likely to be followed by an equal degree of extravaſation in every part, as the veſſels connecting the dura mater to the cranium are, in moſt parts of that membrane, of a ſmall ſize. If theſe are accidentally ruptured, a ſlight hæmorrhage enſues, which ſoon ſtops, and only a thin ſtratum of coagulated blood is found if the bone be removed. But if the fracture happens in the track of the principal artery of the dura mater; if the trunk, or even a conſiderable branch of that veſſel be torn, the hæmorrhage will be profuſe, and the operation of the trephine become

come immediately neceſſary to preſerve the life of the patient. In the three caſes that I have related, the operation was done very ſhortly after the accident: in the firſt caſe, the brain was ſo compreſſed that it did not regain its level; in the ſecond, it roſe ſlowly as the blood found its way through the veſſels; and in the third, it roſe quickly, and the functions of the brain were as quickly reſtored. It can ſcarcely be doubted, then, that if the operation had been performed in theſe caſes as ſoon as it became neceſſary, when, perhaps, only one inſtead of many ounces of blood were poured forth from the torn veſſel, the lives of the patients might have been preſerved.

It is of great importance to diſtinguiſh accurately the nature of ſuch caſes; and the diſtinction is not difficult when there is an interval of ſenſe between the blow and the ſtupor occaſioned by the effuſed blood. In the firſt related caſe, for inſtance, the nature of the accident was made ſufficiently evident by this circumſtance. But though we are

aſſured

aſſured that the patient labours under the effects of compreſſion, we cannot, in many inſtances, know the ſituation of the compreſſing cauſe. In other caſes, again, where there is no interval of ſenſe after the accident, we are at a loſs to determine whether the ſenſeleſs ſtate be the effect of compreſſion or of concuſſion. Every ſurgeon muſt acknowledge that it would be a very deſirable thing to aſcertain when blood is effuſed between the dura mater and the ſkull; for if the extravaſation has happened in the more interior parts, a ſurgical operation is not likely to afford relief*. Now, if the extravaſation which compreſſes the brain, be ſituated immediately beneath the bone, I think there are ſigns by which it will be diſcloſed; and as ſufficient

* In thoſe caſes, which I have ſeen, where blood was extravaſated between the dura and pia mater, and a diviſion of the former membrane was made for its diſcharge, the ſerous part of it only could be evacuated; for the coagulum was ſpread over the hemiſphere of the brain, and had deſcended as low as poſſible towards its inferior part, ſo that very little relief was obtained by the operation. It ſeems then, that extravaſation between the dura mater and the cranium is almoſt the only caſe which admits of being remedied by the uſe of the trephine.

notice has not been taken of theſe, I wiſh particularly to call the attention of ſurgeons to them.

I have already ſaid, that, unleſs one of the large arteries of the dura mater be wounded, the quantity of blood poured out will probably be inconſiderable; and the ſlight compreſſion of the brain which this occaſions, may not be attended with any peculiar ſymptoms; or perhaps it may occaſion ſome ſtupor, or excite an irritation diſpoſing the ſubjacent parts to become inflamed: but both theſe effects will gradually abate, nor will any inflammation enſue, if proper means are taken to prevent it. It is indeed highly probable, that, in many caſes which have done well without an operation, ſuch an extravaſation has exiſted. But if there be ſo much blood on the dura mater as materially to derange the functions of the brain, the bone, to a certain extent, will no longer receive blood from within; and by the operation performed for its expoſure, the pericranium muſt have been

ſeparated from its outſide. I believe that a bone ſo circumſtanced will not be found to bleed; and I am certain it cannot, with the ſame freedom and celerity as it does when the dura mater remains connected with it internally. I need hardly ſay, that, in the caſes which I have related, there was not the leaſt hæmorrhage. But it is right to mention, that I have alſo twice been able, by attending to the want of hæmorrhage from the outſide of the cranium, to aſcertain the extent to which the dura mater was detached within; and very frequently, when ſymptoms appeared to demand a perforation of the ſkull, I have ſeen it contra-indicated by the hæmorrhage from the bone, and, as the event has proved, rightly.

When the bone has remained long bare, the caſe may become perplexing. I once ſcraped a portion of the cranium which had been ſome time denuded, and found that it bled in ſuch a manner, as ſufficiently to point out the adheſion of the dura mater, and of courſe

courſe the inutility of employing the trephine *.

Where the extravaſation on the dura mater is but ſmall, it will probably not require any operation. A ſlight hæmorrhage from the bone, which may happen from the anaſtomoſing of the veſſels within its ſubſtance, will not, in this caſe, lead to any injurious error. But from what I have obſerved, I am inclined to believe, that even a ſmall effuſion of blood will diminiſh the hæmorrhage from the ſuperincumbent bone.

Mr. Pott had an idea, that the bone would periſh when the dura mater was detached for

* In aged perſons, and in thoſe in whom the circulation has been rendered languid by the accident, the mode of diſtinction which I have pointed out, may indeed be leſs concluſive.

Although a contrary opinion has been entertained, yet it appears evident, particularly in apoplectic caſes, that veſſels enter the cranium from every part of the dura mater. To aſcertain more fully this circumſtance, I have injected the principal arteries of the dura mater with glue (after having removed the upper part of the cranium and the ſcalp), when the injection has paſſed through the bone into the veſſels of the ſcalp; and the connection by veſſels, which I have alluded to, has been evident in every point.

a conſiderable ſpace from its inſide; and ſome caſes which he has related, ſeem to favour this opinion: but many other caſes to be met with in authors, and many which have occurred to my obſervation, prove that the opinion was not well founded. Indeed we cannot ſuppoſe that the bone would periſh from this cauſe; for it ſtill receives blood, not only from the anaſtomoſing of veſſels within its ſubſtance, but alſo from the pericranium externally; and the ſucceſs which has of late attended the operations for aneuriſm in the lower limbs, ſhews that parts of great bulk and vaſcularity will continue to live when their uſual ſupply of blood is very much diminiſhed. If, however, the dura mater ſhould be detached for a conſiderable extent from the inſide of the ſkull, at the ſame time that the pericranium ſhould alſo be ſtripped from its outſide, I am inclined to believe that a portion of the bone would, in that caſe, die and exfoliate.

SECTION III.

Caſes of Fungus or Hernia Cerebri.

CASE X.

A man, about forty years of age, was knocked down, and had a conſiderable part of the parietal bone, near the coronal ſuture, depreſſed, by a ſtone falling on his head from a high building. A portion of bone was taken out, and the depreſſed piece elevated. The patient, after this, ſeemed to obtain great relief from the ſtupor under which he had till then laboured. But the next day, he became very reſtleſs and delirious, and frequently endeavoured to get out of bed. Evacuations were preſcribed, and a bliſter applied to his head, by which means the ſymptoms were leſſened, but did not entirely go off; they continued near ſix days, only varying ſomewhat in degree. His ſtrength was now very much reduced; and though he became more tranquil, he was ſtill delirious, and a coma ſupervened, which increaſed daily.—On the tenth day, upon uncovering the wound in or-

der to dreſs it, a hernia cerebri appeared, riſing through an ulcerated opening in the dura mater. The tumour at this time was not larger than a pigeon's egg; the pia mater, ſtretched over its ſurface, was inflamed; and a turbid ſerum oozed at its ſide, from beneath the dura mater. On the following day, the tumour had acquired the ſize of a hen's egg, was ſtill ſmooth on its ſurface, and apparently ready to burſt. On the day after, before the time of dreſſing, the man died.—Upon examining the tumour now, it was found larger than before, and of a dark colour, with an irregularly granulated ſurface; which appearance ſeemed owing to coagulated blood which adhered to its ſurface, as the part had bled ſo much, that one half the cap which the man had worn, was rendered quite ſtiff by it. In raiſing the top of the ſkull to inſpect the contained parts, the tumour was in ſome degree torn from its baſis. The pia mater was in general much inflamed, and, as well as the dura mater, was deficient at the place where the tumour protruded. A part of this tumour being cut off where it was lacerated, appeared

to conſiſt of coagulated blood of a fibrous texture. The brain was now taken out, and the tumour carefully examined, when it was found to be of the ſame nature throughout, and to have originated within the ſubſtance of the brain, about an inch below the ſurface; but I could not diſcover the open veſſel from which the hæmorrhage had proceeded.

The appearances, on diſſection, clearly explained the cauſe of the ſymptoms which had taken place, and rendered it evident, that the diſeaſe under which this man had chiefly laboured, was inflammation of the pia mater. The nature of the tumour, alſo, was not leſs ſatisfactorily pointed out. It was plain, that, in conſequence of the brain being injured to ſome depth beneath the ſurface, diſeaſe of the veſſels, and conſequent effuſion of blood, had enſued; that the effuſion was for a time reſtrained by the ſuperincumbent brain and its membranes; but theſe gradually yielding to the expanſive force exerted from within, and at laſt giving way altogether, the fluid blood oozed out and

congealed upon the ſurface of the tumour. It appears very probable, that the diſeaſe generally deſcribed by the term *hernia cerebri*, conſiſts, as in this inſtance, of a tumour formed by coagulated blood; for an organized fungus could hardly be produced in ſo ſhort a time as that in which theſe tumours are uſually formed.

CASE XI.

A carpenter, while at work in a newly-built houſe, was cruſhed by a part of the wall falling in upon him. His abdomen was bruiſed, his clavicle broken, and his head wounded. Beneath the wounded ſcalp, the right parietal bone was found fractured and depreſſed. He was ſlighly comatoſe for many hours after being brought to the hoſpital, yet anſwered rationally to thoſe queſtions that were put to him. As the coma, however, remained, and his pulſe did not beat with the freedom that is uſual, the ſurgeon under whoſe care he was admitted, thought it right to trephine him. Accordingly, one perforation being made, the depreſſed bone was elevated.

No

No blood was found upon the dura mater, nor did any thing indicate the propriety of uſing the trephine a ſecond time. The patient was largely bled; and ſaline medicines, with antimony and opium, were given. As he complained much of pain in his belly, fomentations were applied to this part, and clyſters adminiſtered occaſionally. He was again bled on the ſecond and fourth days after the operation. At the end of a week the antimony was omitted, on account of his weakneſs; and he ſeemed to get rather better, until December 7, twelve days after the accident, when a hernia cerebri appeared, riſing through an aperture in the dura mater, oppoſite to the perforation in the ſkull. It increaſed rapidly in ſize, and exhibited the ſame appearance deſcribed in the foregoing caſe.—Two days after this, the patient died.

On examining the head, the dura mater was found every where adherent to the ſkull; but on its inner layer there was a ſecretion of pus. The hernia cerebri, which had puſhed

up

up through an ulcerated opening in the dura mater, was of a fibrous texture, and evidently formed of congealed blood depoſited in the medullary part of the cerebrum; the containing cavity being about an inch diameter, and its parietes appearing to be the ſubſtance of the brain condenſed by preſſure. I was equally unſucceſsful here in my ſearch after the veſſel, whence the blood had iſſued. The ventricles of the brain were full of a ſerous fluid mixed with blood, and a large abſceſs was alſo found in the ſpleen.—In this caſe, the mental faculties were not deranged as in the former. Both the ſymptoms and diſſection ſhew the diſeaſe to have conſiſted in the effects of concuſſion, with inflammation of the dura mater, and ſubſequent effuſion into the ventricles of the brain.

The opinion I had formed reſpecting the nature of hernia cerebri was now confirmed; and I think it received additional illuſtration from the following caſe, although the diſeaſe was in a different part of the body.—A patient

tient in the hoſpital had a diſeaſe in the head of the tibia, from whence there aroſe an unhealthy fungus, which Mr. Blicke removed; and afterwards, the bone was kept bare by cauſtic applications, in hopes that a ſeparation of the diſeaſed parts would take place. The patient, however, became feveriſh, and his health was much impaired. On the ceſſation of the fever, there ſuddenly aroſe, within the wound, a fungus-like ſubſtance, about the ſize of a large apple, which ſeemed to ſprout from the bone; it was of a livid colour, and its ſurface appeared as if covered with ſloughs. I took off the tumour, which was nothing but coagulated blood, with the knife; and ſome blood oozed from its baſis, but the hæmorrhage was ſtopped by the application of lint. In a few hours, however, a ſimilar fungus-like tumour aroſe. As both the ſize and ſituation of the open veſſel were unknown, and as the patient could neither ſupport the loſs of much blood, nor the irritation which an extenſive wound, made in ſearch of the artery, together with that ariſing from the diſ-

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eaſed bone, would infallibly produce, it was judged beſt to remove the limb. This was accordingly done; and upon injecting water into the popliteal artery, it was found to be a branch of that veſſel which had given way.

It ſeems that Paré, and the ſurgeons who lived about his time, often miſtook the tumours that aroſe out of the cranium, for aneuriſms, on account of their pulſatory motion. M. Louis, in the *Mem. de l' Acad. de Chirurgie*, tom. V. has well diſtinguiſhed the nature and treatment of thoſe proceeding from diſeaſe of the dura mater or bone. There may, perhaps, be tumours of various kinds ariſing from the pia mater and brain; but if there are ſuch, I believe they have not been diſcriminated; nor have I found an account of any in the writings of authors, which did not reſemble thoſe I have deſcribed. They have generally been treated of under the name of fungus or hernia cerebri;

cerebri; and if the effuſed blood of which they conſiſt, ever acquired vaſcularity, they might then deſerve that title: but none of thoſe that I have ſeen were of an organized ſtructure.—Their formation ſeems to proceed from an injury done to a part of the brain by concuſſion or contuſion, which has terminated in a diſeaſed ſtate of the veſſels, ſimilar to what occurs in apoplexy. The morbid ſtate increaſing, one or more veſſels give way, and an effuſion of blood into the ſubſtance of the brain enſues, which, if the ſkull were entire, would probably occaſion apoplexy, but, where there is a deficiency of bone that allows it to expand, preſſes the ſurface of the brain and its meninges through the vacant ſpace. The dura mater ſoon ulcerates, and the tumour puſhing through the openings, now increaſes with a rapidity proportioned to that with which the hæmorrhage takes place within. At laſt, the pia mater, and the ſtratum of the brain which cover the effuſed blood, are ſo extended as to give way, and the blood oozes out and coagulates.—Thus the quick growth, and all the other phænomena ob-

ſervable in theſe tumours, are ſatisfactorily accounted for.

It ſeems probable that ſimilar injuries at other times give riſe to the formation of abſceſſes in the ſubſtance of the brain, which are not eaſily aſcertained, and which generally occaſion the death of the patient.

The plan of treatment to be adopted with tumours of the kind which I have deſcribed, is next to be conſidered; but as I have had no opportunities of acquiring knowledge as to the treatment of theſe diſeaſes ſince I became acquainted with the nature of them, I can only offer a few general remarks on this ſubject.

Where no bad ſymptoms precede the appearance of the tumour, or where they go entirely away upon its being freed from the confinement of the dura mater, it may, perhaps, be moſt prudent not to interfere in the treatment of the complaint: for probably the hæmorrhage will ceaſe, and the coagulum will

will drop off in pieces*, or gradually waſte away, and be no more renewed†. All that appears neceſſary, then, under ſuch circumſtances, is to cover the tumour and ſore with ſome mild dreſſing, carefully avoiding all preſſure, which both reaſon and experience ſhew is likely to be attended with bad conſequences. Should the bulk of the tumour, however, become inconvenient, or render preſſure from the dreſſings unavoidable, the practice which preſent experience has ſhewn to be moſt ſucceſsful, conſiſts in occaſionally paring off the tumour with a knife. In this manner Mr. Hill treated ſeveral caſes with ſucceſs.

But if the tumour continues to increaſe, and if the patient ſuffers a train of bad ſymptoms,

* See a caſe in the Edinburgh Medical Commentaries, Vol. I. p. 98, where the tumour continued to increaſe for fourteen days, and had acquired the ſize of a gooſe's egg, when it dropped off in pretty large pieces. A ſimilar caſe is related in the Medical Muſeum, Vol. IV. p. 463.

† Fabricius Hildanus relates a caſe in his Fifteenth Obſervation, where the tumour ariſing from the brain became, in 24 hours, as large as a hen's egg, and afterwards gradually diſappeared.

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apparently ariſing from irritation and preſſure made on the brain, ſome further attempt to relieve him ſeems to be required. Under theſe circumſtances, we have reaſon to ſuſpect that the coagulum, from want of room to protrude, is enlarging internally; or that by plugging up the orifice in the bone, it prevents the eſcape of ſome fluid collected within the cranium *. The obvious mode of relief here appears to be, to enlarge the opening in the bone in proportion to the extent and increaſe of the tumour. Many ſurgeons have

* Mr. Hill, in relating a caſe of this kind, ſays that he "was obliged to ſhave away the tumour, and puſh a lancet into its root as often as the ſtupor and other ſymptoms ſhewed that matter was lodged there, by which the patient was uniformly relieved, and afterwards recovered."—(See his Caſes in Surgery, p. 91—2.) But very different was the event in two ſimilar caſes (one is recorded by Scultetus, in his Armamentarium Chirurgicum, Obſ. XIX.; the other in the Lond. Med. Journal, Vol. X. p. 277), in which repeated attempts were made to prevent the growth of the tumour by compreſſion: one patient died at the end of a month; the other not until nearly ſix months after the accident. In the brain of each there was found, upon diſſection, a large cavity, which had been formed by the accumulation of a fluid that could not eſcape, on account of the aperture in the bone being cloſed by the tumour.

objected

objected to the removal of much of the cranium, leſt protruſions of this kind ſhould enſue; but it is evident that theſe tumours ariſe from an injury and conſequent diſeaſe of a part of the brain, the event of which muſt be more fatal if the bone was entire. A large removal of bone was formerly a frequent event; but a protruſion of this kind very ſeldom took place.

But although, by thus allowing a free eſcape to the effuſed blood, we may prevent the injurious effects of its preſſure on the brain, yet the degree of hæmorrhage may endanger the life of the patient.

The quantity of blood effuſed will depend on the magnitude of the veſſels, or on their diſpoſition to bleed. As the diſeaſe is generally ſituated not far beneath the ſurface of the brain, there is leſs riſque of its proceeding from the former cauſe. If it ariſes from the latter, it is very likely that the diſtention cauſed by the confinement of the effuſed blood would irritate the veſſels, and keep up

their diſpoſition to hæmorrhage; therefore the treatment already recommended is likely to diminiſh it. But ſhould the quantity of the hæmorrhage ſeem to threaten the life of the patient, I ſhould think it moſt proper to take away the coagulum, and to expoſe the cavity in the brain, in order to learn whether ſuffering ſome ſudden loſs of blood to take place, together with the expoſure of the bleeding veſſels, might not produce a beneficial change, and a ceſſation of the hæmorrhage. I am induced to propoſe this mode of conduct, from reaſoning founded on analogy; for in other parts of the body a hæmorrhage will ſometimes continue, notwithſtanding a conſiderable preſſure made by a large quantity of coagulum, together with that which the reſiſtance ariſing from the cloſure of the external opening, and that which is occaſioned by the dreſſings, conjointly produce. Yet, upon expoſing the bleeding ſurface, the hæmorrhage will ceaſe, and never afterwards be renewed.

I am ſtill further induced to propoſe this plan of treatment, becauſe I do not perceive any

any other which carries with it a probability of ſucceſs. The impropriety of attempting to reſtrain the hæmorrhage by preſſure has been ſhewn; ligatures cannot be applied, and ſtyptics are known, by experience, to be dangerous.

I ſhall extract one caſe from the firſt volume of the *Memoires de l'Academie de Chirurgie**, to ſhew that the removal of the coagulum is not likely to be attended with any alarming conſequences.—A young man received a blow on the right parietal bone, which occaſioned a fracture; ſome bone was removed, and a hernia cerebri was afterwards produced, which was repeatedly pared down with the knife. On the thirty-fifth day from the accident, the patient having intoxicated himſelf, while in this ſtate, ſlipt his hand under the dreſſings, and laying hold of the protruding coagulum, tore it away with violence. The next day the ſurgeon found, that almoſt the whole of what he conſidered as corrupted brain, was removed, and a vacancy left, ſo deep, that he could ſee nearly to the

* See the Memoire of Mr. Du Queſnay, 10th Obſervation.

corpus calloſum. From this time forward the parts went on healing, until they got quite well; but the patient continued to labour under a paralyſis of the left ſide, which had ſupervened the day after he received the blow.

It is obvious, from the nature of the ſubſtance of which the tumour is compoſed, that ſtyptic remedies applied to its ſurface can have ſcarcely any effect in leſſening its bulk, and none at all in putting a ſtop to its growth; and experience ſhews, that the more active of them are not only ineffectual, but highly dangerous. Hildanus, in his Fourteenth Obſ. relates the caſe of a man who died in conſequence of an empiric having dreſſed a tumour of this kind with alum and calcined vitriol. And Mr. Hill tells us (p. 198), that, after ſhaving off the protruding part, he once ſprinkled the baſis with ſome blue vitriol, and another time with red precipitate; but found that "his patient had a very bad day after each of theſe;" no doubt, in conſequence of their being diſſolved in the diſcharge, and inſinuating themſelves between the tumour and the edges

edges of the ſkull, ſo as to get into contact with the ſenſible parts within; for, that it was not owing to their effect upon the tumour, is evident from the freedom with which he had removed it with the knife.—Whether, in the caſe of the hæmorrhage continuing after the coagulum has been removed and the veſſels expoſed, any of the vegetable aſtringents diluted, ſuch as infuſion of galls, might be ſucceſsfully applied to ſtop the bleeding, is a queſtion which future experience muſt determine.

SECTION IV.

Concuſſion of the Brain.

As I am of opinion that the effects of concuſſion have not been juſtly deſcribed by authors, and as the ſymptoms related by them are not, according to my experience, thoſe which uſually occur, I have therefore ſelected two caſes out of a great number that I have ſeen, in order to ſhew what have appeared to me the common conſequences of this injury; and I ſhall afterwards offer ſome remarks reſpecting the treatment of this diſeaſe.

CASE XII.

Harriet Silverthorn, aged twenty-three years, ſlipped down ſtairs, and ſtruck her occiput againſt ſome of the lower ſteps, by which the integuments were divided about half an inch in length, but the wound was not deep, nor were the ſurrounding parts much bruiſed. She was taken up ſenſeleſs, was bled, and the next morning conveyed to St. Bartholomew's Hoſpital. When brought in, ſhe was comatoſe; could not be made to anſwer any queſtions; yet ſhe drew back her arm when pinched, and ſeemed very uneaſy when the wounded parts were preſſed upon. Her breathing was without ſtertor, but performed at ſome interval, as if ſhe did not wiſh to inſpire until obliged by neceſſity. The pulſe, which was full and labouring, intermitted every fourth or fifth ſtroke.—Eight ounces of blood were immediately taken away, and an opening medicine given, which procured three ſtools, after which ſhe was ordered a mixture, containing aqua ammoniæ acetatæ, and antimonial wine. —The next day *(Friday)*, ſhe was rational,

put

put out her tongue when deſired, and ſaid ſhe had no pain in her head; her breathing was more regular, and her pulſe free from intermiſſion. *(Saturday,)* ſhe was ſtill more ſenſible, and gave ſome account of herſelf; complaining now of head-ach, and general uneaſineſs. The mixture was continued, the purging medicine given again, and a bliſter laid on between her ſhoulders.—*(Sunday,)* her pulſe was harder; ſhe was ſenſible, but reſtleſs; complained of pain in her forehead, ſat up in bed, and wanted to go home. Six or eight ounces of blood were taken from her temples, and the mixture ordered to be continued as before.—*(Monday,)* ſhe was much more compoſed; but as ſhe had ſtill ſome pain in her head, a bliſter was applied to it. —*(Tueſday,)* ſhe had ſlept quietly during the night, anſwered rationally, but with quickneſs, and eagerly deſired to go home. As the bliſters appeared to have been ſerviceable, that on her neck was renewed.—*(Wedneſday,)* ſhe was perfectly quiet, and in every reſpect better; nor had ſhe, after this, any complaint worth mentioning.

CASE XIII.

A Frenchman, twenty-ſeven years of age, who had been many years in England, and (as it afterwards appeared) ſpoke our language perfectly, had met with ſome accident (but in what manner, I know not), in conſequence of which he was brought to the hoſpital. He was then very comatoſe, and expreſſed much uneaſineſs at being rouſed from that ſtate; yet he put out his tongue when bid, but did not give a rational anſwer to queſtions put to him, and his replies were made in his native language. His pulſe was regular, ſtrong, and about 96 in a minute. Ten ounces of blood were taken from his arm; and after being purged, the common ſaline mixture, with antimonial powder, was ordered to be given. In the night, he grew delirious, got out of bed, and tore the bandage from his arm; in conſequence of which he loſt a good deal of blood before it was perceived. This, however, ſeemed of uſe to him; for he became more tranquil after it, and lay quietly dozing till morning. Next day, he was more rational, and complained of pain in his head. When I

 told

told him that if he kept quiet, he would ſoon be well, he ſaid, he hoped ſo; and appeared ſolicitous to know what ſhould be done to him. His pulſe was only 80, and not ſtrong. A gentle laxative was given, and a bliſter applied to his head.—On the third day, he was much more ſenſible, ſpoke with clearneſs, and mentioned the pain being in the fore-part of his head; yet, when I aſked his age, he told me he was but ſixteen years old.—*Tueſday* (fourth day), he appeared more excited and wild; his tongue was dry, but his pulſe only 75. Nine ounces of blood were taken from the temporal artery.—Fifth day, his pulſe was only 70, and perfectly natural; yet he had pulled off the dreſſing from his bliſters, and ſeemed to be very irritable.—Sixth day, ſtill pain in his forehead, pulſe rather quicker, but tongue not furred. After this, he gradually recovered, without any particular ſymptom occurring, and without any other medical treatment.

It is not likely that, in either of theſe caſes, extravaſation, at leaſt to any conſiderable degree,

gree, had taken place within the head, ſince in neither of them was there ſtertor, dilatation of the pupils, or inſenſibility. They may, therefore, I think, be conſidered as exhibiting the ſymptoms which attend ſimple concuſſion. I have related them, to ſhew the circumſtances, upon which the reaſoning that follows is grounded.

The opinions that prevail amongſt ſurgeons reſpecting the treatment of concuſſion, are very different. Many late writers adviſe ſtimulating cordials, ſuch as wine and volatile alkali, to be given; while others purſue a directly oppoſite conduct. Nor do they agree in the account of the ſymptoms, which they conſider as depending on this ſpecies of injury. Moſt writers repreſent the ſubject, as if the deranged ſtate of the brain, which is the immediate conſequence of the ſhock, continued to the termination of the patient's illneſs or life; while, in the caſes given by Mr. Pott, the ſymptoms appear to proceed more from the inflammation which enſues, than from the concuſſion.

The

The whole train of ſymptoms following a concuſſion of the brain, may, I think, be properly divided into three ſtages. The *firſt* is, that ſtate of inſenſibility and derangement of the bodily powers which immediately ſucceed the accident. While it laſts, the patient ſcarcely feels any injury that may be inflicted on him. His breathing is difficult, but in general without ſtertor; his pulſe intermitting, and his extremities cold. But ſuch a ſtate cannot laſt long; it goes off gradually, and is ſucceeded by another, which I conſider as the *ſecond* ſtage of concuſſion. In this, the pulſe and reſpiration become better, and though not regularly performed, are ſufficient to maintain life, and to diffuſe warmth over the extreme parts of the body. The feeling of the patient is now ſo far reſtored, that he is ſenſible if his ſkin be pinched; but he lies ſtupid, and inattentive to ſlight external impreſſions. As the effects of concuſſion diminiſh, he becomes capable of replying to queſtions put to him in a loud tone of voice, eſpecially when they refer to his chief ſuffering at the time, as pain in the head, &c.; otherwiſe, he anſwers incoherently,

rently, and as if his attention was occupied by ſomething elſe. As long as the ſtupor remains, the inflammation of the brain ſeems to be moderate; but as the former abates, the latter ſeldom fails to increaſe; and this conſtitutes the *third* ſtage, which is the moſt important of the ſeries of effects proceeding from concuſſion.

Theſe ſeveral ſtages vary conſiderably in their degree and duration; but more or leſs of each will be found to take place in every inſtance where the brain has been violently ſhaken. Whether they bear any certain proportion to each other or not, I do not know. Indeed this will depend upon ſuch a variety of circumſtances in the conſtitution, the injury, and the after-treatment, that it muſt be difficult to determine.

With regard to the treatment of concuſſion, it would appear, that in the firſt ſtage very little can be done; and perhaps, what little is done, had better be omitted, as the brain and nerves are probably inſenſible to any ſtimulants

mulants that can be employed. From a looſe, and, I think, fallacious analogy between the inſenſibility in fainting, and that which occurs in concuſſion, the more powerful ſtimulants, ſuch as wine, brandy, and volatile alkali, are commonly had recourſe to, as ſoon as the patient can be got to ſwallow. The ſame reaſoning which led to the employment of theſe remedies in the *firſt* ſtage, in order to recall ſenſibility, has given a kind of ſanction to their repetition in the *ſecond*, with a view to continue and increaſe it.

But here the practice becomes more pernicious, and leſs defenſible. The circumſtance of the brain having ſo far recovered its powers, as to carry on the animal functions in a degree ſufficient to maintain life, is ſurely a ſtrong argument that it will continue to do ſo, without the aid of means which probably tend to exhauſt parts already weakened, by the violent action they induce.

And it ſeems probable that theſe ſtimulating liquors will aggravate that inflammation which muſt

muſt ſooner or later enſue. The acceſs of it, in the caſes which I have related, is ſufficiently evident; and its cure is to be effected by the common methods. The great benefit of evacuations was, in thoſe caſes, very evident. Indeed, it appears to me, that there is no complaint which requires ſuch means to be more rigorouſly proſecuted, than an inflammation of the brain or its membranes. But as I deſign to relate ſome caſes, with a view to elucidate the ſymptoms which attend that diſeaſe, I ſhall poſtpone any further remarks on this ſubject.

In addition to the reaſoning which I have offered here, I would obſerve, that ſurgical books abound with caſes in which ſuitable evacuations have been freely employed in concuſſion, with the beſt effects; while the advocates for a contrary practice have reſted their arguments upon vague theory, and communicate no particulars of their ſucceſs.

If the foregoing caſes exhibit the genuine marks of concuſſion, the adminiſtration of cordial

cordial medicines, which has been ſo much recommended, appears to be very ill adapted to the relief of ſuch an injury. In what caſe then does this treatment ſeem adviſable?— The following, which is a caſe of ſimple concuſſion, and ſo violent in degree as ſoon to prove fatal, is related, that the reader may judge what conduct ought to be purſued in ſuch circumſtances.

CASE XIV.

W. Thomas, about thirty years of age, fell from the top of a brew-houſe, a height of at leaſt 80 feet. His hand being ſtretched out, firſt ſuſtained the ſhock, by which the carpal bones were ſeparated, and driven upwards, ſome before, and others behind the ends of the radius and ulna, the articular ſurfaces and perioſteum being at the ſame time forced off the latter bones. I mention theſe particulars to ſhew the great violence of the fall. The man's head afterwards ſtruck the ground, as appeared by a bruiſe on his face; but the cra-

nium

nium was not injured. When brought to the hoſpital, he appeared almoſt deprived of life, his body being cold, and his pulſe ſcarcely to be felt. The gentlemen then attending, put his feet into warm water, and gave him an opiate.

After this he gradually became warmer, and it was obſerved that there was not much dilatation of the pupils, and but little ſtertor in reſpiration. I ſaw the patient next morning, at which time his ſkin was very hot, and he perſpired copiouſly. His breathing was repeated at regular intervals, but the expirations were made with unuſual force. The pulſe was extremely irregular, both in frequency and in ſtrength; generally about 140 in a minute. His pupils were moderately contracted, his eye-brows drawn into a frown as if he ſuffered pain. When I ſpoke to him ſoftly, he did not anſwer. I pinched his hand ſlightly, but he did not move; but when I repeated this a little harder, he drew it away with ſeeming vexation. He diſliked

that

that his eyes ſhould be examined. When, by ſpeaking loud, I rouſed him, and inquired if his head ached, he anſwered, Yes. I got him to ſwallow ſome opening medicine, which emptied his bowels; and four leeches were applied to his temples; but they extracted very little blood, and I thought his pulſe countermanded any further evacuations.

In the afternoon, he appeared better. His pulſe was more regular, and his ſkin of a more natural temperature; his pupils, however, were more contracted, and his ſenſibility increaſed. I tried the effect of giving him forty drops of tinct. opii, thinking it might diminiſh ſenſibility, and keep him quiet for ſome time, during which the vaſcular ſyſtem (which ſeemed to be particularly deranged) might perhaps regain its powers. The opiate increaſed his diſpoſition to ſleep, and he appeared to ſuffer leſs pain; but in the evening, his pulſe was more feeble and frequent, and his ſkin hotter, and quite wet with perſpiration. Wine was now given to him, but without any apparent benefit; the powers and actions of life gradually diminiſhed, and before morning he died.

On diſſection, there appeared every mark denoting violent inflammation of the brain and pia mater, of ſhort duration. The minute arteries of the pia mater were turgid with blood; in many places there was the appearance called blood-ſhot, which was alſo to be ſeen in the lining of the ventricles. Dark-coloured, and in ſome places, bloody, coagulable lymph filled all the receſſes between the tunica arachnoidea and pia mater. On dividing the ſubſtance of the brain, all its veſſels appeared as if injected with blood.

I am inclined to believe that the medical treatment of this patient did him neither much good nor harm. The means employed ſeem to have acted on him as on a perſon in health. The opening medicine rendered him cooler, and quieted a little the diſturbed actions of the ſyſtem. The opiate made him more ſtill, and diſpoſed him to ſleep.

I leave it to practitioners to conſider, whether cordials would have been of any ſervice in this caſe. Would they not rather, by ſtimulating the nervous ſyſtem, have increaſed

the diſturbance of the ſenſorium, and, by exciting the heart and arteries, have tended to aggravate the inflammation of the brain?

It has hitherto been conſidered as a deſirable object, to point out any marks by which we might diſtinguiſh between compreſſion and concuſſion of the brain; but I believe no ſuch criteria have yet been communicated to the public. I think, however, that theſe diſeaſes may in general be diſtinguiſhed. As far as my obſervation goes, the inſenſibility is much leſs in concuſſion, eſpecially after a ſhort time has elapſed. Patients in this caſe, though they ſeem reluctant to anſwer queſtions, yet complain much if their heads are moved; and in thoſe inſtances where it was judged neceſſary to inſpect the bone, I have generally found that they made great complaint during the operation. The pupils alſo are uſually more contracted than in compreſſion of the brain, the muſcles of the limbs retain their natural ſtate of tone, and reſpiration is performed with

little or no ſtertor*, though the pulſe generally intermits in a very conſiderable degree. In the ſlighter caſes of concuſſion, the ſickneſs of the patient is often very great.

But, in caſes of compreſſion of the brain, circumſtances, very much the reverſe of thoſe juſt related, take place; the ſenſibility is much diminiſhed in proportion to the degree of the injury; from this cauſe alſo the pupils are dilated, and the limbs relaxed; the reſpiration is attended with ſtertor; and the pulſe, as far as my obſervation extends, is ſubject to much leſs intermiſſion.

SECTION V.

On Inflammation of the Pia Mater.

Although inflammation of the pia mater is too frequent a diſeaſe to need illuſtration by the relation of caſes, yet I take the liberty of

* But the abſence of ſtertor muſt not be relied on as a proof that there is no compreſſion; for Morgagni relates diſſections of apoplectic perſons, where the effuſion was conſiderable, yet no ſtertor had occurred; and I have ſeen caſes where it took place only in a very ſlight degree.

relating

relating one, in order to recall to the remembrance of the experienced, the train of ſymptoms which are likely to occur in this complaint, and to impreſs the nature of them on the minds of ſtudents; when I ſhall afterwards offer thoſe remarks which I have been able to make from my own opportunities of obſervation.

I am induced to take this ſubject into conſideration, from a perſuaſion, that, if it were omitted, a conſiderable deficiency would appear in this Eſſay.

CASE XV.

A man, between thirty and forty years of age, whoſe head had been cruſhed between a cart-wheel and the wall, was admitted into St. Bartholomew's Hoſpital, under the care of Mr. Pitts. The integuments of the cranium, and the upper edge of the temporal muſcle, were both torn, and much bruiſed. The patient was ſenſible when received into the houſe. He was immediately bled, and took a purgative medicine. The next day he com-

plained of conſiderable pain in his head; upon which ſaline medicines, with antimony, were preſcribed. On the third day he was worſe; and on the fourth he became delirious and frantic; he frequently endeavoured to get out of bed, and ſtruggled violently when prevented. I now, for the firſt time, ſaw the patient, by the deſire of Mr. Pitts, who was gone out of town. The progreſs and ſymptoms of the complaint clearly ſhewed that it was an active inflammation of the pia mater. The patient was therefore bled largely, and a bliſtering-plaſter applied over the greater part of his head. The next day he was quieter, and more diſpoſed to coma; but when rouſed, he was ſtill irrational and impatient. On the following day (the fifth), the coma had increaſed much; and as the bone was laid bare by the wound, it was thought right to expoſe it more extenſively, in order to ſee if the ſtate of it indicated the propriety of applying the trephine. I accordingly removed a little of the ſloughy temporal muſcle, beneath which I found the pericranium naturally adherent. I alſo ſcraped the denuded bone, and found

that

that it bled freely in every part. This circumſtance contra-indicated any operation, and confirmed me in the opinion which I had formed of the diſeaſe, viz. that it conſiſted of active inflammation of the brain and its membranes. Two days after this the man died. On diſſection, the dura mater was found every where naturally adherent; the pia mater was much inflamed, and a conſiderable quantity of turbid fluid was collected between theſe two membranes, and alſo in the ventricles of the brain*.

In the inſtance juſt given, of this very frequent diſeaſe, the diſtinct interval which occurred between the immediate conſequences

* When the former part of this Eſſay was printed, I deſigned to have printed three caſes in which inflammation of the pia mater proved fatal, in order to have ſhewn ſome varieties in the ſymptoms of that diſeaſe; but two of them have been omitted for the ſake of brevity; in one of which the inflammation began on the third day after a ſmall portion of the ſkull had been beaten in, though the depreſſed part was immediately elevated. This caſe has been alluded to in a former part of this Eſſay.

of the injury and the ſubſequent fatal inflammation, renders the nature of the caſe particularly clear. This, however, does not always happen; and when it does not, the inflammation is frequently confounded with the immediate effects of concuſſion.

The inflammation of the dura mater, which occaſionally ſucceeds to injuries of the head, has been well deſcribed by Mr. Pott. Patients labouring under this complaint are feveriſh, have a conſtrictive pain in the head, but continue rational, and give a clear account of their ſymptoms, until matter forms, or inflammation of the internal parts enſues. This is what we might naturally expect from the ſtructure of the dura mater, the manner in which it is ſupplied with blood, and its veſſels having little connection with the brain. When the pia mater becomes inflamed, as the brain derives a conſiderable portion of its blood through the veſſels of that membrane, the diſeaſe is inſtantly communicated to the cerebrum, and deranges its functions. This derangement varies in its nature and degree, accordingly as the

the inflammation of the pia mater is more or leſs violent; as it is confined to the ſurface, or extends to the internal parts; as it produces a greater or ſmaller ſecretion of fluid which compreſſes the brain; or as it is more or leſs blended with the effects of concuſſion. The ſtate of the patient will vary conſiderably under theſe different circumſtances. If the inflammation be violent and general, the patient will be irrational and diſturbed, having his mind ſtrongly affected by wrong ideas, and endeavouring to act in conſequence of them. If the inflammation be moderate, and affect the ſurface only, he will be irrational, uneaſy, reſtleſs, and perhaps endeavour to get out of bed, but without the violence of mania. Should a moderate inflammation be blended with the effects of concuſſion, he will have leſs appearance of irrationality, will lie pretty quiet, and inattentive to ſlight impreſſions, as appeared in the caſes related.—I am not able to particularize every variety that may occur in the ſymptoms; but in all, there muſt be more or leſs derangement of the powers, both mental and corporal, depending upon the

degree

degree of inflammation *.—The ſymptoms which chiefly characterize the complaint, are thoſe of an increaſe of ſenſibility; the pupils of the eyes are contracted; the patient often withdraws his arm on being touched, and his pulſe and tongue denote general as well as local inflammation. It ſeems of the utmoſt importance, that thoſe means which in general cure inflammation, ſhould be proſecuted very vigorouſly at the commencement of this complaint, ſince otherwiſe, although they may check, they will not overcome it. Large blood-lettings, briſk purging, and extenſive counter-irritation by bliſters, ought to be employed at the very commencement; for, if omitted, then the diſeaſe will become eſtabliſhed, and the powers of the body will ſoon be too much ſunk to admit of the ſame active treatment at a later period.

* An unuſual infirmity of the bodily powers is ſometimes obſerved, accompanied with tremors, low delirium, and exceedingly rapid pulſe; yet, on diſſection, a ſlight inflammatory appearance of the pia mater and brain is all that can be diſcovered. Such a ſtate ſometimes occurs after an abſceſs has formed in the brain.

I have

I have here repreſented the general effects of inflammation of the pia mater when it ariſes from previous violence. In other caſes indeed, where it comes on, as it were, ſpontaneouſly, or without any powerfully exciting cauſe (in which caſe it generally falls under the care of the phyſician), it has appeared to have affected the brain but little, and to have been very ſlow in its progreſs, and inactive in its nature. In ſuch caſes it has produced a depoſition between the tunica arachnoidea and the pia mater, or a collection of ſerum between the former membrane and the dura mater. Under theſe circumſtances, I have learned that the rationality of the patient has been ſcarcely deranged. And as ſuch a ſtate of diſeaſe may occur after an accident, I have therefore thought it right to mention it in this place.

Caſes of Diſeaſe of the Bone and Dura Mater.

The diſeaſes of the cranium, and conſequent affections of the dura mater, have been well deſcribed by ſome French and German ſurgeons.

ſurgeons*. But as they have not, I believe, been explained by Engliſh writers, I ſhall confirm the accounts which we have received of them, by additional caſes; and afterwards offer ſome remarks on this ſubject.

CASE XVI.

A man, between thirty and forty years of age, was ſalivated for complaints in his head, ſuppoſed to be venereal. There were two tumours of the ſcalp; one a little before the coronal ſuture, and the other a little above the poſterior ſuperior angle of the left parietal bone. The man's health was greatly reduced by the courſe of medicine he had undergone, as well as by the diſeaſe, which had conſiderably increaſed during the uſe of mercury. The integuments covering the poſterior tumour, had ulcerated; and a probe could be paſſed under them ſo as to diſcover a conſi-

* Vide Monſ. Louis' Memoire, in the fifth volume of the Mem. de l'Acad. de Chirurgie, and Haller's Diſputationes Chirurgicæ.

derable

derable extent of bare and carious bone. The ſurgeon, under whoſe care he was admitted into the hoſpital, divided the integuments, and perforated the diſeaſed bone, which was found ſeparated from the dura mater. That membrane alſo had a very morbid appearance, being covered with a ſoft ſubſtance of a dirty reddiſh colour. On preſſing down the dura mater with a probe, to ſee if it was detached to any extent, nearly a table-ſpoonful of healthy pus iſſued from beneath the bone, about an inch behind the part perforated. The ſurgeon thought this might be ſufficient to relieve, and therefore deferred making another perforation. But the man, who had lain ſtupid, though not irrational, and had ſubſultus tendinum accompanied with great debility, grew ſhortly after delirious; in which ſtate he continued about two days, when he became convulſed, and died.

On diſſection, purulent matter was found on the dura mater beneath both the carious portions of bone. The membrane alſo, which

was

was detached, was much thickened, ſo as in ſome degree to indent the ſurface of the brain. The pia mater was generally inflamed; and a larger quantity of fluid than uſual was found in the ventricles.

CASE XVII.

An old man was admitted into the hoſpital for a complaint of giddineſs and pain in his head. Upon examination, a tumour was perceived over the left parietal bone, into which an inciſion was made, and a good deal of matter diſcharged. The pericranium was found to be detached for three inches in length, and two in breadth. In the middle of the bare bone, which ſeemed to be dead, and really was ſo, granulations of a healthy appearance had ſprouted up. Theſe aroſe from the dura mater, and had made their way through the bone. The patient's health, which was moderately good at the time of his admiſſion into the hoſpital, gradually declined; and, after about ſix weeks, the pain in his head became

particu-

particularly ſevere. From this time he became gradually comatoſe, took no food, and ſoon died.

On diſſection, the dura mater, beneath the carious bone, was found detached, and had granulated. Much pus lay between the left hemiſphere of the brain and the falx; and the whole of the dura mater covering the right hemiſphere was lined with healthy pus, which adhered to its ſurface, and appeared to have been ſecreted by that membrane.

The caſes of diſeaſed bone which require perforation of the cranium, have not been ſufficiently treated of by any Engliſh writer. Mr. Pott has, indeed, noticed the diſeaſe and death of portions of the ſkull, that ſucceed to contuſions; but he has not ſufficiently explained the affections of the membranes of the brain, which even theſe diſeaſes ſometimes occaſion. The circumſtance which ſeems particularly to have attracted his attention, is the inflammation and ſuppuration in the diploë, which proceed from injury done to the bone.

bone. The exiſtence of that complaint, however, is eaſily known; for while there is a fixed pain in that part of the bone, there is no general inflammation, or but very little, of the dura mater. The diſeaſe continues, too, a much longer time without producing any ſeriouſly bad ſymptoms, than any diſorder of the internal parts could do. When matter is formed in the diploë, the pericranium will certainly ſeparate from the bone, and the external table of the ſkull will undoubtedly periſh. In a caſe ſo clearly marked, the conduct to be purſued is obvious, which is, to remove a portion of the external table with the trephine, ſo as to diſcharge the matter collected in the diploë, without which no relief can be obtained. I have ſeen, in ſeveral caſes where the operation was performed early, that the external table came away within the circle of the trephine, the matter was diſcharged from the medullary part of the bone, and the internal table remained ſound and entire, covering the dura mater. Granulations ſoon aroſe, and the patients got well, with the exfoliation only of a portion of the outer table. The miſ-

chievous

chievous conſequences of delaying the operation when once the diſeaſe is known, muſt be evident; for the matter collected within the bone, having no natural outlet, will preſs on every ſide, firſt gradually deſtroying the diploë, ſometimes extending itſelf over almoſt the whole of the cranium, and at laſt occaſioning the partial abſorption of both tables, ſo that the ſkull after death ſhall be found perforated with a number of holes, like a piece of worm-eaten wood. Theſe holes afford a diſcharge to the matter, which not only oozes out beneath the pericranium, but alſo inſinuates itſelf between the ſkull and dura mater; till at length the patient ſinks, worn out by the irritation and fever which this painful and extenſive diſeaſe creates; unleſs, as it ſometimes happens, he is previouſly deſtroyed by inflammation attacking the membranes of the brain.

Suppuration of the diploë, and the death of a portion of the bone, are the common effects of injury done to the cranium; and ſuch a morbid ſtate may indeed occur at ſome di-

ſtance of time from the receipt of the injury. But the diſeaſe which the caſes repreſent, generally ariſes without an obvious cauſe. An affection of the dura mater is almoſt the neceſſary conſequence of ſuch a diſeaſe in the bone. In ſyphilis it probably takes place later than in any other inſtance; for that diſorder attacks the outſide of the ſkull, which it gradually deſtroys; the inner table and the dura mater remain ſound till the laſt. But when, as in the complaint I am now conſidering, the whole bone is involved in diſeaſe, we can no more expect that the dura mater ſhould remain unaffected within, than that the pericranium ſhould continue ſound and attached without; for that membrane may be regarded as the perioſteum to the internal table of the ſkull. It is well known that, in general, the dura mater ſeparates, and becomes thickened from a depoſition and ſubſequent organization of coagulable lymph between its layers. This thickening is ſometimes conſiderable, ſo as to form a tumour which cauſes an indentation in the cerebrum; as happened in a very remarkable degree in the caſe of the

Sieur

Sieur le Gallois, related by M. Louis*. Sometimes the dura mater ſecretes pus, which being confined within the cranium, produces inflammation of the brain, &c. At others, granulations ariſe from the irritated membrane, and, making their way through the bone, form thoſe tumours ſo well deſcribed in the Memoir juſt referred to. This took place in one of the caſes I have related; and is a remarkable inſtance of the power which granulations poſſeſs of removing bone. The diſeaſe, however, does not confine itſelf to the part firſt attacked; for if the irritated ſtate of the dura mater be not appeaſed, thickenings will take place in other parts of that membrane; or the inflammation becoming more extended, ſuppuration may be produced even over the oppoſite hemiſphere of the brain, as happened in both the caſes which I have related.

I do not mean to ſay that in every caſe of diſeaſed cranium, even where both tables of the ſkull are equally affected, the perforation of the

* See Mem. de l'Acad. de Chirurg. tom. V. It alſo took place more ſlightly in one of the caſes which I have related.

bone is indiſpenſably required. I know it often happens that the bone exfoliates, without any bad effects having been produced.

But ſurely no ſurgeon, who perceives the danger of delay, would heſitate to remove all the dead portion of bone, if ſymptoms denoting general irritation of the dura mater take place. The beſt event that can be expected, is, that the bone will at length exfoliate without much pain to the patient, or injury to his conſtitution. By removing the dead bone, and giving an early and free diſcharge to any matter collected beneath it, the irritation which it occaſioned will be taken away, the diſeaſed ſtate of the dura mater will gradually ſubſide, and healthy granulations ariſe from its ſurface; nor will any farther diſeaſe occur in other parts of that membrane. M. Louis tells us, at the concluſion of the Memoir already quoted, in what manner experience had taught him to treat fungi of the dura mater. He ſays that "the whole of "the tumour ſhould be expoſed, which can- "not happen till the bony circle which con-

"ceals

" ceals its baſis, is removed; and that after-
" wards means ſhould be employed to deſtroy
" the fleſhy excreſcence*." Although the deſtruction of the fungus might be proper for the ſake of expedition, and although it can perhaps be attended with no harm, by whatever means effected; yet it may not be neceſſary. Like other animal fungi, it will probably ceaſe to grow, and ſoon diſappear, when the irritation which occaſioned it has been removed.

In caſes of tumours forming within the ſkull, it is of conſequence to determine from what part they proceed. In general, they will be found to ſpring from the dura mater, and to be the effect of diſeaſe in that membrane, induced and kept up by irritation. Surgeons have endeavoured either to reduce them by cauſtic; to reſtrain them by preſſure; or to take them off by ligature or the knife:

* The excellent effects of ſuch bold but judicious practice are well ſhewn in a caſe related in the 9th Paper of Haller's Diſputationes Chirurgicæ, Vol. I. in which a piece of diſeaſed bone, ſix inches and a half in circumference, was removed.

and the excreſcences have either ceaſed or continued to grow, according as the irritation which gave riſe to them has been removed or not. If the former happened, the ſurgeon has ſometimes attributed undeſerved merit to the means he had employed for the cure.

Thoſe tumours which come from *within* the dura mater, may poſſibly differ in their kind in different diſeaſes; but all that I have ever ſeen were of the ſame nature; and thoſe have been deſcribed in a former part of this Eſſay.

What I have written muſt appear very deficient, if it be conſidered as regarding the effects of injuries of the head in general. But my intention has been only to endeavour to illuſtrate particular points of practice, by a relation of caſes ſelected from a conſiderable number of each kind.

A

SUPPLEMENT

TO THE

ESSAY

ON THE

LUMBAR ABSCESS.

SINCE my former publication on this ſubject, I have met with ſeveral intereſting caſes, which I ſhall now relate, together with the concluſions drawn from them, in the order in which they occurred.—It may not be improper, however, previouſly to mention, that George Tucker, the perſon on whom I firſt tried this method of diſcharging the matter without leaving a permanent opening in the cyſt, and whoſe body I have, not long ago, had an opportunity of examining, never had the leaſt return of his complaint. After quitting the hoſpital, he travelled over a conſiderable part of England

for two years, during which time he lived very irregularly. When I next ſaw him, he had come up from Portſmouth to get into St. Bartholomew's Hoſpital, on account of an ulcer on the prepuce, accompanied with eryſipelatous inflammation and ſloughing; for which he was admitted, and ſoon got well. In relating his caſe, I have ſaid that he had a conſtant cough, and probably diſeaſed lungs. This opinion has ſince been verified; for, about a year and a half ago, he was ſeized with hæmoptyſis, of which he died. When I opened the body in order to inſpect the ſeat of his former complaint, I found ſome difficulty in raiſing the peritonæum from the pſoas and quadrati lumborum muſcles, owing to a thickened ſtate of the cellular ſubſtance connecting theſe parts; but the alteration was ſo inconſiderable, that I believe it might have paſſed without notice in the ordinary diſſection of the body.—The ſpine had never been in the leaſt diſeaſed.

CASE

CASE I.

The next caſe which I had occaſion to ſee after thoſe already related, was that of Charles White, a patient of Mr. Blicke's, at St. Bartholomew's Hoſpital. This man, who was thirty-ſix years of age, and not unhealthy, had a lumbar abſceſs, which preſented beneath the faſcia of the thigh, and which there was no reaſon to ſuppoſe connected with any diſeaſe of the ſpine. From this abſceſs I diſcharged, by puncture, twenty-four ounces of healthy pus, and healed the orifice. The patient ſuffered ſome weakneſs and derangement of health; but they were not conſiderable. The operation was repeated every fortnight; and, by the fifth time of performing it, the quantity had decreaſed to four ounces. At the end of another fortnight, I made the opening to diſcharge the matter, larger than common, and did not attempt to unite it, but directed a poultice to be applied to the thigh, and the patient to be kept in bed. No perceptible derangement in his health took

place in conſequence of this. The lips of the wound granulated, which, I think, is always a good ſign; the faſcia ſeemed to adhere to the parts beneath; and in the courſe of a month he was thought well enough to leave the hoſpital, although there was ſtill ſome matter diſcharged from the wound. In a few weeks more, the part was entirely healed; nor had he afterwards any return of the complaint.

CASE II.

—— Harris, thirty-five years of age, had a conſiderable collection of matter beneath the integuments of the abdomen, forming a moderately prominent tumour, about three inches in diameter, and ſeated juſt above Poupart's ligament. The patient had ſuffered a great deal from pain in his loins; and the motion of the thigh had been much impeded, but was now tolerably free. Indeed there was no doubt that the matter had been originally formed in the loins; from whence it was violently impelled, ſo as to elevate the prominent integuments of the abdomen, whenever he coughed.

coughed.—By permiſſion of Mr. Long, under whoſe care he was admitted into the hoſpital, I punctured the tumour, and diſcharged about 24 ounces of pus, mixed with ſome flakes of a curd-like ſubſtance. The wound healed readily, and no conſiderable alteration of his health enſued, though he found himſelf weaker for ſome days after the operation. —At the end of a fortnight, I made a ſecond puncture, and let out between ſix and ſeven ounces of a turbid fluid. He now thought himſelf ſo much better than after the firſt evacuation, that he went out of the hoſpital; but returned again at the expiration of a fortnight, when, by a third puncture, ſix ounces of purulent matter were diſcharged; and, after another week, four ounces more were let out. A cauſtic was now applied to his loins, and four or five peas uſed to keep the ulcer open; from which time no matter could be diſcovered in the abſceſs during the ſix weeks that he remained in the hoſpital.

About eighteen months after this, he was admitted into the hoſpital on account of a fever

and

and ſore throat; and it appeared he had never experienced any farther complaint in his loins.

This caſe, I think, is very intereſting, inaſmuch as it contributes to prove that the cavity of a lumbar abſceſs may be entirely obliterated without the cyſt undergoing any of thoſe changes which generally take place when it is laid open.

CASE III.

William Hankes, when about twenty-eight years of age, had a collection of matter formed in his loins, which deſcended beneath Poupart's ligament, and elevated the faſcia of the thigh. The formation of this matter had not been attended with pain; neither were the motions of the thigh impeded during its collection. The elevated portion of the faſcia was about three inches in length, and two in breadth; and the impulſe communicated to it from the loins, on coughing, was diſtinct, though not very forcible.—I punctured the abſceſs, and diſcharged

diſcharged twelve ounces of pus, in which there were ſome flakes of coagulum. The wound healed ſpeedily, and the patient not only ſuffered no inconvenience, but even found himſelf better than before the operation.—After three weeks' time, the matter which was collected gave ſo little prominence to the faſcia, that, when I punctured it, I was apprehenſive of injuring the ſubjacent parts; and not more than between five and ſix ounces of pus flowed from the orifice on this occaſion.—As the quantity of matter contained in the abſceſs at firſt was ſmall when compared with that in many other caſes which terminated well, as the patient alſo was young, and apparently capable of ſuſtaining the degree of irritation likely to enſue, I thought there was no great riſque in leaving the orifice uncloſed. Accordingly, a poultice was applied over the part; and I hoped that, by thus endeavouring as much as poſſible to leſſen inflammation about the wound, I might prevent any conſiderable degree of it from taking place in the cyſt. For ſome time the faſcia felt ſore, and was painful when the integuments were preſſed;

preſſed; but this tenderneſs abated in about ten days; the diſcharge alſo leſſened, and there appeared ground to hope that the patient would ſoon get well. He was now attacked with pain in his loins, accompanied by fever: the diſcharge alſo increaſed, and had a fetid ſmell. Theſe ſymptoms, however, gradually abated, but left the patient greatly reduced in ſtrength. After a ſhort interval, he again experienced a ſimilar relapſe and recovery, by which his weakneſs was ſtill farther increaſed. He had been occaſionally troubled with cough, which now became very conſtant, but without any expectoration; and I obſerved that he drew in very little air when he inſpired.—As the abſceſs diſcharged largely, and the ſtrength of his conſtitution was rather declining, I made a large iſſue in the integuments of his loins, with a view to leſſen the internal diſeaſe. This ſeemed to be of great ſervice; for the pain of his loins went off, and the diſcharge from the abſceſs abated gradually, and at laſt became inconſiderable. Still, however, he did not recover his health; and the country air was now recommended by Dr. Latham,

who

who had preſcribed for him, during his illneſs, thoſe medicines which his diſorder ſeemed to require. He accordingly left the hoſpital, and, at the end of ten months, returned to town; when the wound in his thigh ſtill continued to diſcharge a ſmall quantity of matter. Afterwards, a thickening of the integuments on the front of the thigh took place; and two or three ſmall ulcers formed there, which did not readily heal, but were ſometimes in a better and ſometimes in a worſe ſtate.—I ſaw him occaſionally, for two years, during which time he had tried the effect of ſea-bathing. His health, however, was not good, though it did not appear to me to ſuffer from the remains of the abſceſs, which neither occaſioned pain nor hindered his walking. At laſt, his ſtrength declining, he was again admitted into the hoſpital, under Dr. Latham's care. He was now much troubled with cough, and hectic fever; and, under the faſcia of the other thigh, oppoſite to the dorſum of the ilium, a freſh abſceſs appeared, which, however, had no communication with the abdomen. The powers of his conſtitution were

now evidently broken, and he gradually ſunk, and died.

Being greatly hurried for time during the only opportunity I had of inſpecting the body, my examination of it was very curſory. I can, therefore, only ſay that both lungs were irregularly and generally indurated; that the cavity of the original abſceſs ſtill remained open, but was contracted into a narrow fiſtula leading from the thigh to the middle of the pſoas muſcle. There was another large abſceſs on the oppoſite pſoas muſcle, which had not yet deſcended to the thigh, where, as has been already mentioned, there was alſo an abſceſs of conſiderable magnitude, but unconnected with this in the loins. The lumbar vertebræ were perfectly ſound.

That the death of this man was not owing to the original abſceſs in the loins, is to me very obvious. That abſceſs did, indeed, for a conſiderable time, greatly diſturb his conſtitution; but it afterwards became indolent, and acquired a ſtate incapable of exciting irritation.

tion. The derangement of health which he ſuffered, was, I think, uncommon; and the diſpoſition which different parts had to form matter, was alſo unuſually great.

CASE IV.

Having unfortunately loſt the minutes which I took of the next caſe that occurred in the hoſpital, I can only give ſuch a general account of it as my memory ſupplies. The ſubject of it, Doods King, who was under the care of Mr. Blicke, was about thirty years of age, and of a very ſickly aſpect. The abſceſs preſented beneath Poupart's ligament; it contained at firſt about 20 ounces of curdly matter, and was punctured four times, with the uſual progreſſive reduction in the quantity of matter diſcharged: but before the fifth time of opening, one of the punctured places ulcerated. There was indeed, from the beginning, in this caſe, a great diſpoſition in the ſkin to inflame and ulcerate, and it was with difficulty I could heal the orifices made to let the matter out. As ſoon as the cavity

had thus become open, a poultice was applied to the part, and confinement to bed ſtrictly enjoined. The patient became ſomewhat weaker, but no fever enſued. I did not ſuffer him to go about, however, for a long time, leſt the motion of the parts ſhould induce inflammation. The abſceſs at laſt became perfectly indolent itſelf, and un-irritating to the conſtitution; but it did not ſhew much diſpoſition to heal.—He was diſcharged in this ſtate, and promiſed to apply again if his complaint became troubleſome. I ſaw him about a month after his diſmiſſion, when he mentioned a deſign of going into the country; ſince which I have not heard of him.

CASE V.

A poor girl, nineteen years of age, whoſe ſpine was greatly diſtorted from diſeaſe of the bodies of the vertebræ, had a collection of matter formed in her back, which made its way along the right pſoas muſcle, and now diſtended the faſcia of the thigh ſo much, as to occaſion a redneſs of the integuments, and a diſ-

a diſpoſition in them to ulcerate. She was very thin, and of a delicate appearance; but her appetite was good, and her pulſe, though frequent, was regular, and moderately ſtrong. Iſſues were made in the integuments on each ſide of the curvature in the ſpine; and the abſceſs being punctured, two quarts of matter were diſcharged from it. At the end of a fortnight, I let out another quart, of a ſerous fluid rendered turbid by pus. After a like interval, fourteen ounces, and again ten ounces, of a ſimilar fluid, were evacuated. During all this time ſhe ſuffered no derangement in her health; on the contrary, both her appetite and ſtrength were increaſed; a convincing proof that it is not the quantity of matter diſcharged, but the irritation which patients undergo in theſe caſes, that exhauſts their ſtrength. Indeed, whoever reflects upon the great loſs of nutritive matter which is often ſuſtained with little injury by delicate females, where the contents of a diſeaſed ovarium are frequently drawn off, will readily admit this concluſion.

The patient now became rather feveriſh, her ſkin being hot and dry, and ſhe was thirſty and reſtleſs: at the end of the fortnight, the faſcia of the thigh was ſo little elevated, that it was difficult to puncture it, and ſix ounces of matter only were diſcharged. During the next fortnight, her health improved, and ſhe daily went out into the air upon crutches, which the deformity of her ſpine had long obliged her to uſe. I now wiſhed her to return home, and to come to the hoſpital every fortnight or three weeks, as ſhe might find it neceſſary. Before her diſmiſſion, however, I once more punctured the faſcia, and let out ſix ounces of fluid. This was done on Saturday; and when I came to the hoſpital on Monday, I was not a little ſurpriſed to find the tumour in the thigh as large and tenſe as when I firſt ſaw it. The integuments were alſo affected with conſiderable eryſipelatous inflammation; her pulſe was a hundred and ſixty, and very irregular; her breathing quick, and ſo extremely difficult as to indicate ſome uncommon affection of the parts concerned in reſpiration; her face, too,

expreſſed the greateſt diſquiet and alarm. All the account I could obtain from the patient was, that ſomething had burſt within her during the preceding night.—She did not continue long in this diſtreſsful ſtate, but died before I came to the hoſpital next day.

On examining the body, I found a great quantity of healthy pus beneath the faſcia of the thigh. I then traced the channel of the lumbar abſceſs (which was about an inch in diameter) up to the ſuperior part of the right *crus* of the diaphragm. I could not purſue it farther without dividing that muſcle; but I paſſed my finger through an opening in the diaphragm, and found that I could introduce it between the proceſſes of ſome of the dorſal vertebræ (which were carious and deficient), ſo as to touch the medulla ſpinalis. I now thought it right to open the thorax; and having removed the lungs, I diſcovered a large abſceſs which had formed beneath the pleura on the left ſide of the ſpine, and which ſtill contained ſome matter. From this alſo, I could paſs my finger through the ſpinal canal

to the abſceſs on the oppoſite ſide; the tranſverſe proceſſes of the vertebræ on both ſides being carious, and in part deficient.

It was now clear, that the abſceſs from which I had diſcharged the matter by puncture, extended from the dorſal vertebræ to the thigh; but that a large abſceſs had alſo formed on the oppoſite ſide beneath the pleura, which forced its way through the carious ſpine, and again filled the cavity of the primary one. But why the mere burſting of this ſecond abſceſs, in the manner deſcribed, ſhould have occaſioned ſuch extraordinary derangement of the ſyſtem, and eſpecially ſuch difficult reſpiration, is not ſo eaſily explained.

CASE VI.

James White, aged twenty-five years, came from Eſſex to be admitted into St. Bartholomew's Hoſpital, on account of a lumbar abſceſs. He had ſuffered much from pain of his loins for twelve months; and for ſome time paſt had experienced a difficulty in lifting up his right thigh. There was a curvature in the dorſal

dorſal vertebræ; but that, he informed me, was an old complaint. Yet, from the general appearance of the man, from the difficulty he had in moving the upper part of the trunk upon the lumbar vertebræ, and from the caution with which he attempted this motion, I could not but ſuſpect a diſeaſe of the ſpine. Iſſues were therefore made in the loins; and on the 25th of June, I let out two quarts of purulent fluid from beneath the faſcia of the thigh. He had leſs pain in his back after the operation; and though he was teaſed with a cough, his ſtrength did not ſuffer any diminution.—On July 7th, I diſcharged from the abſceſs fourteen ounces more, of a turbid browniſh fluid. On the 17th, though the tumour in the thigh was inconſiderable, yet the part firſt punctured was elevated and inflamed. It ſeemed that the puncture in the integuments had healed, while that in the faſcia had not united firmly, but had ſuffered the matter to paſs through it, ſo as to elevate the ſkin. To remedy this, which threatened to lay open the cavity of the abſceſs, I was obliged to puncture it in an-

other place; and eight ounces of fluid were diſcharged. The patient was now in much better health than he had been for more than a year, and was able to lift up his thigh without pain. I therefore ſet him to exerciſe the muſcles in the neighbourhood of the diſeaſe, thinking that if the exertion did not produce irritation, it might anſwer a good purpoſe. With this view, he ſtood upon the leg of the ſound ſide, and alternately lifted up and let fall the other, until he was ſomewhat fatigued. By frequent repetition of this exerciſe, the muſcles of the diſeaſed ſide acquired conſiderable ſtrength; and in a little time he felt himſelf (to uſe his own expreſſion) "able to go to plough."

The faſcia of the thigh was punctured every fortnight for ſome time, and afterwards every three weeks. When he had been nearly three months in the hoſpital, he became tired of the confinement, and feeling himſelf ſtrong, was very ſolicitous to have the abſceſs opened, and ſuffered to diſcharge itſelf. The diſeaſe of the ſpine made me unwilling to comply with his deſire; and I ſent him into the country for three

three weeks, that he might aſcertain, by the journey, whether he was as ſtrong as he ſuppoſed; thinking that if he bore it without fatigue, it might be of ſervice to him. At the ſame time, I gave him ſtrict injunctions not to exert himſelf if his loins or thigh became painful; and, in that caſe, to return again by the firſt conveyance. It was five weeks, however, before he came back; when I found that the abſceſs had inflamed, and burſt, about twenty days after he left town; in conſequence of which he became ſo ill, that he could not bear removal. He was now in a moſt wretched condition, being ſcarcely able to turn in bed, from the weak and painful ſtate of his loins; his pulſe was rapid, and his ſkin hot, and he had occaſional fits of chilline ſs ſucceeded by ſweating. He became conſiderably better, however, and continued ſo for ſome time, in conſequence of the attention paid to him in the hoſpital; but his health again declined; and after ſeveral relapſes, with intervals of temporary amendment, he at laſt ſunk, and died at the end of three months from his re-admiſſion.

With

With a view to leſſen the exceſſive irritation which prevailed in the cyſt after the abſceſs had become open, I tried to inject a ſolution of opium, but could not force it above Poupart's ligament; though I think that the quantity which was injected, and which was retained for ſome time, proved of ſervice in this reſpect. The only way, I believe, in which injections could be applied to the whole extent of the ſac, would be, by making an opening immediately below Poupart's ligament, and introducing to the upper part of the abſceſs a piece of hollow bougie, or ſome ſimilar canula, through which the liquid might be puſhed by means of a ſyringe. But whether injections of this or any other kind would prove of ſufficient benefit to vindicate ſuch an attempt, my experience does not enable me to ſay.

On opening the body after death, I found that the abſceſs extended upwards to ſome diſeaſed vertebræ. The diſeaſed bone, however, did not immediately come into view on lifting up the peritonæum; for the tendinous expan-

expanſion which covers the bodies of the vertebræ, was ſtill entire, and formed a kind of cyſt diſtended with matter. When this was opened, it was found to contain pus, together with the fragments of three of the bodies of the lumbar vertebræ; there being ten or twelve detached pieces of bone lying upon the medulla ſpinalis, and ſurrounded with matter. This was evidently a peculiar diſeaſe of the ſpine, which neither cauſtics nor any other remedy could alter. It greatly reſembled that diſeaſed ſtate which ſometimes occurs in the carpus and tarſus, in which the ſmall bones compoſing theſe parts are broken down, and lie confined in a ligamentous capſule, ſurrounded with matter. If the dead portions of the vertebræ had not been thus confined, they might have had ſome chance of removal; but under the circumſtances already noticed, it is moſt probable that they would remain, and act as extraneous bodies, exciting irritation, and increaſing the diſeaſe.

CASE

CASE VII.

April, 1795.—Robert May, aged thirty, was about three years ago attacked with ſevere pain in his loins, which has continued in a greater or leſs degree ſince that time. In the beginning of the winter the pain became very ſevere, during the continuance of which he was unable to lift up his thigh; and ſoon after, he, for the firſt time, remarked a ſwelling in his groin. The pain then gradually abated, and he recovered the power of moving his thigh with tolerable freedom.—About three months ago, he diſcovered another ſwelling beneath the glutæus muſcle of the ſame ſide. The ſwelling on the front of the thigh appeared large and ſpherical, and the matter was forcibly impelled from his loins whenever he coughed. The patient, who was of a pale complexion, with ſlender feeble muſcles, had alſo conſiderable difficulty in performing the natural motions of the ſpine; from which circumſtances, as well as from the long continuance of the diſeaſe, it

ſeemed

ſeemed very probable that the vertebræ were affected.

The firſt time I punctured the abſceſs, about forty ounces of thin ſerous pus, mixed with ſome coagula, were evacuated. Three days after the operation, he had much pain in his back, on which account iſſues were made there, and were attended with relief. The abſceſs was punctured ſix times, at intervals of a fortnight, till at laſt the quantity of matter diſcharged did not exceed five ounces. His health during this time became much better; but the repeated wounds made by the lancet produced a conſiderable degree of enlargement in the lymphatic glands on the front of the thigh. This indeed had occurred to me in other caſes, but never in ſo great a degree. One of the largeſt of the glands ſuppurated and ulcerated; and the general tumour was ſo great, as to preclude any farther attempt to puncture the faſcia. I was therefore obliged to have recourſe to other means, from one of which I experienced much advantage. Having applied leeches and

aqua

aqua lithargyri acetati to the tumour, without any effect, I was induced to try emetics; one of which, conſiſting of half a drachm of vitriolated zinc and one grain of vitriolated copper, the patient took twice a week. The uſe of theſe was followed by a great abatement in the ſwelling of the glands; and no fluid was collected in the abſceſs for more than ſix weeks, although, during that time, theſe medicines were gradually left off.

As I could now do no more for the patient, and thought that he would recover his health ſooner out of the houſe, he was made an out-patient. In little more than a fortnight, however, he returned. A new inflammation had attacked his loins, where, as it appeared, the diſeaſe had not abated ſufficiently to allow of much exertion in exerciſe. He was again admitted into the hoſpital, in hopes that this attack might ſubſide during a ſtate of reſt. Very unfortunately, however, the ulcerated gland partook of the general inflammation, and the ſore enlarged. A poultice was now applied over the front of the thigh; but on the

the fourth day after his re-admiſſion, the ulceration extended into the cavity of the abſceſs; which circumſtance was known by the quantity of ſerous diſcharge that followed on the removal of the poultice; nearly a tea-cupfull of this kind of fluid came away daily.

Although his ſufferings were not immediately aggravated by the abſceſs being thus laid open, yet the parts ſoon acquired that ſtate which is uſually found to take place in lumbar abſceſſes, eſpecially when connected with a diſeaſe of the ſpine. The diſcharge became profuſe, thin, and fetid. He could ſcarcely move himſelf in bed, and felt, he ſaid, as if his back was broken. His appetite entirely forſook him, and his nights were paſſed without reſt. From this ſtate I certainly expected that he never would recover; yet, after lingering in it for more than two months, a change for the better took place. The ſides of the opening granulated, and both the quantity and fetor of the diſcharge abated. Some degree of appetite again returned, and he acquired ſufficient ſtrength to walk about the ward. The weather

ther was at this time warm; and as he had an opportunity of going to the ſea-ſide, I encouraged him to do ſo. His complaint, however, did not get any better there; on the contrary, he returned weaker than he went, with the addition of a conſiderable curvature of the ſpine about the lumbar vertebræ. His illneſs now ſeemed to be kept up rather by the diſeaſe of the vertebræ than by the peculiar ſtate of the abſceſs.—Iſſues were made in his loins, and confinement to bed enjoined. Under this plan, his health, for a ſhort time, improved; but the abſceſs continued to diſcharge profuſely, and he afterwards became hectical, and died. His body was removed from the hoſpital before I had an opportunity of examining the ſpine.—I have, in other caſes, ſeen people recover where the ſpine has been much diſeaſed, under ſimilar treatment. It ſeems to be very eſſential to preſerve the diſeaſed bone as free from motion as poſſible, and to keep up a conſiderable counter-irritation by iſſues.

CASE

CASE VIII.

Elizabeth Smyth, aged twenty-ſeven, had a lumbar abſceſs, which preſented beneath the faſcia of the thigh. The previous ſymptoms rendered the nature of the complaint indiſputable; and as ſhe not only ſhewed evident marks of a ſcrofulous habit, but alſo felt conſiderable inability in moving the ſpine, there was great reaſon to ſuſpect that the abſceſs originated from a diſeaſe in the bone. She was likewiſe troubled with cough, and drew in very little air when ſhe inſpired. Her appetite, too, was often deficient, and her bowels frequently diſordered. It may alſo be added, that her brother, who greatly reſembled her, was at this time a patient in the hoſpital, under Mr. Long, on account of a ſcrofulous diſeaſe of the ſpine, which had occaſioned an affection of the medulla ſpinalis. When all theſe circumſtances were taken into account, ſhe certainly appeared a ſubject by no means capable of ſuſtaining the irritation and diſorder which the burſting of a lumbar abſceſs might

be expected to produce. I therefore punctured the abſceſs immediately, and diſcharged from it twenty ounces of flaky matter: and having healed the wound, I gave her emetics of vitriolated zinc and copper, and afterwards of ipecacuanha, twice or three times a week, for ſix weeks. At the end of this time, there was ſo little matter in the abſceſs, that I thought it too ſmall to be punctured with ſafety; and as her health was too infirm to admit of the emetics being continued, I tried to produce abſorption of the remaining matter, by paſſing the electric fluid through the abſceſs. Very ſmall electric ſhocks* were accordingly ſent from different parts by the ſide of the lumbar vertebræ, down to the groin, and upper part of the affected thigh;

* Theſe ſmall ſhocks, which, for the ſake of diſtinction, I ſhall call electric vibrations (a term, I believe, generally applied to them), were made by diſcharging a ſmall jar, the coated ſurface of which did not exceed fourteen ſquare inches: and by placing the ball of the electrometer at a ſmall diſtance from the conductor, generally about a quarter of an inch, one of the diſcharging rods was moved about on the upper part of the thigh, and the other on the loins, ſo that the electric fluid might paſs through the abſceſs.

and, under this treatment, the contents of the abſceſs ſoon diſappeared, nor did any farther collection of matter take place during the time of her remaining in the houſe, which was nearly two months. The electricity alſo brought on the menſtrual diſcharge, which for a long time had been very irregular; and her general health was greatly improved before ſhe left the hoſpital*.

CASE IX.

Elizabeth Hart, about thirty years of age, had ſuffered greatly from pain in her loins, for ten months. During that time, matter had formed, and made its way down beneath Poupart's ligament, in ſuch quantity as conſiderably to diſtend the faſcia of the thigh. She was much reduced in ſtrength, and in the appearance of health, by this complaint; but as her conſtitution was good, and ſhe could move the ſpine with facility, there was no reaſon to ſuſpect any diſeaſe of the bone.

* I have lately heard, that the abſceſs has not appeared again, though a year has ſince elapſed; but the pain in her loins, has (as might be expected) recurred.

I punctured the abſceſs, and diſcharged two quarts of very healthy pus, ordering her occaſional emetics after the orifice had cloſed. She could not continue them regularly, however; as, during their uſe, her bowels became diſordered, and ſhe loſt her appetite and ſtrength. The accumulation of matter was, notwithſtanding, evidently delayed by them; for when, at the end of three weeks, I next punctured the abſceſs, only one quart of ſerous fluid was evacuated. After the ſpace of a month had elapſed, another quart was diſcharged. During this time ſhe had taken emetics occaſionally; but her health was far from good, and the pain in her loins was ſtill conſiderable.—I had now witneſſed the beneficial effects of electricity in the caſe of the laſt patient, and reſolved upon trying it here. It was accordingly repeated three times a week, for three weeks. At firſt, a ſmall collection of fluid in the abſceſs was perceptible; but this was gradually abſorbed; and by the end of the third week, there was no longer any pain in her loins, her health was greatly improved, and ſhe was able to walk about, without

out the leaſt appearance of her former complaint. She was therefore diſcharged from the houſe; but came once a week, for ſome time, to be electrified*.

The two laſt caſes point out to notice a remedy that is likely to be of much advantage in the future treatment of lumbar abſceſs. My experience of it, however, has not yet enabled me to determine how far it may be *generally* beneficial. In one inſtance where I employed it after the abſceſs had been once punctured, it kept the matter from collecting for a long time; but the patient growing tired of the confinement, and apprehenſive leſt the lancet ſhould be again employed, left the hoſpital without my knowledge.—Of another, and ſomewhat analogous diſeaſe, in which it was tried, though not with complete ſucceſs, I ſhall here relate the particulars; firſt remarking, that all the obſervations which I have made on electricity applied to diſeaſed parts,

* This patient remains at preſent in perfect health; nor is there any reaſon to expect a relapſe.

lead me to conclude, that it acts as a ſtimulus, which has the peculiar effect of accelerating that proceſs which happens to be going on at the time.—Thus, in ſome ſtates of inflammation, it haſtens ſuppuration, whilſt in others it promotes diſperſion. We ſhould therefore always endeavour, previous to the uſe of this remedy, to bring the tumour or abſceſs into that ſtate in which its progreſs is ſtopped, and in which, perhaps, it is rather inclined to recede; and by this rule I have been guided in the application of this remedy to lumbar abſceſſes.

I have alſo been attentive to proportion the number and ſtrength of the vibrations to the effect which they appeared to produce on the abſceſs: their operation ſeemed to be moſt beneficial when they occaſioned a kind of irritation or ſlight uneaſineſs in the part for a ſhort time after their application. But if this ſenſation amounted to pain, or if it was of too long continuance, I then ſuppoſed that the ſtimulus had been employed in too great a degree.

CASE

CASE X.

Iſrael Brooks, aged twenty-five, about two years ago, was firſt ſeized with violent pain in his loins, which prevented him from either riding or walking for ſome time. About three months afterwards, he had the rheumatiſm in the joint of one of his fingers, which ſhifted to his wriſt, where it produced a thickening and diſeaſe of that part; and at preſent, all the carpal bones are evidently diſeaſed, and diſplaced. This diſeaſe alſo attacked his left knee, where it occaſioned an enlargement of the joint, that ſtill continues. Two months after this, he diſcovered a ſwelling beneath the glutæus muſcle, which has gradually increaſed; and ſince that time the pain in his loins has become much leſs ſevere, but a ſenſation of great weakneſs remains. This abſceſs was ſhewn to me at the hoſpital, as an inſtance of a remarkably large one; and there was no doubt but that it contained between two and three quarts of matter. There was alſo a prominence of the faſcia on the front of the

thigh below Poupart's ligament, accompanied with evident fluctuation. The ſeveral gentlemen who examined this latter tumour, thought they could perceive an impulſe given to it from within, whenever the patient coughed; whence it was ſuppoſed to have its riſe from a lumbar abſceſs: but whether the abſceſs under the glutæus muſcle communicated with the loins or not, we were unable to determine, as no ſuch impulſe could be felt in it.

I gave the patient emetics of vitriolated zinc and copper; and kept up an eruption of pimples on the ſkin covering the abſceſs, by rubbing it with a ſtrong ſolution of tartariſed antimony. Gentle electric vibrations were alſo daily paſſed from the loins through the front of the thigh, and alſo through the glutæal abſceſs. By this treatment, continued for two months, the tumour was very much reduced in ſize; that is, as far as could be judged of by the eye; for its ſituation prevented any accurate meaſurement of it. In ſpite of our endeavours, however, the patient's health had declined ſince his admiſſion

miſſion into the hoſpital; and in proportion as he loſt ſtrength, his other local complaints became worſe.—As it was now ſummer-time, and he had an opportunity of going to the ſea, which had formerly been of ſervice to him, I punctured the glutæal abſceſs without loſs of time, let out three pints of healthy pus, and then healed the opening. His weakneſs increaſed conſiderably after this diſcharge, and all his other complaints were much aggravated. The electricity was ſtill perſevered in; and at the end of three weeks, the quantity of matter in the abſceſs was very ſmall; I cannot ſuppoſe it was more than eight ounces.—I very much wiſhed to have had an opportunity of making freſh punctures in this caſe; but the ſtate of the patient's health obliged me, however reluctantly, to diſcharge him from the hoſpital.

I have always found that abſceſſes, evacuated in this manner, filled again to one half or two thirds of their original quantity in the ſpace of a fortnight: ſo that here alſo, the beneficial

neficial effects of electricity are, in my opinion, ſufficiently manifeſt.

Theſe are all the caſes of lumbar abſceſs that I have had the treatment of ſince my former publication on this ſubject. There are, however, ſome circumſtances in two others that I have ſeen, which I think deſerve attention, and which I ſhall therefore briefly relate.

CASE XI.

Catharine Vallance, nineteen years old, of a healthy appearance, but having a conſiderable inclination of her body forwards, from a former diſeaſe of the dorſal vertebræ, had, for twelve months before I firſt ſaw her, laboured under ſevere pain of her loins, accompanied with fever. There was at that time a large lumbar abſceſs, the matter of which had deſcended to the upper part of the thigh, where it diſtended the integuments, ſo as to render them prominent and thin. A ſurgeon pricked this

tumour

tumour with a lancet, and let out more than a pint of very healthy pus; by which the bulk of the ſwelling was ſcarcely diminiſhed: but as no more matter would flow, a piece of ſticking-plaſter was applied over the orifice. Four days afterwards, another ſurgeon, obſerving that the integuments were inflamed, and the punctured part much diſpoſed to ulcerate, made another aperture, at ſome diſtance from the former, and diſcharged three pints of good pus; which completely emptied the cavity. The laſt puncture being attentively cloſed, healed readily; and the firſt loſt its diſpoſition to ulcerate. The young woman continued perfectly in health for ten days, when ſome little diſtention of the abſceſs again occurring, the firſt puncture ulcerated; in conſequence of which the collected matter made its way out, and left a permanent opening into the cavity. Conſiderable fever now came on, the patient's pulſe was rapid, her tongue white, and her ſkin hot and dry; but theſe ſymptoms abated after a ſhort time, and ſhe again recovered her former ſtate of health; the abſceſs not falling into any ſecondary ſtate

of

of diſeaſe after the inflammation went off; nor did any hectic fever take place after the firſt derangement of the conſtitution had ſubſided.

Another abſceſs now preſented itſelf, in the ſame ſituation, on the oppoſite ſide. As ſoon as this had acquired ſufficient prominence to give ſecurity to the parts beneath, it was punctured; twelve ounces of healthy pus were let out, and the orifice was cloſed. When the matter collected again, the wound, made to diſcharge it, was ſuffered to remain open. The inflammation which took place in the cyſt in conſequence of this, was very ſlight, and hardly affected the conſtitution: the parts ſoon became indolent, diſcharging but little matter, and both the abſceſſes healed gradually.

It is now three years ſince this caſe occurred; and I have lately ſeen the patient, who has experienced no inconvenience from the complaint ſince that period.

CASE

CASE XII.

A young woman had a lumbar abſceſs, preſenting in the upper part of the thigh, from which a ſurgeon diſcharged, by puncture, nearly a quart of matter, and healed the opening. At the expiration of a fortnight, a ſecond puncture was made, and twelve ounces of matter let out. The laſt orifice was cloſed like the firſt, but after a few days it ulcerated, and the cavity of the abſceſs became expoſed. The patient now growing very ill, was admitted into St. Bartholomew's Hoſpital. Her pulſe was quick, but not deficient in ſtrength; her tongue white, and her ſkin hot and dry: the diſcharge from the abſceſs was not great, but the pain of her loins was very ſevere. A large poultice was applied to the thigh; and the common ſaline mixture, with ſmall doſes of antimonials, was given. In the courſe of a week, a conſiderable change took place; her pulſe, though ſtill quick, was rather feeble; her tongue moiſt, and not furred; and ſhe had

had frequent perſpirations without any evident cauſe: the pain in her loins abated conſiderably, and the diſcharge from the abſceſs became copious, thin, and fetid. She now began to take the Peruvian bark, and in the ſpace of a month gradually recovered from this ſtate of debility. Having acquired ſtrength enough to ſit up, and to walk a little about the ward, ſhe one day imprudently went into the air, and walked until ſhe was much fatigued. The conſequences of this were, a return of the pain in her loins, with quickneſs and hardneſs of her pulſe, white tongue, and hot and dry ſkin. As the pain and fever went off, they were ſucceeded by an increaſed diſcharge from the abſceſs, and irregular perſpirations, which gradually abating, the abſceſs at length became indolent, and no longer affected the conſtitution. Warned by her former experience, ſhe now took exerciſe very cautiouſly; and when ſhe found ſhe could bear motion without exciting irritation in the abſceſs, ſhe went into the country, where ſhe regained her health; the abſceſs healed,

healed, and ſhe has ſince continued perfectly well.

When a permanent opening is made in a lumbar abſceſs, the part generally falls into a morbid ſtate, and this is accompanied by a ſympathetic affection of the conſtitution, correſponding in its nature with the local complaint. In the firſt of the two caſes juſt now related, both the local and conſtitutional diſeaſe were of a more purely inflammatory kind, than in any other that I had ever ſeen; nor was it ſucceeded by that ill-conditioned ſtate of the ſore, accompanied with a thin fetid diſcharge, and hectic ſymptoms, which ſo frequently occur in this diſorder. In the ſecond caſe, as the patient's general health was tolerably good, the diſeaſe in the beginning approached to the nature of common inflammation, then gradually acquired the uſual ſtate of theſe abſceſſes, but afterwards became indolent; the ſympathetic affection of the conſtitution exactly correſponded to the ſtate of the abſceſs. At firſt the fever was inflammatory, then hectical;

tical; and when the local complaint became indolent, the general ſtate of the patient's health was no longer affected. Theſe circumſtances ſtill more ſtrongly appeared after the accidental re-excitement of the inflammatory ſymptoms.

When I firſt began to open lumbar abſceſſes in the method I have recommended in this and my former Eſſay on the ſubject, I was extremely ſolicitous to do it in ſuch a manner that the inner part of the aperture might act like a valve, to prevent any matter from oozing out, ſo as to keep the orifice open. I have found, however, that great care in this reſpect was quite unneceſſary. I now make the opening with very little obliquity, and by uſing a broad abſceſs lancet, the wound is generally ſufficient io give a diſcharge to thoſe coagula which are ſo frequently found in the matter. I always completely empty the abſceſs, and then bring the lips of the orifice together

gether by means of lint and ſticking-plaſter, as after the operation of phlebotomy; and over theſe a compreſs and bandage are applied. I dreſs the wounds every ſecond day, and of late have found little difficulty in healing them, though many of them granulate before they completely unite. The only troubleſome circumſtance that has lately occurred to me, has been an enlargement of the lymphatic glands on the front of the thigh, at the place where the abſceſs has been opened.

I ſhould not have been ſo particular in deſcribing what may, to ſome, appear unneceſſary minutiæ, had I not known inſtances where this mode of treatment was completely fruſtrated from want of attention to them.—With regard to the time of repeating the operation, it muſt be regulated entirely by the circumſtances of the caſe; the matter collecting much faſter in ſome perſons than in others. It is beſt, I think, to wait until the integuments are ſufficiently elevated to allow of a puncture being made in them without any hazard of wounding the parts

underneath.—Many patients bear even the firſt diſcharges without any loſs of ſtrength, notwithſtanding the quantity of matter evacuated is very conſiderable; and almoſt all that I have ſeen, improve in health under the ſubſequent ones. The great diſturbance that enſues, when, either by accident or deſign, a permanent opening is made in a lumbar abſceſs, ſhould render ſurgeons extremely anxious to avoid ſuch an occurrence altogether, if poſſible, or, at leaſt, to delay it for a conſiderable time: and although the danger and the ſufferings of the patient, when the abſceſs is opened, will be much greater where there is diſeaſe of the vertebræ; yet, as we had an opportunity of obſerving in the third caſe, this caution cannot be diſregarded with ſafety, even when there is no reaſon to ſuſpect any morbid condition of the ſpine.

The great benefit derived from occaſional emetics and electricity, encourages me to hope that many of theſe abſceſſes may be diſperſed without any permanent expoſure of their cavity, and that thus the patient may eſcape

eſcape the ſufferings and hazard to which ſuch an operation neceſſarily expoſes him.

Where the vertebræ are ſound, the diſturbance excited by opening the abſceſs will in general ſubſide gradually, and the wound will at laſt become indolent; in which ſtate it may remain for a conſiderable time before it entirely heals, but without affecting the patient's conſtitution. Perfect quietude ſeems indiſpenſably neceſſary in the irritable ſtate of this diſorder. I have thought iſſues very uſeful in ſome caſes; but in others I could not perceive much advantage derived from them. A ſolution of opium injected, in one caſe, ſeemed beneficial, though it did not aſcend above Poupart's ligament. From reflecting that the ſtate of the conſtitution follows, and correſponds with, that of the abſceſs, I am ſtrongly inclined to believe, that injections may be uſeful, in preventing the cyſt, when it has become open, from acquiring that morbid condition which induces the hectic fever. In the records of former practice, we read of many extenſive abſceſſes, into which irritat-

ing injections were daily thrown. According to the ideas which now prevail among ſurgeons, the additional irritation excited by theſe, would be ſuppoſed to create great miſchief; yet, we are told that theſe patients recovered perfectly, and perhaps for the very reaſon I have ſuggeſted, viz. becauſe the abſceſs was prevented from falling into the peculiar morbid ſtate which induces hectic fever.

The injecting the cavity of a lumbar abſceſs cannot, I believe, be effected, unleſs a flexible pipe, ſuch as a hollow bougie, could be introduced into it from beneath Poupart's ligament; when the injection might be thrown in, and applied to the whole ſurface of the cyſt. In general, however, it would require a new opening to be made through the ſkin and faſcia below Poupart's ligament, in order to effect the eaſy introduction of ſuch a canula.

I have very little to obſerve reſpecting the medical treatment of theſe diſeaſes. I ought, however, to mention, that I thought the ad-

miniſtration of opium, at regular intervals, and in doſes proportioned to the cauſe which required it, was very uſeful in mitigating the pain and irritability of the abſceſs, and in conſequence the correſponding hectic fever. Although later experience has ſhewn me, that lumbar abſceſs and diſeaſed vertebræ are more frequently connected with each other than at firſt I ſuppoſed, ſtill I think it probable that they are much leſs ſo than was formerly believed. It is, perhaps, a curious circumſtance, that, in the firſt eight caſes of which I gave an account, there was no reaſon to ſuppoſe any diſeaſe of the ſpine exiſted. In the preſent twelve caſes which I have related, the three patients who died, periſhed from the extraordinary degree of the diſeaſe in the bone. One woman, whoſe abſceſs was diſperſed by electricity, has, in my opinion, a diſeaſe of the ſpine, and may, on that account, be liable to a return of the complaint. All the other caſes, where the diſeaſe was unconnected with carious vertebræ, did well, although in ſome of them the abſceſs was

large, and the health much impaired by its formation.

At the concluſion of my former Eſſay on lumbar abſceſs, I ſuggeſted, that this mode of letting out fluids contained in ſacs might prove uſeful in ſpina bifida. Only one inſtance of this diſeaſe has ſince occurred to me; and in it the circumſtances were ſuch, that little could be hoped for from any means.

CASE XIII.

A child, about four months old, was brought to the hoſpital for advice. From its ſcreaming violently at times, and being alſo occaſionally affected with ſtrabiſmus, I thought there might be ſome diſeaſe within the head; but yet the child ſucked heartily, and its bowels were in a natural ſtate. But the complaint which principally required attention, was a ſpina bifida; the tumour was as large as an orange, and the dura mater which formed the

ſac,

ſac, had protruded through a vacancy in the upper part of the ſacrum. The integuments covering the tumour were as thick and inelaſtic as the upper leather of a ſhoe, except at one part, where ulceration had lately taken place, and formed an opening through which the fluid contained in the dura mater had juſt begun to eſcape. The thickened ſtate of the integuments probably aroſe from a variety of irritating applications being employed to diſperſe the tumour.—As I knew that the child muſt ſhortly periſh if nothing were done, I punctured the ſwelling at ſome diſtance from the ulcerated part, and let out ſix ounces of perfectly limpid fluid. I then cloſed the aperture by means of ſticking-plaſter, dreſſing the ſore with mild ſalve, and, afterwards laying a compreſs over the whole, made a ſlight degree of preſſure on the part by applying moderately broad ſlips of ſticking-plaſter over the compreſs. Upon removing theſe dreſſings the ſecond day after the operation, I found the puncture quite healed, the ulcerated orifice cloſed, and the ſore having a

healthy appearance: the ſac was now about half filled. In two days after, the ulcer was much better, and the ſac nearly full. I now again diſcharged by puncture about the ſame quantity of limpid fluid, and afterwards applied the compreſs in the ſame manner. The thickened ſkin fell into wrinkles when the fluid was let out, but ſhewed no diſpoſition to contract. The puncture was repeated every fourth day for ſix weeks, during which time the child's health continued unaffected; but the great obſtacle to recovery ſtill remained, viz. want of contractility in the ſkin, the dimenſions of which did not ſeem to have varied from what they were at firſt. The plaſter which covered one of the punctures being now by ſome accident rubbed off, the fluid continued to ooze out; nor could this orifice be afterwards brought to unite. The diſcharge gradually changed from a limpid to a puriform appearance; and in a few days the child died, but with much leſs pain, convulſion, or ſigns of inflammation, than in any caſe that I had ſeen.

When

When the body was examined, I diſcovered more than one error in the formation of the ſpine and parts connected with it. There was not only a deficiency of bone, which allowed the dura mater to protrude and elevate the integuments in the manner already deſcribed, but the medulla ſpinalis, or a ſubſtance of an apparently ſimilar nature, was continued into the ſacrum, and there joined to that part of the dura mater which made the front of the bag. The nerves compoſing the cauda equina went off at their uſual place. But there were other nervous filaments which aroſe from the unnatural prolongation of the medulla ſpinalis mentioned above, and which, like it, terminated in the dura mater forming the ſac.

In ſome caſes of ſpina bifida, the ſkin covering the tumour has not a natural texture; but in this caſe the diſeaſed ſtate of it was the effect of improper treatment. Under ſuch circumſtances, much benefit cannot be expected from this mode of treatment; but

where

where the integuments are ſound, and naturally elaſtic, and where the malformation conſiſts merely in a defect of a ſpinous proceſs, I entertain hopes that a gradual contraction of the ſac may enſue, if it be occaſionally emptied, and moderately compreſſed. This unſucceſsful caſe is related, as it ſhews, that, where the circumſtances are more favourable, the attempt at a cure may at leaſt be made without any hazard.

EXPERI-

EXPERIMENTS

ON

IRRITABILITY.

FONTANA obſerved, that a muſcle which could no longer be excited to contract beneath water, was yet capable of acting again when removed from that ſituation, and expoſed for ſome time in contact with air previous to its being ſtimulated. This obſervation ſuggeſted an idea, that air was in ſome way or other conducive to irritability. In the *Journal de Phyſique* are two Memoirs, by Dr. Girtanner, in which that gentleman endeavours to prove that irritability depends on the oxygenous gas taken into the blood during reſpiration, and is in a direct ratio to the quantity admitted; an opinion which ſome later writers in this country ſeem inclined to adopt. It is difficult, however, to conceive,

conceive, how oxygenous gas ſhould in ſo eſſential a manner ſupport the irritability of the body; and the opinion that it does ſo, is contradictory to all the ideas of that function, which we derive from general phyſiological reſearch.—The queſtion, if not abſolutely to be determined, yet as it appeared to me capable of being illuſtrated by experiment, I endeavoured to examine in the following manner:

EXPERIMENT I.

If the newly-diſcovered method of exciting animal electricity be employed, a vivid contraction of the muſcles will follow, as long perhaps as they retain their power of acting in this way. I accordingly had recourſe to this mode of excitation, in order to aſcertain how long muſcular action would continue under certain circumſtances.

Having killed a frog, I ſeparated the pelvis and lower extremities from the trunk, deprived them of their ſkin, and divided them at

at the ſymphyſis pubis. One leg was put into a bottle containing oxygenous gas procured from manganeſe, and which was very pure; the other into a bottle containing atmoſpheric air: the quantity in each bottle was about ſix ounce meaſures, and the limbs were ſupported in the airs, and wholly ſurrounded by them. After five hours, the muſcles had nearly ceaſed to act in both limbs; thoſe, however, of the thigh belonging to that limb incloſed in the common air, acting more vividly than the others; but in a little time, even theſe could be no longer excited.—Upon comparing the limbs afterwards, the muſcles of that which had been expoſed to the oxygene gas were evidently the moſt flabby.—Several other trials were made with a ſimilar reſult; whence I am diſpoſed to conclude, that oxygenous gas has no greater power of ſupporting the irritability of parts *ſeparated* from an animal, than the common atmoſphere.

In ſome of the experiments, the muſcles have continued to act after eighteen hours, but

but with little difference of ſtrength in the two limbs. This variety in the duration of the excitability probably depends on the degree of vigour poſſeſſed by the individual animal from which the limbs were taken; for all thoſe gaſſes which are injurious when reſpired, generally deſtroy the life of the detached parts of animals in nearly an equal ſpace of time.

EXPERIMENT II.

Having prepared the limbs of another frog in the manner deſcribed in the former experiment, I introduced one of them into a bottle of azotic, and the other into a bottle containing an equal quantity of hydrogene gas, in order to ſee the comparative effects of theſe fluids upon animal irritability. The limb which was kept in azotic gaz for two hours and a half, was incapable of being any longer excited; but that in the hydrogene gas acted faintly after being kept nearly four hours in that gas: the former alſo, on examination, appeared very flabby.—Several repetitions of this

this experiment afforded the ſame conſequences.

EXPERIMENT III.

The prepared limbs of a frog were put into two equal quantities of carbonic and nitrous gas: both limbs ceaſed to act in an hour and a half.

EXPERIMENT IV.

One limb of a frog, prepared in the manner deſcribed, was incloſed in a veſſel of carbonated hydrogene gas: at the end of an hour and a half, it would no longer contract. The other limb was immerſed in water, from whence, after an hour and a quarter, it was taken out ſtiff and without action: but on ſoftening the rigid muſcles by the application of warmth with moiſture, and afterwards expoſing the limb to the air, I again excited perceptible contractions.

EXPERI-

EXPERIMENT V.

I put one prepared limb of a frog under the exhauſted receiver of an air-pump; it lay on a plate of glaſs ſupported by a cup: Zinc was placed beneath the thigh, and gold under the leg; and by means of a probe paſſing through a collar of leather, I could touch both metals, ſo as to excite the muſcles to contraction. This I did occaſionally, and found the limb capable of excitement for twenty-two hours. The correſponding limb which was left expoſed to the atmoſphere, alſo contracted at the end of that time; ſo that it was doubtful which of them retained their powers in the greater degree.

The ſame experiment was repeated ſeveral times, with reſults ſo nearly alike, that I am induced to believe irritability continues very little longer in common air than it does in the exhauſted receivers of an air-pump.

I have frequently produced numerous contractions in the limbs of frogs incloſed in azotic,

azotic, hydrogenous, and other gaſſes; which likewiſe tend to ſhew that the cauſe of irritability does not depend upon oxygene for its power of action.

Theſe experiments, I think, ſhew the impropriety of a term now commonly employed, by ſome perhaps metaphorically, but which many receive in a literal ſenſe, I mean, the exhauſtment of irritability during the contraction of the muſcles: ſurely, if it was exhauſted, it could not be ſo completely renewed as to continue to produce vivid contractions for a long time under ſuch a variety of circumſtances.

The event of theſe experiments, however, imparts no new information; it only tells us what we knew before,—that azotic, carbonic, and hydrogenous gaſſes are, in different degrees, injurious to life; and that oxygene gas, by itſelf, is not more beneficial than common air. The experiments ſhewing the long continuance of life and action in muſcles placed under an exhauſted receiver, are, however,

worthy of notice; as they ſeem to prove, that the cauſe of irritability, when once it has been formed, does not require the aſſiſtance of external matter for the performance of its functions; and that it is leſs ſuſceptible of change in this ſituation, than when expoſed to the influence of the different gaſſes, which perhaps impair its vigour, or conduct it away from the animal fibre.

That the decompoſition of oxygenous gas in the living body is the great ſource of animal heat, ſeems now to be fully proved; but how far it contributes to the production of irritability or of the living principle, we are not at preſent perhaps competent to determine. If the phænomena of irritability, like thoſe of electricity or magnetiſm, ſhould depend upon a ſubtile matter connected with another of a groſſer nature, we have no more reaſon to ſuppoſe that it conſiſts of oxygene, than of any other chemical ſubſtance. I am far from meaning to deny the great utility of oxygene in the functions of the animal body; but I think its importance has been over-

over-rated.—I infer that it is not eſſential to vitality, becauſe different tribes of animals partake of it in very different degrees, and thoſe which have leaſt of it are by no means the leaſt vivacious. In warm-blooded animals, the air-cells of the lungs are very numerous and ſmall, and the colouring matter of the blood exiſts in great quantity; ſo that a ſtrong attraction of oxygene takes place from a ſurface of immenſe extent. In the amphibia, the ſurface is leſs from the great ſize of the air-cells; and there is leſs of the attracting matter. In fiſhes there is ſtill leſs oxygene applied to the gills, and ſtill leſs attraction for it in the blood*. The conſequence is what we might

* That oxygenous gas combines with the blood, and imparts to it a ſcarlet colour, was, I think, ſufficiently proved by the experiments of Doctor Prieſtley; but as this is a circumſtance ſtill doubted by many, I beg leave to relate an experiment which I made, in order to examine this ſubject ſtill more fully.—I took the coagulum of venal blood left in a baſon after bleeding, and turning it bottom upwards, waited till its ſurface had become of a ſcarlet colour: I then took ſlices of this ſurface, and ſimilar ſlices of the interior part of the coagulum, which had a very dark appearance, and expoſed them repeatedly to azotic and nitrous gaſſes. The ſcarlet colour gradually faded upon ſuch ex-

poſure,

might naturally expect,—a leſs production of heat in thoſe animals which are the leaſt capable of acquiring oxygene gas. There is, however, no correſponding decreaſe, but, on the contrary, an augmentation of vitality. —Again, if we reflect on the life of hydatids in cloſed ſacs, of animalcules in the ſeminal veſicles, liver, gall-bladder, &c. and the length of time that many inſects will continue to live, even when immerſed in ſpirits, I think we muſt confeſs, that the preſence of oxygene gas does not appear ſo eſſential to animal life, as many perſons have of late ſuppoſed.

poſure, and the azotic gas being afterwards examined, was found to contain oxygenous gas, while the nitrous gas was much diminiſhed, doubtleſs by combining with the ſame principle. The gaſſes to which the dark-coloured blood was expoſed, underwent no change in this experiment. That blood takes oxygenous gas from the air when it becomes florid, will not, I ſuppoſe, be denied; and the experiment I have related, ſhews that it will again part with it, though ſlowly, without any alteration in its temperature. When I expoſed the ſerum of the blood to azotic gas, I did not find any oxygenous gas was given out by it; and this, as well as other reaſons, have led me to entertain the opinion, that one great uſe of the colouring matter of the blood is, to readily combine and part with oxygenous gas.

SURGICAL

SURGICAL CASES

AND

REMARKS.

Of the Operation for the Aneuriſm.

ALTHOUGH the experiment of tying the artery above an aneuriſm has been repeatedly made, ſufficient experience has not yet been acquired to enable us, with certainty, to prognoſticate the event of ſuch an operation. The two following caſes are therefore offered to the public, with a view to contribute ſomething to the preſent ſtock of knowledge on this ſubject.

CASE I.

George Dickens, aged thirty years, about eight months before his applying at the hoſpital, was rather ſuddenly, and without any

evident cauſe, affected with pain extending from the calf of his leg towards the ham, and ſo ſevere as to make him limp as he walked. When this had continued for ſome days, he took notice of a ſwelling in his ham, which throbbed violently, and continued gradually to increaſe in bulk till the time of his admiſſion, March, 1795. The tumour was then of conſiderable ſize, but did not extend farther into the ham, than about two inches above the origin of the gaſtrocnemius muſcle. The pulſation was then obſcure; but on remitting the preſſure with the fingers after having continued it for ſome time, an influx of fluid into the tumour was ſo diſtinctly perceived, as to render the nature of the caſe not at all doubtful. The leg was œdematous, and an eryſipelatous bluſh ſurrounded the knee.—An attempt was made to compreſs the femoral artery juſt before it paſſed through the tendon of the triceps muſcle, in order to ſee if it would leſſen the ſize, or diminiſh the pulſation of the aneuriſm; but it gave the patient great pain, and conſiderably increaſed the ſwelling of his leg. After he had been a

fort-

fortnight in the hoſpital, the ſize of the aneuriſmal tumour, and the general ſwelling of the limb, were ſo much increaſed, that it was thought dangerous to defer the operation any longer. Mr. Blicke being indiſpoſed at the time, it became my duty to perform the operation, which I accordingly did in the following manner: Having made an inciſion about two inches and a half in length, through the integuments and faſcia of the thigh, near to the outer edge of the ſartorius muſcle, I ſeparated the parts with my fingers, until I had laid bare the tendinous expanſion which connects the lower part of the triceps muſcle to the vaſtus internus, under which the veſſels immediately lie. This being cut through, I immediately diſcovered the veſſels, and paſſing my finger beneath them, could diſtinctly feel the artery pulſate between my finger and thumb. Having thus ſeparated the veſſels from their ſurrounding connections for about an inch in length, I thought it of great conſequence to preſerve their attachments at the places

where they were to be tied. I therefore paſſed two common-ſized ligatures beneath them, and having ſhifted one upwards, and the other downwards, as far as the veſſels had been detached from their ſurrounding connections, I tied both firmly. The ligatures were about an inch aſunder, ſo that all that portion of the artery which had been detached, remained entire between them. It is right to mention, that no nerve was tied; but the veins accompanying the artery were included in the ligature. The divided parts were now brought together by means of ſticking-plaſter, except at the places where the ends of the ligatures were left hanging out of the external wound, which were reſpectively oppoſite to the part of the artery incloſed by them. The patient complained of much pain after the operation, occaſioned by the pulſation of the artery at the part where it was tied; and likewiſe of an uneaſy ſenſation of tightneſs extending from the wound down to the inſide of the knee: nor did theſe feelings entirely abate

abate for many days afterwards*.—The diſeaſed limb was rather colder than the other during the two firſt days; but at the end of that time it had acquired, and afterwards continued to poſſeſs, its natural warmth. In a few days the aneuriſmal tumour, and the ſwelling of the limb, were greatly reduced; the integuments united by the firſt intention both above, below, and between the ligatures; and from the openings where the ends of the threads hung out, there was a diſcharge of healthy pus, which rather increaſed in quantity for the firſt ten days, and then gradually diminiſhed. The upper ligature came away on the thirteenth, and the lower on the fifteenth day after the operation, and the openings left by them cloſed ſoon after.

I think it deſerves notice, that the portion of artery included between the ligatures, did not periſh, notwithſtanding it was neceſſarily

* Theſe ſymptoms determined me to divide the artery, in any future caſe, between the two ligatures; by which means it will be left quite lax, and the uneaſineſs in queſtion will, I think, be prevented.

deprived

deprived of all nouriſhment conveyed in the direction of the veſſels, and alſo had been completely detached by my finger during the operation from all its lateral connections.

The aneuriſmal tumour, which had leſſened very quickly and conſiderably at firſt, became afterwards much ſofter, its contents ſeeming to be converted into a fluid; and from that time it decreaſed very ſlowly. The patient therefore remained in the hoſpital two months after the wound was entirely healed; nor could he perfectly extend his leg at the time of his diſmiſſion.—I ſaw him about ten months afterwards, walking with very little appearance of infirmity: both legs were of the ſame ſize, and he told me there was very little remains of the ſwelling.

CASE II.

Feb. 1796.—James Lindſey, aged thirty-four, about a year ago perceived a ſwelling beneath the calf of his right leg; and ſoon after-

afterwards, whilſt walking, he ſuddenly felt, he ſaid, "as if he had been ſtruck on the part "by a cannon ball," the pain being ſo great that he could not move for ſeveral minutes. The pain, however, gradually abated; but the ſwelling of the leg had continued to increaſe ſince that time. The whole calf was now lifted up by a quantity of blood effuſed beneath it. The muſcles appeared thin, and were ſo extremely tenſe as to occaſion great pain, accompanied with conſiderable eryſipelas of the whole leg; ſo that a ſpeedy ulceration and ſloughing, or ſudden rupture of the diſtended part, was hourly to be dreaded. Under theſe circumſtances, tying the artery above the aneuriſm, was the only means of relieving the patient from his preſent ſuffering, and of preſerving him from ſudden death. But what was particularly diſcouraging, both to the patient and ſurgeon, was the diſcovery of another aneuriſm, ſituated in the femoral artery of the oppoſite limb. No preternatural pulſation, however, could be felt in any other part of his body.—The operation

was

was performed by Mr. Blicke, in the ſame manner as deſcribed in the foregoing caſe, with this addition, however, that when the two ligatures were tied, the artery was divided between them. The lips of the wound were then brought together by ſlips of ſticking-plaſter. This patient's limb was for ſome time much colder than the other, and nearly three days elapſed before it had regained its natural degree of warmth; but the tenſion, pain, and eryſipelatous inflammation quickly ſubſided. The divided integuments united above and below the ligatures, but not between them as they had done in the former inſtance; and there was alſo a larger diſcharge from the wound: both of which were probably owing to the ſtate of the patient's conſtitution, which was much reduced in point of ſtrength. This man, however, did not complain of the leaſt throbbing, tenſion, or pain in the wounded part; and this entire exemption from the ſufferings of the other patient, I could not but attribute to the diviſion of the artery. The upper ligature came away

on

on the tenth, and the lower on the fifteenth day; after which the wound healed gradually, though very ſlowly.

About five weeks after this operation, the aneuriſm in the oppoſite thigh was almoſt ready to burſt; the tumour having acquired a pyramidal form, and the ſkin covering the apex having yielded ſo much as to form a kind of proceſs from the tumour. Indeed the integuments at this part were ſo thin, that we every hour expected them to give way. The aneuriſm was ſituated ſo high, as to make it probable that the diſeaſe extended above the place where the arteria profunda is ſent off. The patient had hitherto refuſed to ſubmit to the operation; but on reflecting that if the tumour ſhould burſt in the night, he muſt periſh unleſs the bleeding veſſel could be immediately ſecured, he conſented to let me tie the artery in the groin whilſt we had daylight, and proper aſſiſtance. The tumour approached ſo near to the groin, as to prevent us from compreſſing the artery againſt the bone; for, in attempting this, the compreſs occupied

occupied the place where the inciſion ought to be made, and our endeavours to make a compreſſion ſtill higher, were ineffectual; they weakened, but did not interrupt the pulſation of the tumour. As the artery was ſo imperfectly compreſſed, hæmorrhage took place during the operation, which, though not dangerous to the patient, proved extremely embarraſſing to the ſurgeon; for in attempting to lay bare the faſcia of the thigh, I divided, by the very firſt inciſion, ſo many ſmall arteries ſupplying the inguinal glands, and alſo ſo many veins, that the blood which was poured forth, completely filled the ſpace made by the inciſion, and overflowed the ſide of the wound. The application of the ſponge, the uſual reſource on thoſe occaſions, was of no avail; for the wound was inſtantly filled again, ſo that the whole operation was to be done upon parts covered with blood, where the only guide in its performance was the feeling. I did indeed ſee ſome expoſed inguinal glands, and found that I had divided two of them in trying to get at the faſcia of the thigh. As ſoon as I could

diſtinctly

diſtinctly feel this part, I made a ſmall opening through it, and introducing my finger, I divided it upwards as far as Poupart's ligament, and downwards as low as the aneuriſmal ſac would allow me. The pulſation of the artery now ſerved as my guide. Laying aſide, therefore, all ſurgical inſtruments, I made way with my finger in a perpendicular direction, till I could touch its coats, and then, with my finger and thumb, ſeparated it from its connections, ſo as to be able to graſp it alone between them. I then paſſed two ligatures under it by means of an eyed probe, and drawing one of them upwards, and the other downwards, as far as the ſpace would permit, I tied them firmly. The upper ligature was about half an inch from the os pubis, and the lower one the ſame diſtance from the arteria profunda, which veſſel I had diſtinctly felt before I tied the ligatures.

There are, perhaps, few ſituations of aneuriſm where the artery can be tied ſo ſeparately and diſtinctly as here; the pulſation directs the ſurgeon to the preciſe ſituation of the

the veſſel; and if he only keeps ſufficiently cloſe to its ſides when he paſſes the ligature round, neither the vein nor the nerve can be included. I did not divide the artery between the two ligatures; it was ſuggeſted that I had better not; and I knew that I could obtain all the advantages of a relaxed ſtate of the veſſel, by merely bending the thigh upon the pelvis. The patient did not, after the operation, ſuffer any kind of pain from the wounded parts; which, I think, ſhews, that the artery did not inflame much in conſequence of the ligature. The ſuppuration was moderate, and every thing relative to the wound went on as well as could be expected. The limb, and particularly the foot, was colder than that of the oppoſite ſide; but in about three days, it gradually acquired its natural temperature; and it all along retained a perfect ſtate of ſenſibility, which I conſidered as a proof that it was ſufficiently nouriſhed. To prevent the heat from being carried off faſter than it was generated, the limb was wrapped in flannel; but I avoided the application of any artificial warmth, leſt its ſtimulus ſhould prove injurious,

rious, by exciting action when the powers of life in the part might have been conſiderably diminiſhed.

The blood in the aneuriſmal ſac did not appear to have coagulated before the operation; for the bulk of the tumour could be greatly leſſened by preſſure, whenever the patient would allow the attempt to be made; ſo that I conclude the limb had received nearly its uſual quantity of blood through the femoral artery, until that veſſel was tied. The tumour diminiſhed greatly after the operation, and the blood contained in it became coagulated. This reduction of the ſwelling, I think, was owing to a conſiderable part of the blood paſſing onwards through the femoral artery: and I regretted afterwards, that, at the time of the operation, I had not endeavoured to preſs all the blood from the aneuriſmal ſac; which experiment would have ſhewn how far it was fluid or coagulated.

Every thing, with reſpect both to the ſtate of the limb, and the patient's general health, went

on well till the fifteenth day, when the upper ligature unexpectedly ſeparated, and the blood guſhed in a full ſtream from the open extremity of the veſſel. This fortunately happened during the attendance of the ſurgeons at the hoſpital, and the bleeding was ſtopped by preſſure until their arrival. The ſtream of blood which flowed upon any remiſſion or wrong application of the preſſure, was ſo large, that we did not dare to remove the patient even from the bed on which he lay. Mr. Ramſden undertook, in this ſituation, to prevent the further eſcape of blood from the veſſel, whilſt I proceeded to tie the artery above Poupart's ligament. Accordingly, I firſt made an inciſion, about three inches in length, through the integuments of the abdomen, in the direction of the artery, and thus laid bare the aponeuroſis of the external oblique muſcle, which I next divided from its connection with Poupart's ligament, in the direction of the external wound, for the extent of about two inches. The margins of the internal oblique and tranſverſalis muſcles being thus expoſed, I introduced my fingers beneath

beneath them for the protection of the peritonæum, and then divided them. Next, with my hand, I puſhed the peritonæum and its contents upwards and inwards, and took hold of the external iliac artery with my finger and thumb, ſo that I was thus enabled to command the flow of blood from the wound. It now only remained that I ſhould paſs a ligature round the artery, and tie it; but this required caution, on account of the contiguity of the vein to the artery. I could not ſee the veſſels; but I made a ſeparation between them with my fingers. Having, however, only a common needle with which to paſs the ligature, I ſeveral times withdrew the point, from the apprehenſion of wounding the vein*. After having

* It would be, I think, an uſeful addition to our ſurgical inſtruments for ſuch purpoſes, to have needles made with handles of pure, and conſequently flexible, ſilver, and with ſteel points that have edges juſt ſharp enough to paſs through the cellular ſubſtance; but neither ſo pointed nor ſo ſharp, as to endanger the wounding any parts of conſequence that may be contiguous to thoſe round which they are paſſed. When the points of theſe inſtruments were once paſſed underneath the veſſel, the ſurgeon could bend their

having tied the artery about an inch and a half above Poupart's ligament, I divided that part, and thus laid the new and the former wound into one. I traced, as well as I could with my finger, the continuation of the artery, from the place where the ligature was now made, to that where it was formerly applied. I wiſhed to have divided the artery, and to have ſuffered it to retract behind the peritonæum; but I found it ſo attached to the ſurrounding parts, as to render ſuch diviſion difficult, and perhaps not adviſable.

The lips of the wound were brought together with ſticking-plaſter, and one ſuture only was made, oppoſite to the natural ſituation of Poupart's ligament. The peritonæum was preſſed back into its place, and the protruſion of it reſtrained by bringing together the integuments with ſtrips of ſticking-plaſter.

handles ſo as to accommodate them to the ſpace they have to turn in, and thus avoid an inconvenience which, I believe, moſt ſurgeons muſt have experienced; I mean, the great difficulty of turning a common needle in a deep and narrow wound.

No

No perceptible alteration occurred in the ſtate of the limb after this ſecond operation; but the patient's health was conſiderably reduced, by his having ſuffered from the complaint nearly twelve months, by having undergone three operations, and by the loſs of a conſiderable quantity of blood. No adheſion took place between the divided parts; the edges of the wound were open and ſloughy; the wound was painful, diſcharged a great deal of pus, and was ſo extremely tender, that he could not bear it to be touched. Still no great miſchief appeared till the fifth day after the operation, when a hæmorrhage of arterial blood took place in ſuch quantity, that there was no doubt but that it aroſe from the principal artery, though the ligature with which it was tied ſtill remained firm. The patient's health was now ſo impaired, and his weakneſs ſo great, that an attempt at tying the artery ſtill higher up, would have appeared like torturing him without any hopes of ultimate ſucceſs. The wound was therefore cleanſed and dreſſed; ſome compreſſes were applied upon it, and bound down by the ſpica bandage. By this

treatment the hæmorrhage was ſtopped; and the attendants were ordered to make a preſſure on the bandage if any freſh bleeding ſhould occur. The compreſſes were renewed for three ſucceeding days; and though occaſionally the wound bled, yet it was not profuſely, or in ſuch quantity as to deſtroy the patient: his ſtrength, however, gradually declined; a troubleſome cough occaſioned extreme pain in the wound, and in the courſe of the third day he died.

Diſſection.

No marks of diſeaſe were diſcoverable in the aorta, or in the internal iliac artery. The external iliac was covered by a great number of lymphatic glands, which prevented it from being readily diſtinguiſhed; yet, when ſeparated from theſe, it did not appear diſeaſed. For nearly two inches above the part which was tied, the lymphatic glands covering the artery were conſiderably enlarged, in conſequence of the irritation excited by the ligature. The external ſurface of one of them

next

next the wound, had ulcerated; and the ulceration penetrated through the gland, and communicated with the artery, as was afterwards proved by ſlitting open that veſſel. It was through this aperture that the blood had eſcaped; for the ligature ſtill remained firm upon that part of the artery which it had incloſed. From this ligature to the place where the veſſel had formerly been tied, the artery was ſo cloſely connected with the ſurrounding ſubſtance, that diſſection was required to ſeparate them. The parts of the artery from which the former ligatures had ſeparated, were about half an inch aſunder, and the canal of the veſſel appeared perfectly open.—The whole of the veſſels from the bifurcation of the aorta, to the aperture in the tendon of the triceps muſcle, were now removed, and carefully diſſected; and after being ſtuffed, and hardened by ſpirits, they were cut open to ſhew the ſtate of them internally. A coagulum of blood, about two inches long, was found above the part where the laſt ligature was made. At what time this coagulum had been formed, is perhaps difficult to

aſcertain; it did not ſeem to have taken place after death, for above it the artery contained no blood; and if it had occurred before death, it is probable that it would have prevented the hæmorrhage. I have already remarked, that the man did not bleed for ſome time previous to his death; in which interval, perhaps, this coagulum had been formed — The ulcerated opening from the artery through the diſeaſed gland, admitted the paſſage of a moderate-ſized bougie. The ligature, which ſtill firmly incloſed the artery, had brought its ſides in contact, ſo as to render it probable that they would have united. All the other parts of the femoral artery were quite open, ſo that a large bougie could be paſſed from the lower end of it, through the aneuriſmal ſac, to the place where the ligature now remained. About half an inch of the artery was wanting, which had been, as it were, cut out by the ligatures in the firſt operation. The ſides of the arteries below the part which was tied were thicker than natural, and their internal ſurface was rough, and of a yellowiſh white colour. The arteria profunda was filled with

coagu-

coagulated blood, and had become reduced to leſs than the natural ſize. The ſides of the artery of the oppoſite limb had firmly united at the part where it had been tied. No coagulum was found in it, and it had not diminiſhed in ſize in any remarkable degree above the part which was cloſed.

The laying bare a portion of an artery, and tying it, in order to ſtop the current of the blood, was in ſome degree a new operation in ſurgery. It is not wonderful, therefore, that errors were at firſt committed in the performance of it. The failure in this operation appears to have been of two kinds; firſt, that which aroſe from the inflammation and ulceration of the artery; and, ſecondly, that which proceeded from want of union between the ſides of the veſſel. When an artery was laid bare, and detached from its ſurrounding connections, the middle of the detached portion was tied with a ſingle ligature. An artery thus circumſtanced muſt neceſſarily inflame; which

it would do in different modes and degrees, according as the ſtate of the conſtitution, or of the part, was more or leſs healthy. It ſeems very probable that under theſe circumſtances the inflammation of that portion of the artery which had been detached from its natural connections, would proceed either to ſuppuration or ulceration, and in either caſe an outlet would be given to the contained blood. The occurrence of hæmorrhage led ſome ſurgeons to adopt a practice which I cannot but conſider as injurious. They applied a ſecond ligature above the other, leaving it looſe, but ready to be drawn tight if the firſt ſhould not anſwer. The ſecond ligature, however, muſt not only keep a certain portion of the artery detached from the ſurrounding parts, but muſt alſo give additional irritation to the inflamed veſſel; and on both theſe accounts it is more likely to make the inflammation end in ſuppuration or ulceration. For ſimilar reaſons, I think, pieces of wood, cork, or other ſubſtances, muſt be detrimental, as they require a greater detachment of the artery for their application, and afterwards irritate by their preſence.

They

They have been employed by ſurgeons with two views; firſt, to prevent the ligature from cutting the artery. In this reſpect, I believe their interpoſition is not neceſſary, as ſuch an accident ſcarcely ever occurs when the artery is tied in the uſual manner. Secondly, to compreſs a certain extent of artery, ſo as to cauſe adheſion of its ſides: but experience has proved that they will rather produce ulceration of the veſſel than this effect. Indeed the attempt to employ preſſure in this way requires ſo much dexterity in its application, and ſo much preciſion in regulating its degree, as to render it, in my opinion, inadmiſſible in common ſurgical practice. Mr. Hunter ſoon perceived the reaſon of the hæmorrhage after the operation, in the firſt caſes that occurred to him; he ſaw that the ulceration aroſe from an irritated and unſupported ſtate of the artery, and ſought to remedy the defect by cloſing the parts about it. The mode, therefore, which Mr. Hunter's experience and judgment taught him to adopt, was, to expoſe as ſmall a portion of the artery as poſſible, and, after having tied it, to

bring

bring the ſurrounding parts into contact with it again. It is ſcarcely poſſible, however, to paſs a ligature with certainty round a deep-ſeated artery without firſt introducing your finger beneath the veſſel; to do which, in general, nearly an inch of the artery muſt be detached. When the ligature is applied in the middle of ſuch a detached portion, ſo as to cauſe the death of that part incloſed by it, there will ſtill be a certain extent, both above and below the ligature, liable to ulcerate, particularly in unſound arteries. It ſeems to me, therefore, that it might be better to uſe two ligatures, as was done in the foregoing caſes, applying one of them as high up, and the other as low down, as the operator can, ſo as to incloſe the artery at thoſe parts where it is ſurrounded by, and remains attached to, its natural connections. Another advantage which, in my opinion, reſults from this plan, is, that it allows the diviſion of the artery between the two ligatures. Some degree of inflammation muſt neceſſarily be excited in the tied veſſels; and every ſurgeon knows how much the inflammation of parts is aggravated when

when they are kept in a tenſe ſtate. But when the artery, tied in this way, is divided in the ſpace between the ligatures, it becomes quite lax, poſſeſſes its natural attachment to the ſurrounding parts, and is, in ſhort, as nearly as poſſible, in the ſame circumſtances as when tied upon the ſurface of a ſtump after an amputation. If ſuch a ligature does not ſoon come away; if it remains for more than a fortnight upon the ends of the veſſel; it becomes difficult to imagine a cauſe why the ſides of the veſſel are not united.—In the two caſes which I have related, the ſufferings of the patients were very different. In the firſt, although the man's health was comparatively good, and the healing proceſs went on as well as could be wiſhed, ſo that the lips of the wound united between the two ligatures; yet this perſon ſuffered much from pain in the part, accompanied with a conſiderable throbbing of the artery for ſome days; whilſt, in the other, the patient ſcarcely experienced any uneaſineſs, although the wound did not heal nearly ſo well.

The

The ulceration of the artery has certainly been the cauſe of the greater number of failures; this, however, is an effect which, I hope, experience has now taught us to prevent*. But I acknowledge myſelf totally at a loſs to deviſe any plan for obviating the other cauſe of failure in theſe caſes, namely, the want of union between the ſides of the artery. The ſecond caſe affords an illuſtration of both theſe cauſes, particularly of the latter. Here the ligature which was firſt applied, did not ſeparate till the fifteenth day; yet the mouth of the veſſel remained as open as if it had been newly cut acroſs; nor was there any tendency of the veſſel to cloſe below the ligature, except in the arteria profunda. Though we may be unable to counteract this indiſpoſition in the ſides of the artery to unite, it ſeems, however, of conſequence, that we ſhould protract, as long as poſſible, the ſeparation of the ligature,

* The ulceration which took place in the laſt operation, cannot, I think, be conſidered as contradicting this aſſertion; for ſuch was the ſtate of the patient's health, that if a wound had been made in any part of his body, I believe, inſtead of cloſing, it would have become painful and enlarged.

to give time for this desirable event. Ligatures are, I believe, slow in their separation, in proportion as they include more of the surrounding substance, or as they are drawn less tight. We cannot, however, expect a ligature to remain upon a vessel longer than a fortnight; nor is it likely, if the artery be not closed in that time, that such an event will afterwards happen. Why the femoral artery did not unite in the case last related, I am quite at a loss to determine. Dissection, I think, proved that it had not suffered excess of inflammation in consequence of the first ligature: neither was there a deficiency of that process; for the cellular substance in which the vessel lay, had become thickened and adherent to it. Although I have several times seen the operation for the aneurism performed after Mr. Hunter's method, yet this was the only instance in which it did not succeed; which leads me to conclude that the least remediable cause of failure in this operation is not a frequent occurrence. As I cannot ascribe the want of success here to any other cause than a diseased state of the vessel, it seems

ſeems right to apply the ligature as far as poſſible above the aneuriſm; and as this appears to be an object of importance, I feel great pleaſure in having been able to relate a caſe, which ſhews how very high ſuch an operation may be performed with ſafety to the limb, though repeated inſtances are required to give us aſſurance on this ſubject.

The obſtruction which an aneuriſm occaſions to the ſupply of a limb by the veſſel in which it takes place, is probably not conſiderable until the blood coagulates on the inſide of the ſac. As far as I am capable of judging, the blood, in the aneuriſm laſt deſcribed, was very little, if at all, coagulated; but, as I have often regretted ſince, I did not try to aſcertain this circumſtance at the time of the operation. The previous ſtate of the artery below the aneuriſm, which was obſerved in the diſſection, is alſo an additional reaſon for ſuppoſing that the blood had not been much diverted from its natural channels previous to the performance of the operation.

OF

Of Emphyſema.

Much praiſe is, in my opinion, due to Mr. John Bell, for the clear and ſpirited deſcription which he has given of the ſtate of the lungs in emphyſema. The following caſe is related, to corroborate his remarks, and alſo to explain and lead to others which I am deſirous of offering to the public on that ſubject.

CASE.

A poor woman, about forty years of age, was run over by a mail-coach, one of the wheels of which paſſed lengthwiſe over her back, and fractured ſeveral of her ribs on the right ſide. When brought to the hoſpital, ſhe breathed with much difficulty, and an emphyſema of the integuments had taken place. An opening was made through the ſkin to let out the air; and the emphyſema did not afterwards ſpread. The patient was bled largely; but the difficulty of breathing

had increaſed to the third day, at which time I firſt ſaw her, in company with Mr. Harvey, under whoſe care ſhe was. She had paſſed the preceding night without the leaſt ſleep, and breathed at this time with extreme difficulty; indeed it ſeemed as if ſhe could not long continue the labour of ſuch imperfect and diſtreſsful reſpiration. It was ſuppoſed that one ſide of the thorax was filled with air; and as it was ſuſpected that the oppoſite lung might be oppreſſed by this cauſe, it was agreed to extract the air from the right ſide of the cheſt. With this view, Mr. Harvey made an opening into the thorax, in the following manner: He firſt made an inciſion about two inches in length, through the integuments, near the middle of the ſeventh rib, and oppoſite to its lower edge. He then drew the ſkin upwards, ſo as to expoſe the intercoſtal muſcles which connect the upper edge of this rib to the one above it. Theſe he cautiouſly divided, as he next did the pleura. At the time this was effected, I believe the patient was in the act of expiration; for a blaſt

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of air evidently iſſued from the thorax; and afterwards, whilſt the integuments were kept retracted, and the aperture in the pleura conſequently uncovered, the external air continued to ruſh in during the enlargement of the thorax, and to be forced out again during its contraction. But when the divided ſkin was allowed to deſcend to its natural ſituation, and thus the opening in the pleura was covered, no farther paſſage of air took place; and all that could then be perceived, was a depreſſion of the integuments oppoſite to the aperture in the thorax, occaſioned by the preſſure of the atmoſphere during the enlargement of that cavity. I had got ready a large injecting ſyringe, and introducing the pipe into the cavity of the cheſt, I drew up the piſton, and thus exhauſted the air, till I found I was ſtopped from proceeding, by the lung, which had riſen up and applied itſelf to the mouth of the ſyringe. The ſkin was then immediately brought down over the aperture in the thorax, and ſerved, like a valve, to prevent the farther ingreſs of air into that cavity. About ten ounces meaſure of air might probably

have been thus extracted by the ſyringe. As this quantity of air could have occupied but a ſmall ſpace when compared with the ſize of the thorax, it was probable that the back part of that cavity was filled with fluids.—Nothing further, however, was done at this time; and ſhortly after the poor woman fell aſleep, and breathed with comparative eaſe for nearly ſix hours. But the difficulty of breathing again increaſed during the night, and, at noon on the following day, was nearly as great as ever. Mr. Harvey and I agreed, however, that it would not be wrong to inſpect the thorax, to ſee if the lung had collapſed, or if we could by any means afford relief to the patient. Upon ſeparating the adheſion which had formed between the ſkin and ſubjacent parts, and introducing a finger through the aperture in the pleura, we found the lung adhering to the inſide of that membrane; but upon ſlightly varying the patient's poſture, ſome turbid bloody ſerum flowed from beneath the lung. When we had diſcharged as much of this fluid as we conveniently could, the external wound was cloſed; but the patient

continued to breathe with increaſing difficulty till about midnight, when ſhe died.

Diſſection.

On examining the body, no air was diſcovered in the cavity of the cheſt. The right lung was partially inflated, and the anterior part of it cloſely adhering to the pleura coſtalis, as far as the place where the opening had been made. About three pints of bloody fluid lay in the hollow of the ribs poſteriorly, and about half filled the cavity of the cheſt on that ſide; the ſurface of it being nearly on a level with the opening which had been made to exhauſt the air. Upon the ſurface of this fluid, the half-inflated lung ſeemed to float. —I looked for the place where the lung had been wounded by the injury; but cannot ſay that I could perceive it. It was, however, certainly healed; for the lung bore inflation without letting the air eſcape from it. The pleura was covered with coagulated lymph. The cells of the lung contained a quantity of fluid, and the whole ſubſtance of it was of a

livid colour.—The cells of the lung of the oppoſite ſide of the cheſt alſo contained more than their ordinary quantity of fluid; its veſſels were turgid, and it was hard and thickened in ſeveral places; which was probably owing to former diſeaſe. There was likewiſe more than a uſual quantity of turgid ſerum in the left cavity of the thorax.

It ſeems to me highly probable, that there are two ſtates of the lungs in emphyſema; one of which, indeed, I have never proved by examination, and am led to believe the exiſtence of it merely from reaſoning. I have ſeen ſo many caſes of emphyſema attended with very little difficulty of breathing or other inconvenience, indeed, proceeding in a manner ſo like caſes of fractured ribs unaccompanied with wounds of the lungs, that I cannot ſuppoſe patients were in theſe caſes reduced to the neceſſity of breathing with one lung only. Theſe patients indeed were all treated in the manner recommended and practiſed by Mr. Blizard.

Blizard. That excellent ſurgeon, obſerving the great pain and irritation which the conſtant motion of the fractured ribs occaſioned, was induced to diſregard the emphyſema, and to confine the motion of the ribs by a tight bandage, in the ſame manner as when the lungs are uninjured: afterwards the patients were largely bled, and other evacuations freely purſued. This practice he has ſince continued with general ſucceſs. I alſo have ſeen this treatment attended with ſuch frequent and complete ſucceſs, as induces me to believe, that under ſuch circumſtances the wounded lung continues in very many caſes to fill the cavity of the cheſt. The preſſure of the bandage in general prevents the air from eſcaping out of the wounded lung, and pervading the cellular ſubſtance. It will, perhaps, appear probable to many ſurgeons, that, for this very reaſon, the air will be likely to inſinuate itſelf between the two pleuræ, and thus occaſion a collapſe of the lung. I do not, however, ſee any good reaſon for ſuch a ſuppoſition. The two pleuræ remain in their natural ſtate of contact; and there is no ſpace for the

air to paſs between them. So frequently alſo are there adheſions between the ſurface of the lung and the ſides of the thorax, that I think, in ſome of the caſes of emphyſema which I have ſeen, this circumſtance muſt have occurred, and that if the lungs had receded from the ſides of the thorax, the ſymptoms would have indicated the laceration or ſtretching of theſe adheſions.

An idea has generally prevailed among ſurgeons, that if the pleura coſtalis were divided in the living ſubject, the lung would immediately collapſe, as it is uſually found to do in the dead one. But M. Bremond* has ſhewn by experiments, that not only when an opening is made into the cavity of the thorax, but even when ſome of the ribs are removed, the lungs ſtill occupy their natural ſituation, and are even thruſt up into the opening during expiration. Mr. Norris has alſo lately ſhewn, by experiments undertaken for this purpoſe, as well as by obſervations on the effects of accidents, that frequently the lungs do not collapſe when the cavity of the cheſt is ex-

* Memoires de l'Acad. des Sciences, 1739.

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poſed in the living animal*; and I have alſo had occaſion to obſerve, on dividing the pleura coſtalis in a caſe of ſuppoſed hydrothorax (in which, however, no water was found), that the expoſed lung did not collapſe; a circumſtance which, I think, ought to encourage us to a more frequent performance of ſuch an operation. In other experiments, however, the lungs have been known to collapſe; and the circumſtances on which either of theſe effects depends, are not perhaps well underſtood.

For theſe reaſons, I believe, that in moſt caſes of emphyſema ſucceeding to broken ribs, preſſure by bandage not only hinders the air from diffuſing itſelf through the cellular ſubſtance, but ſerves to prevent it from eſcaping out of the wounded lung, and of courſe facilitates the healing of the wound, which would be prevented by the conſtant tranſmiſſion of air. Its early application, therefore, will often prevent a very troubleſome ſymptom, whilſt at the ſame time, by keeping the fractured bones from motion, it greatly leſſens the ſufferings of the patient.

* Memoirs of the Medical Society of London, Vol. IV. p. 440.

In

In ſome caſes where the lungs are wounded by the ribs, the air does undoubtedly get into the cavity of the thorax, as happened in the poor woman already mentioned, and as I have alſo ſeen in other inſtances. When the air paſſes from the wounded lung into the cavity of the cheſt, and the lung becomes in conſequence collapſed, ſtill the ſymptoms and progreſs of the complaint will differ from the effect of circumſtances which have not been much attended to. When the wound in the ſides of the thorax allows of the expulſion of air from that cavity during expiration, and does not admit air during inſpiration, it is not to be ſuppoſed that the wound of the lung can heal; for the cavity of the thorax muſt, under theſe circumſtances, be filled from the wounded lung every time that it is enlarged during inſpiration.

But this ſtate of circumſtances, which is ſo particularly injurious, and which uſually takes place when the lung has collapſed in the manner deſcribed, it is the buſineſs of the ſurgeon to remedy; and it may be accompliſhed in two ways:

ways: Firſt, by preventing the eſcape of the air from the cavity of the cheſt, in which caſe the neceſſity of its being filled from the wounded lung will, in a great meaſure, be done away. And as I know ſurgeons have apprehended, that if an outlet was not given to air from the cavity of the cheſt, the oppoſite lung might become oppreſſed, I beg them to reflect a little on the ſtate of reſpiration under theſe circumſtances.

To examine this ſubject, let us ſuppoſe the thorax expanded, and one of its cavities filled with air, at which time the patient attempts to make an expiration; what will be the effect? The air cannot return through the wound in the lungs; and we have ſuppoſed that it cannot eſcape through that in the pleura coſtalis. The muſcles of reſpiration are unable then to produce any conſiderable change in the dimenſions of the cavity, without an exertion productive of pain, which it is not probable that they will make; the inactive diaphragm will not be thruſt up into the hypochondrium as in natural expiration, and the ribs will remain nearly ſtationary;

ary; but in proportion to the degree of the expiratory effort that is made, the air may be condenſed, and the mediaſtinum thruſt to the oppoſite ſide of the cheſt. But no injury will ariſe from this preſſure, neither can it happen in any great degree; for both ſides of the cheſt being diminiſhed at the ſame time, a ſlight compreſſion of the oppoſite lung cannot be detrimental, ſince it helps to expreſs the air from it,—the very effect which is now required; and as that lung is preſſed inwards by the ſides of the thorax, it will counteract any great preſſure made on the mediaſtinum. Upon inſpiration taking place, the condenſed air will expand and fill the enlarged cavity, and the mediaſtinum will regain its natural ſituation; ſo that the function of the ſound lung is ſcarcely, if at all, impeded by the compreſſion which takes place on the oppoſite ſide of the cheſt.

In whatever ſtate the lungs happen to be when they are wounded, a bandage, if it can be borne, ſeems therefore to me extremely uſeful. By means of it, the pain and irritation which the motion

motion of the fractured ribs must otherwise occasion, are in a great measure, or entirely, prevented. In that state of the lungs which I have first described, the pressure of a bandage prevents emphysema, and does no harm; in the other, it not only prevents emphysema, but does good, by keeping the collapsed lung at rest, and thereby free from the necessity of constantly transmitting air. Patients, however, will not always be able to wear a bandage when one lung is collapsed (particularly if any previous disease has existed in the other), as it equally confines the motion of the ribs on both sides, and as every possible enlargement of the chest becomes necessary for the due admission of air into the lung which still executes its functions. Under these circumstances, if the emphysema continues (and its continuance must always denote that the wound in the lung is not closed), I should esteem it the best practice to make a small opening into the chest, so that the external air might have free communication with that cavity; and then the injured lung must remain motionless till its wound is healed, and the

the mediaſtinum will, in every ſtate of the thorax, preſerve its natural ſituation.

As almoſt all the circulating blood muſt, in ſuch caſes, be tranſmitted through the veſſels of one lung, if the quantity of that fluid be not greatly diminiſhed, the pulmonary veſſels will become turgid; a larger effuſion of fluids will therefore take place into the air-cells, and cavity of the cheſt, and thus the function of the acting lung will be materially impaired. This reaſoning illuſtrates what experience has already determined, viz. that the preſervation of life in theſe caſes depends on the moſt copious blood-letting.

The caſe which I have related, clearly ſhews, that the collapſed ſtate of the lung affords an opportunity for the wound of its ſurface to heal: and when this deſirable event is accompliſhed, the air which is at that time in the cavity of the thorax, will be ſpeedily abſorbed, and the lung will again acquire its former ſize and ſituation. But ſhould the function of it be more immediately neceſſary,

from a diſeaſed ſtate of that on the oppoſite ſide, or from other circumſtances, it may be more quickly reſtored by exhauſting the air, in the manner deſcribed.—If the cavity of the cheſt contain a quantity of fluids, and it is thought right to extract them, it cannot well be done by varying the poſture of the patient ſo as to let them run out of the opening that has been made: the difficulty with which reſpiration is performed, will render ſuch an attempt almoſt inſupportable to the patient. It would therefore be better to introduce a hollow bougie, or ſome ſuch inſtrument, into the poſterior part of the thorax, there connect it to the ſyringe, and thus extract the contained fluids. I need ſcarcely add, that the ſame method may be employed with advantage for the extraction of water from the cavity of the cheſt in hydrothorax.

The great advantage of retaining the lung in a collapſed ſtate is, if poſſible, more ſtrikingly ſhewn when thoſe bodies have ſuffered a greater degree of injury than can occur to them from the fracture of a rib. I have ſeen

caſes

caſes in which bullets have paſſed through the lungs near the root of thoſe bodies, and where many of the large veſſels were conſequently torn, in which the blood has been poured into the cavity of the cheſt, has condenſed the lung by its preſſure, and thus ſuppreſſed the hæmorrhage. The injured veſſels might, under theſe circumſtances, unite; and the blood being let out of the thorax, the lung might gradually be reſtored to its former function. Yet in the caſes which I was a witneſs to, the patients died of inflammation and fever; but the particular nature of the circumſtances was unknown during the life of the patient; and of courſe the conduct appropriated to them was not purſued. The fluids contained in the cavity of the thorax had in theſe caſes undergone a degree of putrefaction previous to the patient's death; which ſtate required their diſcharge.

But ſhould this be attempted in other caſes, it becomes very eſſential to keep the thorax filled with air, leſt the lungs ſhould become prematurely inflated, the newly-healed part lacerated,

lacerated, the hæmorrhage renewed, or inflammation induced; and the ſurgeon would be able, I believe, without much contrivance, to regulate the inflation of the lungs, as circumſtances ſeemed to indicate. Surgeons uſed formerly to keep canulæ in the thorax in theſe caſes, with a deſign to give an outlet to fluids; but ſuch means might have been beneficial by preſerving the lungs collapſed; and they might have been continued from being found ſerviceable, though the manner in which they became ſo was unknown.

Of the Uſe of Mercurial Fumigations.

In addition to theſe caſes which occurred at the hoſpital, I think it may be uſeful to give an account of ſome others, in which mercurial fumigations were employed for the cure of the venereal diſeaſe, after the manner recommended by the Chevalier Lalonette: for I have witneſſed ſo much comfort as well as benefit ariſing from them, that I think, if their peculiar advantages were generally known to practitioners, they would be much more frequently employed. As I believe the relation of caſes will afford, in the ſhorteſt manner, the cleareſt view of the peculiar utility of this mode of employing mercury, I ſhall therefore preſent the reader with an account of a caſe of each claſs, in order to ſhew the advantages which attend this method of uſing that medicine: Firſt, from its affecting the conſtitution when other means have failed; and, ſecondly, from its producing its

its effects in a much ſhorter time than any other mode requires.

I beg leave, however, previouſly to obſerve, that the term, mercurial fumigations, is apt to excite wrong ideas of this method in the minds of ſurgeons. Fumigations have been, of late, generally employed to correct local diſeaſes; and they have often, by deſign, been made of an acrid quality. And even when they were formerly employed with a view of affecting the conſtitution, it was at a time when the chemical compounds of quickſilver were not underſtood, and ſufficient attention was not paid to thoſe circumſtances on which the ſucceſs of their application depends.

But, in the year 1776, the Chevalier Lalonette, a phyſician at Paris, laid before the public an account of a new mode of mercurial fumigation, free from the inconveniencies of former ones, and which, in the ſpace of thirty-five years, he had ſucceſsfully employed in more than four hundred caſes, that had re-

ſiſted all the ordinary methods of cure. His method conſiſted in encloſing the patient, previouſly undreſſed, in a kind of box reſembling a ſedan chair, with an opening at the top to let out the head, and another at the bottom, to which was fitted a ſmall grate or furnace, having in it a heated iron for converting the mercurial remedy into fume. The preparation he made uſe of was a kind of calomel, which, by repeated ſublimation from iron-filings, was ſo far deprived of its muriatic acid, as to be in part reduced into running quickſilver; and, while it poſſeſſed conſiderable volatility, was perfectly irritating. Some of this powder being ſtrewed upon the hot iron placed below, was immediately converted into ſmoke, which ſurrounded the patient's body, and after ſome time ſettled on his ſkin in the form of a white and very fine calx of quickſilver: a complete dreſs, having its inner ſurface fumigated with the ſame powder, was then put on.—The remedy being thus generally applied to the mouths of the cutaneous abſorbents, ſoon got admiſſion into the

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circulating fluids; and the conſtitution became thereby more ſpeedily affected than by any other proceſs known before.

For a more particular account of the chemical preparations uſed by M. Lalonette, and his manner of employing them, I muſt refer to his treatiſe, which was publiſhed in 1776.

With regard to the proceſs, I would only farther obſerve, that the feelings of the patient during it, are not at all unpleaſant, provided the heat be properly regulated; that there is nothing uncleanly or diſagreeable in the powder applied to the ſkin; and that all who have had an opportunity of comparing it with the common method by inunction, have been highly pleaſed with the ſuperior advantages attending it.

CASE I.

In Sept. 1788, a young man had both his tonſils affected with venereal ulceration. This complaint came on after a bubo; and a great deal of mercury had been given for it without effect; for, being naturally healthy, and his bowels not eaſily diſturbed, he had taken, on an average, from two to three grains of calcined quickſilver, or calomel joined with opium, every day for three months; and had alſo uſed mercurial ointment during the ſame period, beginning with two drachms, and gradually increaſing it to an ounce daily: beſides which, he had for a ſhort time taken a ſolution of hydrargyrus muriatus. Yet all this ſcarcely produced any ſoreneſs of his gums, or cauſed any viſible amendment in the ulcers of his throat; the only effect it had, being that of preventing them from becoming worſe. His bowels indeed were occaſionally diſturbed by the medicines, but were eaſily quieted by opium. To rub in the quantity of mercurial ointment uſed towards the latter part of the courſe,

courſe, the patient ſpent nearly an hour and half every night and morning; but as he became weaker, he perſpired conſiderably in conſequence of this exerciſe, which tended to fruſtrate his endeavours by preventing, or at leaſt greatly diminiſhing, the abſorption of the medicine.

No ground being gained by purſuing this plan, Mr. Blicke recommended mercurial fumigation according to Lalonette's method, which he had occaſionally employed with ſucceſs, and which would not only relieve the patient from the fatigue of rubbing in the ointment, but prevent any farther irritation of his bowels, by ſuperſeding the internal uſe of mercury. The patient was accordingly expoſed, for half an hour each night, to the fumes produced from half an ounce of the powder already deſcribed; by which means, in leſs than a fortnight, his conſtitution and mouth became properly affected by the mercury; the ulcers healed ſoon afterwards; and in leſs than a month he was permitted to diſcontinue the remedy.

I could relate many other caſes in which fumigation accompliſhed, with facility, the cure of complaints which had reſiſted long-continued mercurial courſes both by friction and internal exhibition; but I have ſelected this, as being rather a ſtriking example of the difficulty which we ſometimes experience, of introducing into the ſyſtem, in the ordinary modes, a ſufficient quantity of mercury to affect the conſtitution. It is reaſonable to think, that this object will be more certainly obtained by the abſorption thus taking place from almoſt the whole ſurface of the body, than by any other method hitherto deviſed. Yet it is but right to ſay, that my hopes of ſucceſs from it have not always been fulfilled; and that, in ſome few caſes where mercury ſhewed a particular tendency to act on the bowels without affecting the mouth, the mercurial fumes ſeemed to produce this effect even ſooner than the ointment had done: and in one young man, whoſe mouth neither frictions nor the internal uſe of mercury could be made to affect, but in whom they occaſioned conſtant tremors of the muſ-

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cles, and ſpaſms of the bowels, the fumigations were not attended with any better ſucceſs. Happily, however, ſuch caſes are rare; and in general the fumigations affect the conſtitution ſpeedily, and in the uſual manner.

The remarkable benefit reſulting from this method of fumigation in the caſe mentioned above, rendered me very ſolicitous to introduce the practice of it into the hoſpital. I accordingly got a quantity of the powder prepared at the laboratory; and by uſing it rather more liberally than M. Lalonette directs, I found that I could in a very ſhort time completely affect the conſtitution; a circumſtance which I conſider as a very important advantage attending this mode of employing quickſilver. Although I had ſatisfied myſelf both of the ſpeedy and effectual operation of the medicine, exhibited in this manner, I did not, however, perſiſt in its uſe; for I judged, that though the experiment ſhould prove harmleſs, it could not be proper to excite a ſudden and powerful conſtitutional affection by this mineral,

ral, where neither the obſtinacy of the caſe nor the rapid progreſs of the diſeaſe particularly called for it.—Out of the ſix caſes of which I took notes, I ſhall relate only one, to ſhew how quickly, by this mode, the medicine can be made to operate.

As the fumigating powder uſed by M. Lalonette was a very operoſe, and conſequently a very expenſive preparation, and appeared to have no advantages over one made by abſtracting the muriatic acid from calomel by means of volatile alkali, I have always employed the latter, which is prepared at the hoſpital in the following manner: Two drachms of aqua ammoniæ are added to ſix ounces of diſtilled water, and four ounces of calomel are thrown into this liquor, and ſhaken up with it; the powder is afterwards ſeparated by a filter, and dried.

The powder thus obtained is of a grey colour, and contains a good deal of quickſilver in its metallic ſtate, which of courſe is extremely volatile, but becomes oxydated when raiſed

raiſed into fume, and afterwards condenſes into a white and very fine duſt.

This mode of uſing mercury is not, however, ſo well adapted to hoſpital practice; for ſometimes the iron was too much heated, and the patients were made by this means to perſpire profuſely, ſo that the powder was formed into a paſte, which was irregularly incruſted on the ſkin; beſides, the patients either could not or would not wear a complete under-dreſs; and in that caſe the powder was wiped away, and the plan of treatment fruſtrated: for the deſign is to allow of a conſtant abſorption of this ſubtile preparation of quickſilver from the whole ſurface of the body.

CASE II.

A young woman, twenty-five years of age, was admitted into the hoſpital, with chancres and a venereal ſore throat. Both tonſils were enlarged, and on each there appeared a deep ulcer about the breadth of a ſhilling, having white irregular edges. On the 19th of December,

cember, half an ounce of the powder was uſed at one fumigation; which treatment was again repeated with the ſame quantity on the night of the 20th, and both on the night and morning of the 21ſt. As ſhe then complained of head-ach and faintneſs, the fumigation was diſcontinued. On the 23d, her gums were much ſwelled and very ſore: the prominent margins of the ulcers in her throat had ſubſided greatly, and the ſurface of the tonſils now hardly appeared to be ulcerated. During the three following days, the ſoreneſs of the mouth increaſed, and in that time the ulceration in the throat had become ſcarcely viſible: the chancres alſo were healing faſt. On the 27th, two drachms of the powder were uſed in fumigation; and the next day ſhe was ſeen by all the ſurgeons of the hoſpital, who agreed that her mouth was too ſore to juſtify the continuance of the remedy.—On the 1ſt of January, her mouth remained properly ſore; the chancres were quite healed; and only a ſlight redneſs was perceptible in the throat, which ſeemed more like the effect of mercurial irritation, than of her former diſeaſe.—On the

the 2d of January, two drachms more of the powder were uſed. On the 4th, her mouth was leſs ſore; and Mr. Blicke having examined her, conſidered her complaint as perfectly cured. To make more ſure, however, I directed that ſhe ſhould be fumigated with two drachms that day, and the ſame to be repeated on the 6th; after which ſhe was diſcharged from the hoſpital, and promiſed to come back if ſhe found any return of the diſorder.

The other caſes in which this method was tried, were ſo ſimilar in their circumſtances and events, as to render a particular recital of them unneceſſary. In every one, a conſiderable affection of the conſtitution was excited in the ſpace of three or four days. It is to be preſumed, that theſe patients had no particular idioſyncraſy in reſpect to the operation of quickſilver. Thoſe who are affected by that medicine ſlowly and with difficulty, might perhaps have withſtood its action for a longer time.

It may ſurely be an advantage to be able, in the generality of patients, not merely in venereal, but in other diſeaſes, to produce ſo ſudden and complete a *mercurial* affection of the ſyſtem.

I have heard it objected, that fumigation cannot be depended on for the cure of lues. But I never knew it fail, nor do I ſee why mercury, uſed thus, ſhould, when abſorbed, prove leſs effectual than when this mineral is combined with lard in the common ointment. If fumigations in this mode have failed, it was more probably owing to their being improperly managed, than to any inſufficiency peculiar to them. Thus, if adminiſtered frequently and largely at firſt, they may have conſiderably affected the mouth without proportionally affecting the conſtitution in general; or, from the quickneſs with which they heal venereal ulceration, the cure may have been too ſoon ſuppoſed complete, and their uſe diſcontinued before they had entirely eradicated the diſeaſe. Under proper management, I have no doubt but mercury, employed in

in this manner, will be found adequate to the cure of every variety of the diſeaſe.

Beſides their general application, there is another way in which mercurial fumigations may be occaſionally employed with advantage, though the benefit is leſs important; and perhaps this method may be regarded merely as a refinement in the practice of ſurgery. In local diſeaſe of the joints, ſuch, for inſtance, as frequently takes place in the knee, and in ſarcomatous enlargements of the breaſt in women, Mr. Sharp and Mr. Blicke have been long accuſtomed to direct fumigated ſtockings, or under-waiſtcoats, to be worn; when the complaints have been relieved, and the conſtitutions of the patients affected, without the trouble and unpleaſantneſs ariſing from the uſe of the common mercurial ointment.

The information which the author of theſe Eſſays had acquired in the practice of his profeſſion,

feſſion, and which he has in theſe pages ſubmitted to the public, was not obtained without labour; nor could it have been acquired unleſs he had poſſeſſed opportunities which do not fall to the lot of many ſurgeons. Theſe obſervations were therefore publiſhed from a belief that the knowledge, which he eſteemed of ſome value, might be likewiſe conſidered ſo by others, who had not the ſame means of obtaining it.—Continual employment of other kinds has prevented the author from paying that attention to the finiſhing of theſe papers, which the public have a right to expect: he however felt, that if their publication was poſtponed, other engagements and purſuits would occupy his attention, and render him leſs capable of offering them even in their preſent ſtate.

SURGICAL
OBSERVATIONS.

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SURGICAL OBSERVATIONS,

CONTAINING

A CLASSIFICATION OF TUMOURS, WITH CASES TO ILLUSTRATE THE HISTORY OF EACH SPECIES;—AN ACCOUNT OF DISEASES WHICH STRIKINGLY RESEMBLE THE VENEREAL DISEASE;—AND VARIOUS CASES ILLUSTRATIVE OF DIFFERENT SURGICAL SUBJECTS.

BY JOHN ABERNETHY, F.R.S.

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AN

ATTEMPT

TO FORM

A CLASSIFICATION OF TUMOURS

ACCORDING TO

THEIR ANATOMICAL STRUCTURE.

THE obſervations which I have had an opportunity of making in St. Bartholomew's Hoſpital, on the various tumours which occur in the human body, have been ſo numerous, that I have almoſt felt myſelf under the neceſſity of forming ſome claſſification of thoſe diſeaſes. This claſſification I have attempted according to their anatomical ſtructure, which allows, at the ſame time, of a correſponding arrangement of thoſe practical remarks that have been promiſcuouſly collected. I have long felt ſo ſenſibly the advantages reſulting from an orderly arrangement of this extenſive ſubject, that I have

taught it for ſome years in my Lectures in the manner exhibited in the following pages. I am far, however, from being ſatisfied with the method which I have adopted, but it is the beſt that I have been able to deviſe; and, at leaſt, it has this utility, that it admits of a number of important caſes being arranged in a perſpicuous manner, and prevents that obſcurity which a total want of order neceſſarily creates.

My motives for laying this paper before the Public are; firſt, a conviction, that an extenſive knowledge of this ſubject, ſuch a knowledge as would lead to an attempt at claſſification, and to aſcertaining the peculiarities which characterize the different ſpecies of tumours, can only be obtained by thoſe who have very ample opportunities of obſervation. But it is probable that, when the ſubject in general has been ſurveyed, and its parts pointed out, that thoſe parts may be diſcriminated and examined with accuracy and advantage, by perſons who have not had opportunities of contemplating the whole. 2dly, The minds

minds of medical men having of late been laudably excited to inveſtigate the nature of cancer, in hopes of diſcovering ſomething ſerviceable in that dreadful diſeaſe. It becomes therefore right to remark, and it will appear from the following account, that there are many local tumours and ulcers, as intractable in their nature, and deſtructive in their progreſs as cancer, which are liable to be confounded with that diſeaſe, but which ought to be diſtinguiſhed from it, before any progreſs can be made in this difficult part of medical ſcience. The ſociety for the inveſtigation of the nature of cancer have enquired about the anatomical ſtructure of that diſeaſe, and about other diſorders which have a reſemblance to it. In the preſent paper I have attempted to reply to ſuch interrogations, as far as my knowledge enables me. It appears to me, that, in order fully to inveſtigate any ſubject with advantage, a great deal of collateral knowledge is required, which ſerves, like light ſhining from various places, to illuminate the object of our reſearches. I am not without hopes that this paper will

tend to point out the required diſtinctions, and furniſh ſuch collateral knowledge.

In engaging in a new undertaking, I am likely to expoſe my own deficiencies of information; and by adopting a new and perhaps injudicious arrangement, and employing new and perhaps unfit terms, I may lay myſelf open to criticiſm and cenſure. I am not unwilling, however, to encounter theſe riſks, when I have it in view to bring a difficult and intereſting ſubject fairly before the public; in hopes that, by exciting the attention and engaging the labours of many perſons, it may, at length, acquire that perfection of which it is ſuſceptible, and which could never be brought about by the exertions of a few individuals.

The ſubject of tumours occupies a conſiderable ſpace in the works of the antient writers on medicine. They ſeem, however, to have conſidered the ſubject, rather with regard to its name than its nature; for we find a great variety of diſſimilar diſeaſes collected,

lected, I cannot ſay arranged, under the ſame general title. The error has deſcended to us, and even in Dr. Cullen's Noſology we find diſeaſes of arteries, veins, glands, tendons, joints, and bones, brought together under one order, and deſignated by the ſame name of *tumours*. Some of theſe alſo are merely enlargements of natural parts; whilſt others are entirely new productions, having no exiſtence in the original compoſition of the body. We have, I believe, ſufficient knowledge of the nature of theſe diſeaſes to claſs them more ſcientifically; and as this has not yet, as far as I know *, been done, I ſhall endeavour to ſupply the deficiency.

In the definition which I mean to give of tumours, I ſhall treſpaſs as much againſt the uſual import of the word, as noſologiſts have hitherto done in their claſſifications againſt

* Plenck publiſhed, 1767, a work intitled "Syſtema Tumorum," which I have not ſeen, but I conclude that it does not reſemble the preſent attempt; ſince no arrangement, like that which I have made, is to be met with in the Encyclopédie Methodique.

the nature of the diſeaſe. For I ſhall reſtrict the ſurgical ſignification of the word "Tumour" to ſuch ſwellings as ariſe from ſome new production, which made no part of the original compoſition of the body; and by this means I ſhall exclude all ſimple enlargements of bones, joints, glands, &c. Many enlargements of glands are however included in the definition, as they are found to be owing to a tumour growing in them, and either condenſing the natural ſtructure, or cauſing the abſorption of the original gland. Sometimes alſo the diſeaſe of the gland ſeems to produce an entire alteration of ſtructure in the part; the natural organization being removed, and a new-formed diſeaſed ſtructure ſubſtituted in its ſtead. In either of theſe caſes the diſeaſe of the gland is deſigned to be included in the definition; and the practical remarks which follow will equally apply to the ſame kind of diſeaſed ſtructure, whether it exiſts ſeparately by itſelf, or occupies the ſituation of an original gland. The ſtructure of tumours is alſo a part of morbid anatomy which deſerves to be examined; ſince (as it did

did not come within the ſcope of the undertaking) it has not been fully diſcuſſed by Dr. Baillie in his very valuable treatiſe on that ſubject. Yet as he has given repreſentations of glandular parts enlarged by a diſeaſed ſtructure of an entirely new formation; ſo I ſhall have the advantage of referring the reader to his accurate and expreſſive repreſentations of ſome of thoſe appearances which it is my purpoſe to deſcribe. There is an obſervation of this judicious and accurate writer which I ſhall take the liberty of inſerting, ſince it juſtly appreciates the degree of utility of inveſtigations like the preſent: he obſerves, "that the knowledge of morbid ſtructure does not lead with certainty to the knowledge of morbid actions, although the one is the effect of the other; yet ſurely it lays the moſt ſolid foundation for proſecuting ſuch enquiries with ſucceſs. In proportion, therefore, as we ſhall become acquainted with the changes produced in the ſtructure of parts from diſeaſed actions, we ſhall be more likely to make ſome progreſs towards a knowledge of the actions themſelves, although it muſt be very ſlowly."

The incipient ſtate of tumours will naturally firſt engage our attention; and thoſe which perhaps form the beſt example and illuſtration of the ſubject, are thoſe which hang pendulous into cavities from the membranous ſurfaces which form their boundaries. The cauſe of tumours having a pendulous attachment attracted the attention of Mr. Hunter, who made the following remarks on the formation of one on the inner ſurface of the peritoneum, as is related by Mr. Home in the Tranſactions of a Society for the Improvement of Medical and Chirurgical Knowledge, Vol. i. p. 231. "The cavity of the abdomen being opened there appeared, lying upon the peritoneum, a ſmall portion of red blood recently coagulated; this, upon examination, was found connected to the ſurface upon which it had been depoſited by an attachment half an inch long, and this neck had been formed before the coagulum had loſt its red colour." Now had veſſels ſhot through this ſlender neck, and organized the clot of blood, as this would then have become a living part, it might have grown

to

to an indefinite magnitude, and its nature and progreſs would probably have depended on the organization which it had aſſumed. I have in my poſſeſſion a tumour, doubtleſs formed in the manner Mr. Hunter has deſcribed, which hung pendulous from the front of the peritoneum, and in which the organization and conſequent actions have been ſo far completed, that the body of the tumour has become a lump of fat, whilſt the neck is merely of a fibrous and vaſcular texture. There can be little doubt, but that tumours form every where in the ſame manner. The coagulable part of the blood being either accidentally effuſed, or depoſited in conſequence of diſeaſe, becomes afterwards an organized and living part, by the growth of the adjacent veſſels and nerves into it. When the depoſited ſubſtance has its attachment by a ſingle thread, all its vaſcular ſupply muſt proceed through that part; but in other caſes the veſſels ſhoot into it irregularly at various parts of its ſurface. Thus an unorganized concrete becomes a living tumour, which has at firſt no perceptible peculiarity

culiarity as to its nature; though it derives a ſupply of nouriſhment from the ſurrounding parts, it ſeems to live and grow by its own independent powers; and the future ſtructure which it may acquire, ſeems to depend on the operation of its own veſſels. When the organization of a gland becomes changed into that unnatural ſtructure which is obſervable in tumours, it may be thought in ſome degree to contradict thoſe obſervations: but in this caſe the ſubſtance of the gland is the matrix in which the tumour is formed.

The ſtructure of a tumour is ſometimes like that of the parts near which it grows. Thoſe which are pendulous into joints, are of a cartilaginous or oſſeous fabric; fatty tumours frequently form in the midſt of adipoſe ſubſtance, and I have ſeen ſome tumours growing from the palate, and having a ſlender attachment, which in ſtructure reſembled the palate. Sometimes, however, they do not reſemble in ſtructure the parts from which they grow. The inſtance juſt mentioned, of the pendulous portion of fat

growing

growing from the peritoneum, will ſerve as an inſtance: the veſſels which had ſhot into it, made the tumour into fat, whilſt the neck was of a fibrous and vaſcular ſtructure. I have ſeen oſſeous tumours unconnected with bone or perioſteum; and indeed, in general, the ſtructure of a tumour is unlike that of the part in which it is produced. Therefore we ſeem warranted in concluding, that in many caſes the nature of the tumour depends on its own actions and organization; and that, like the embryon, it merely receives nouriſhment from the ſurrounding parts.

If, then, the coagulable part of the blood be from any cauſe effuſed, if the adjacent abſorbents do not remove it, and the ſurrounding veſſels grow into it, the origin of a tumour may be thus formed. It may be right to reflect a little on the cauſes which may occaſion a depoſition and conſequent organization of the coagulable part of the blood; as ſuch reflections throw light on the nature and growth of tumours, and lead to the eſtabliſhment of principles, which are applicable

applicable to tumours in general. The depoſition of the coagulable part of the blood may be the effect of accident, or of a common inflammatory proceſs, or it may be the conſequence of ſome diſeaſed action of the ſurrounding veſſels which may influence the organization and growth of the tumour.

In the former caſes, the parts ſurrounding the tumour may be conſidered ſimply as the ſources from which it derives its nutriment, whilſt it grows apparently by its own inherent powers, and its organization depends upon actions begun and exiſting in itſelf. If ſuch a tumour be removed, the ſurrounding parts, being ſound, ſoon heal, and a complete cure enſues. But if a tumour be removed, whoſe exiſtence depended on the diſeaſe of the ſurrounding parts which are ſtill left, and this diſeaſe be not altered by the ſtimulus of the operation, no benefit is obtained: theſe parts again produce a diſeaſed ſubſtance, which has generally the appearance of fungus, and, in conſequence of being ir-

ritated by the injury of the operation, the diſeaſe is in general increaſed by the means which were deſigned for its cure. It appears therefore that in ſome caſes of tumours, the newly formed part alone requires removal, whilſt in others the ſurrounding ſubſtance muſt be taken away, or a radical cure cannot be effected.

There is yet another circumſtance deſerving attention, before I proceed to the particular conſideration of the ſubject; which is, that a tumour once formed, ſeems to be a ſufficient cauſe of its own continuance and increaſe. The irritation which it cauſes in the contiguous parts, is likely to keep up that increaſed action of veſſels which is neceſſary to its ſupply; and the larger it becomes, the more does it ſtimulate, and of courſe contribute to its own increaſe.

Suppoſe then a tumour to have formed, and increaſed; it will continue to grow and to condenſe the ſurrounding cellular ſubſtance, and thus acquire for itſelf a kind of capſule.

Tumours

Tumours are more cloſely or looſely connected to the ſurrounding parts; which circumſtance ſeems to depend upon the degree of ſtimulus which they occaſion, and the inflammation which they thus excite. This irritation perhaps may be the cauſe why ſome tumours which are ſlow in their firſt increaſe grow rapidly after they have acquired a certain ſize.

Theſe preliminary obſervations will be referred to when the different kinds of tumours are deſcribed. When the hiſtory of different kinds of tumours is ſpoken of, there will be frequent neceſſity to advert to the effects of medical treatment upon them, it therefore ſeems right to premiſe a few words upon that ſubject.

It can ſcarcely be doubted but that when tumours form and grow, that there exiſts an increaſed ſtate of action in the adjacent veſſels, and the firſt curative intention in theſe diſeaſes, will therefore be to repreſs as much as poſſible this unuſual exertion of the veſ-

ſels

ſels which gives riſe to the formation of a tumour, and, by its continuance, cauſes its increaſe.

I know of no local meaſures to diminiſh an increaſed or inflammatory action of any part of the body more rational in theory, or more efficacious in practice than thoſe of taking away the two great cauſes of animal actions, the blood and heat of the diſordered part. The former is generally accompliſhed by means of leeches applied in its vicinity, which ſhould be repeated as circumſtances indicate, and the latter, by the application of folded linen, wetted with ſedative lotions, by which a continual evaporation and conſtant abſtraction of heat is kept up from the ſurface of the ſkin. The effect of this laſt mode of treatment is much more conſiderable than at firſt ſight might be ſuppoſed. It operates on parts far beneath the ſurface. As heat is ſo tranſmiſſible a ſubſtance, ſo in proportion as the temperature of the ſkin is diminiſhed by evaporation, it derives heat from the ſubjacent parts, and thus are their

morbid actions leſſened. If by ſuch means the growth of a tumour be ſuſpended, another curative indication naturally ariſes which is to promote the abſorption of the new formed ſubſtance.

This indication is generally attempted by means of a ſtimulating nature, ſuch as frictions with mercurial ointment, preſſure, and electricity, or by means which alſo excite ſome counter-irritation, as rubefacient plaſters, ſolutions of ſalts, bliſters, and iſſues. Both reaſon and experience equally demonſtrate the impropriety of uſing the ſtimulating plan till the diſeaſe is firſt tranquillized, and in a degree ſubdued. It is reaſonable to expect that ſtimulating meaſures will increaſe the actions, which are going on in the diſeaſed part; and experience proves that diſeaſes are often increaſed by thoſe very means which, had they been employed at a proper time, might have effected their cure. The fact may be elucidated by a caſe that is, I believe, generally known and admitted, if a bliſter be applied for the cure of a pleuriſy before

before evacuations are made uſe of, and the activity of the diſeaſe thus checked, it aggravates the diſeaſe; if afterwards, it ſpeedily effects a cure. If a tumour or any local diſeaſe be for a time benefited by ſtimulating diſcutients, and the diſeaſed actions recur in it with a degree of activity; it is better to deſiſt from this latter plan of treatment, and adopt again the former one, till the diſeaſe is by ſuch means rendered inactive.

I am ſo well convinced of the neceſſity of attending to the time and circumſtances in which theſe remedies are applied, in order to give them their real efficacy in the cure of local diſeaſes, that I have been induced to dwell longer on this ſubject than may perhaps to ſome ſeem neceſſary.

When a bliſter is made permanent, or a ſeton or iſſue is made in the vicinity of a diſordered part, it is in fact producing a new but curable diſeaſe, in order to detract from an old one, over which we have leſs controul. But here the ſame obſervations apply. We

ſhould not produce a new diſeaſe till the active ſtate of the original one is diminiſhed, and till it is, as it were, rendered dormant; for otherwiſe the irritation of the intended remedy will rather tend to the aggravation than the cure of the diſorder; it will alſo increaſe the febrile diſturbance of the conſtitution, by adding to the cauſes of irritation.

Such are the local means of treating tumours, as well as other local diſeaſes, and to theſe I ſhall have occaſion to refer. I cannot ſpeak of the general means uſually employed to operate on theſe diſorders without entering into a long and, I think, unneceſſary diſcuſſion.

In attempting a claſſification of tumours, I ſhall ſuppoſe that they may be made to conſtitute an Order in the claſs of local diſeaſes in noſology; and the meaning of the word may be reſtricted, in the manner ſuggeſted, to ſubſtances of new formation, which made no part in the original ſtructure of the body; the order may then be divided into genera,

and the firſt genus may be denominated from its moſt obvious character, (that of having a firm and fleſhy feel,) Sarcoma, or Sarcomatous tumours.

This genus contains many ſpecies, to a deſcription of which I next proceed; the firſt of which I ſhall treat, being apparently compoſed of the coagulable part of the blood, rendered very generally vaſcular by the growth of veſſels through it, without having any noticeable peculiarity in their diſtribution, may therefore be called

Common Vaſcular, or organized Sarcoma.

The names by which I have diſtinguiſhed the different ſpecies of ſarcoma have been objected to, becauſe they are derived from internal circumſtances, and not from any information, which can be acquired prior to an operation. I have not, however, been able to deviſe any better mode of denominating theſe tumours; for all the ſpecies muſt agree in the external characters, thoſe of an increaſe of bulk, and a fleſhy feel. If,

however, an arrangement of tumours was once made, ſo that the hiſtory of each ſpecies could be particularly remarked, we might perhaps be able, from this circumſtance, to form a probable opinion of the nature of the tumour and of the mode of treatment which it would require; and, by adverting to the ſtructure of the removed tumour after an operation, we might determine whether it would be right to remove or leave the contiguous parts. It is deſigned then, to include under this title all thoſe tumours, which appear to be compoſed of the gelatinous part of the blood, rendered more or leſs vaſcular by the growth of veſſels through it.

The veſſels which pervade this ſubſtance are, in different inſtances, either larger or ſmaller, more or leſs numerous: they are diſtributed in their uſual arboreſcent manner, without any deſcribable peculiarity of arrangement. This kind of tumour ſeems to be the moſt ſimple in its nature; many, perhaps all, of the varieties of tumours, were at firſt of this nature. The fatty tumour lately

mentioned was doubtleſs at firſt common vaſcular ſubſtance; but the veſſels ſecreted fat in the body of the tumour, whilſt the neck underwent no ſuch change.

It is then ſuch tumours as are organized throughout, but without any diſtinguiſhable peculiarity of ſtructure, that are meant to be conſidered under this title. This ſtructure is met with not only in diſtinct tumours, but likewiſe in the teſtis, mamma, and abſorbent glands. In the teſtis I have ſeen the veſſels, very numerous and ſmall, diſperſed through every part of the tumour. In the mamma they ſeem to be rather large than numerous, and the organization appears leſs complete.

When this kind of tumour has attained a conſiderable ſize, the ſuperficial veins appear remarkably large; on which account, together with their curiouſly meandering courſe beneath the ſkin, they cannot fail to attract attention. Perhaps the weight of the tumour compreſſes the deeper ſeated veins, and

obliges the blood to return in larger quantities through thoſe nearer the ſurface; or perhaps theſe veſſels undergo a kind of ſympathetic enlargement; for they do not appear to be diſtended by the blood which they contain.

Theſe tumours are generally dull in their ſenſation; enduring even a rough examination by the hand, and electrifying, without becoming painful. I ſuſpect that it is this kind of ſarcoma, which ſometimes, though rarely, ſuppurates; but as, when that event takes place, even partially, the reſt of the ſubſtance is, in general, ſpeedily removed by abſorption, I have had no opportunity of aſcertaining this circumſtance.

Theſe tumours generally grow till the ſkin is ſo diſtended that it ulcerates, and expoſes the new-formed ſubſtance; which, being as it were obliged to inflame, and not being able to ſuſtain diſeaſe, ſloughs and falls out; ſometimes portions ſeem to be detached, and come away without ſloughing. In this manner

ner is the diſeaſe occaſionally got rid of; but ſuch is the conſtitutional irritation attending this proceſs, and the diſguſting fœtor and frightful appearance of the part, that the ſurgeon generally recommends, and the patient ſubmits to its removal at this juncture.

As Caſes will probably convey more information in leſs words than deſcription or narrative, and as they identify the kind of diſeaſe which is meant to be deſcribed, and inform, as it were by example; I deſign to relate one or more *caſes* of each kind of tumour, and thus curtail as much as I can my deſcription of them.

CASE.

A woman, between forty and fifty years of age, was admitted into St. Bartholomew's Hoſpital, on account of a conſiderable tumour which had grown on the inſide of the knee, and had ſo concealed the tibia, that it could not be felt. She remembered it when of the ſize of an egg, but could give no in-

formation to our inquiries, whether in that ſtate it was fixed to the bone, or moveable upon it. It meaſured two feet in circumference, and had been gradually increaſing between three and four years. The veins were large, and formed an appearance like network on the ſurface.

As the tumour advanced in ſize it had gradually prevented her moving about till it entirely confined her to her bed. In this ſituation it was not painful till within half a year before her admiſſion into the hoſpital; when, from the ſenſe of diſtenſion of the ſkin, and the inflammation induced in that part, ſhe became reſtleſs and feveriſh, and loſt her fleſh conſiderably. At length, the the ſkin ulcerated, and the expoſed tumour inflamed and ſloughed at different times, ſo as to leave a cavity in it of the ſize of a pint-baſon. From the ſides of this cavity there was poured forth a moſt *copious and fætid* diſcharge: ſhe had frequently loſt blood from the veſſels laid open by ulceration or ſloughing; and, on her admiſſion into the hoſpital

ſhe

ſhe had a confirmed hectical fever through weakneſs and irritation.

The ſtate of the patient's health, the magnitude of the tumour, the uncertainty of its origin, (for it was ſuppoſed to have ariſen from a diſeaſed bone) made amputation appear the only means of preſerving life. Upon an examination of the amputated limb, which was previouſly injected, this tumour was found to have no connection with the bone or joint upon which it lay. The lower part of the tumour was covered by a thin capſule, made apparently of condenſed cellular ſubſtance, and it was looſely connected to the parts on which it lay; but on the ſurface of the tumour next the ſkin the capſule firmly adhered to it in conſequence of the inflammation which had taken place. The ſubſtance of which the tumour was compoſed appeared to have been originally of a coagulable nature, and the veſſels which ramified throughout it, appeared to be rather large than numerous: yet this appearance might have ariſen from an imperfect injection.

This

This ſingle caſe is ſufficient to convey all the general information on this ſubject, which I have obtained. It is unneceſſary to add parallel inſtances, and I am unwilling to load the account with minute particulars, leſt they ſhould obſcure the principal facts. Probably from the want of knowledge I may have included, without diſcrimination, many varieties in this ſpecies of tumour; and, perhaps, further obſervations will furniſh more ſpecific diſtinctions in theſe diſeaſes. The ſubject is but begun; and the difficulty of the inveſtigation will, I hope, apologize for the ſmall advances which I have been yet able to make.

Adipoſe Sarcoma.

This is a very common ſpecies of ſarcomatous tumour, and is formed moſt commonly on the front, or back part of the trunk of the body, and ſometimes in the extremities.

Although it is generally formed in the midſt of cellular and adipoſe ſubſtance, there can

can be little doubt that its origin is like that of other tumours; that, in the firſt inſtance, it was coagulable lymph, rendered vaſcular by the growth of veſſels into it, and that its future ſtructure was the conſequence of their arrangement and actions. That this was the caſe in the pendulous tumours mentioned in the preliminary obſervations (page 9.) ſeems to be certain.

The diſtinct origin of ſuch tumours is made ſufficiently evident, by obſerving, that they have always a thin capſule of common cellular ſubſtance, which ſeparates them from the contiguous parts. This capſule ſeems merely to be the effect of that condenſation of the ſurrounding cellular ſubſtance, which the preſſure of the tumour occaſions. As the growth of adipoſe tumours is regularly and ſlowly progreſſive; as nothing like inflammation in general accompanies their increaſe; their capſules afford a ſtriking inſtance of an inveſtment acquired ſimply by a ſlight condenſation of the ſurrounding cellular ſtructure, unaffected by inflammation. The capſule,

ſule, which is very thin, adheres but ſlightly to the tumour; and the principal connection appears to be by veſſels, which paſs through it to enter the ſubſtance of the tumour. Theſe veſſels are ſo ſmall and the connection ſo ſlight, that no diſſection is required to ſeparate it; for when the tumour is to be removed, the hand of the operator can be eaſily introduced between it and its inveſtment, and it is thus readily turned out of its capſule.

The veſſels of adipoſe tumours are neither large nor numerous; they are readily torn when the ſeparation alluded to is attempted, and they ſcarcely bleed after it has been effected. It is natural to ſuppoſe when the greater part of a large tumour has been detached, and no veſſel of conſequence has been divided, that ſome principal nutrient artery will afterwards be met with, and this ſuppoſition produces an unneceſſary heſitation on the part of the operator. There is indeed no ſpecies of tumour that can be removed with ſo much celerity, with ſuch apparent

parent dexterity, or with ſuch complete ſecurity againſt future conſequences as thoſe of an adipoſe nature. In ſome inſtances, however, when inflammation has been induced, the capſules even of theſe tumours are thickened, and adhere ſo as not to be ſeparable without difficulty from their ſurface. To certify this remark I may mention the caſe of a man who had an adipoſe tumour growing beneath the ſkin of the nates, in which the preſſure from ſitting occaſioned inflammation, and this kind of tenacious adheſion of the capſule to its ſurface. This circumſtance made the ſeparation of the ſkin from off its ſurface difficult, when the extirpation of the tumour was undertaken; but, after that was accompliſhed, the baſe of the tumour was lifted up and removed with great facility, and almoſt without the uſe of the knife. The under part of this tumour had not a regular ſurface, but projected in portions ſo as to have a lobulated appearance; a circumſtance which is not unfrequent, and which deſerves to be mentioned. From the occurrence of inflammation likewiſe theſe

tumours

tumours ſometimes adhere to the contiguous parts; of which circumſtance the caſe which I am about to relate affords a curious example.

I have known ſeveral fatty tumours growing at the ſame time, in different parts of the body of the ſame perſon.

I ſhall take the liberty of giving an account of the extirpation of a very large tumour of this kind; as the caſe is particularly intereſting, and ſhews that the circumſtances uſually met with are unaltered by the ſize of the tumour.

CASE.

A healthy middle-aged man had a tumour formed apparently beneath the faſcia of his thigh, which he remembered when no bigger than an egg. It had increaſed by a regular and ſlow progreſs, in little more than four years, to a very great magnitude, ſuch as may be eaſily ſuppoſed, when it is told, that it weighed, after removal, between fourteen and

and fifteen pounds. It had been attended with no pain during its increaſe, and was now only inconvenient by its bulk.

The ſurgeons who firſt ſaw this patient would not undertake any operation, feeling an uncertainty as to the nature and connections of the tumour; though they all agreed that, when the ſkin gave way, there was but little chance of the poor man's ſurviving the conſequences of ſuch an expoſure. Conſidering from the hiſtory of the caſe, that the tumour muſt have been removable in the firſt inſtance; believing, from its freedom from pain and irritation, that it was of no malignant nature, and that an operation was only alarming from its magnitude; I recommended the patient to ſee the moſt eminent ſurgeons in London, before he returned in deſpair to the country, from whence he had come for relief. Mr. Cline gave him more direct hopes of ſucceſs than he received elſewhere, and he went into St. Thomas's Hoſpital to ſubmit to the operation.

When

When Mr. Cline had divided the ſkin and faſcia of the thigh, the tumour was eaſily turned out; but it had unfortunately acquired a ligamentous adheſion to the orbicular ligament of the hip, which could not be ſeparated without, in ſome degree, injuring that part. This attachment appeared to be about half an inch in breadth and about one fourth of an inch in length. The cauſe and nature of this firm attachment to the ligament of the hip, ſeems the only circumſtance peculiar to this caſe, or requiring explanation. It appears to me eaſily accounted for, by ſuppoſing the tumour to have compreſſed and irritated that part, and thus to have occaſioned an adheſion, at firſt of a gelatinous nature, but which afterwards becoming organized, had aſſumed the ſtructure of the parts, from whence it proceeded. In like manner tumours growing near, and compreſſing the ſurface of bones, frequently occaſion a degree of exoſtoſis.

No hæmorrhage followed the removal of the tumour. The wound at firſt appeared diſpoſed to do well, but the patient became feveriſh,

feveriſh, and it did not unite by adheſion. There were alſo ſome ſymptoms indicating inflammation about the hip-joint. The man, however, ſurmounted theſe difficulties, and, after ſome months, was diſcharged from the Hoſpital.

There were two circumſtances in the operation attended with danger; one, the ſize of the wound, which could hardly be expected to unite by adheſion, on account of the irritation which from its extent muſt be created; the other, this unlucky attachment to the ligament of the joint. It is to be lamented, that a diſeaſe, ſo readily removable in its commencement, ſhould have been ſuffered to acquire a magnitude, which alone was a ſource of danger.

Pancreatic Sarcoma.

The next ſpecies of ſarcomatous tumour which I ſhall deſcribe, reſembles in appearance the pancreas, and, on that account, may be named (if the etymological import of the

word be not conſidered as prohibitory) Pancreatic Sarcoma.

This new-formed ſubſtance is made up of irregularly ſhaped maſſes; in colour, texture, and ſize reſembling the larger maſſes which compoſe the pancreas. They appear alſo to be connected to each other, like the portions of that gland, by a fibrous ſubſtance of a looſer texture. This kind of ſarcoma, though ſometimes formed diſtinctly in the cellular ſubſtance, more frequently occurs in the female breaſt, perhaps originating in lymphatic glands; and, as caſes of this kind ſufficiently illuſtrate its nature and progreſs, and appear more intereſting in proportion to the importance of the parts concerned, I ſhall ſelect ſome inſtances of this kind, to ſhew thoſe circumſtances which ſeem moſt important in the hiſtory of this ſpecies of ſarcoma.

I ſhall, however, firſt relate a caſe of this diſeaſed ſtructure occurring in the lymphatic glands beneath the lower jaw, and afterwards

ſpeak of its progreſs when it takes place about the female breaſt.

A man came to St. Bartholomew's Hoſpital from Oxfordſhire, with three diſeaſed lymphatic glands, each of the ſize of a very large plumb. They were ſituated beneath the baſis of the jaw, upon the mylohyoideus muſcle. They reſiſted the attempts which had been made to diſcuſs them; and had not been removed from an apprehenſion that a dangerous hæmorrhage would take place in the operation. The glands had gradually, though very ſlowly, attained their preſent magnitude, for the diſeaſe was of fifteen years' duration. The ſurrounding parts were not affected. Sir Charles Blicke undertook and accompliſhed the removal of the diſeaſed glands, the ſtructure of which was exactly ſuch as has been deſcribed. This caſe is related in the firſt place, as it ſhews moſt clearly the uſual characteriſtics of this ſpecies of diſeaſed ſtructure; which are thoſe of ſlowly increaſing, of not being

prone to inflammation, or tending to ſuppuration.

It may not be improper to mention, though it is irrelevant to the preſent ſubject, that, in the operation, the external maxillary artery was unavoidably divided. It did not, however, bleed immediately after the operation, ſo that this cirumſtance was not perceived; and the edges of the wound were brought together by one ſuture, and accurately and firmly cloſed by ſticking-plaſter. Shortly afterwards the patient felt a ſenſe of choking, which increaſed to a ſtate of almoſt actual ſuffocation. Indeed it ſeems probable that this might really have happened before any one could have got to his aſſiſtance, had not ſome of the plaſters fortunately given way, and afforded ſome diſcharge to the blood: for a very great quantity of coagulated blood had collected within the wound, and compreſſed the trachea and pharynx to a greater degree than would readily be believed by thoſe who had not witneſſed the fact. This

circumſtance is mentioned to ſhew the impropriety when there is any chance of hæmorrhage, of cloſing wounds ſo ſtrictly by ſticking-plaſter, as to allow no exit to any blood that may be effuſed; and it is particularly unſafe in circumſtances ſimilar to thoſe of the foregoing caſe. If the hæmorrhage be but ſmall in quantity, and the eſcape of the blood be prevented, it ſeparates the ſides of the wound which ſhould lie in cloſe contact, and thereby prevents their immediate union; and, if it be conſiderable, it deſerves to be remarked, that, ſo far is the compreſſion which the confined blood muſt make on the arteries, from which it was poured, from ſtopping the bleeding, that it ſeems to be a ſtimulating cauſe, exciting an hæmorrhagic action in the veſſels. This remark is manifeſted by the preſent, as well as by many other caſes in ſurgery.

This kind of ſarcoma frequently forms amidſt the mammary gland, a little above, and on that ſide of the nipple, which is next to the arm. Its appearance would lead one

to ſuppoſe, that it was a lymphatic gland, which is uſually found in that ſituation, converted into this ſtructure; but ſometimes it ſeems like a diſtinct tumour. It is the appearance of the capſule which inveſts the tumour, that has led me to form theſe opinions.

Theſe tumours leſſen in bulk if judiciouſly treated; but if they cannot be entirely diſperſed, they increaſe gradually; and when they have attained ſome conſiderable ſize, they are generally removed, from apprehenſion of the conſequences which they might produce, if they were ſuffered to remain. If the tumour be indolent, and if it increaſes ſlowly, the parts ſurrounding it, and the glands in the axilla are not affected. But ſome tumours formed by this kind of diſeaſed ſtructure, which do not unfrequently occur in the breaſt, are, contrary to the ordinary properties of ſuch diſeaſes, of a very irritable nature, occaſioning ſevere and lancinating pain, and producing an inflammatory ſtate of the ſkin which covers them, ſo that it becomes

comes adherent to their ſurface. They alſo irritate the abſorbents leading to the axilla, and produce enlargement of their glands. From theſe circumſtances I ſuſpect that theſe tumours may be frequently conſidered as cancers. Theſe extremely irritable tumours do not generally attain any conſiderable magnitude; they are reduced in ſize by the treatment which has been mentioned, but increaſe again, when it has been deſiſted from. Sometimes a tumour of this nature, which was irritable in the firſt inſtance, becomes indolent after the activity of the diſeaſe has been checked by proper local applications, but in other caſes the irritability of the diſeaſe recurs. The pain is lancinating, and ſo ſevere as to make the patients feveriſh, grow faint frequently, and loſe their muſcular ſtrength. When the axillary glands become affected, one generally ſwells at firſt, and is extremely tender and painful; but afterwards the pain abates, and it remains indurated: another then becomes affected, and runs through the ſame courſe. I remember an inſtance where many of the glands attained a conſiderable

magnitude. The caſe was conſidered as cancerous, and the tumour, which was of the ſtructure that has been deſcribed, and alſo ſome of the diſeaſed glands were removed, but ſeveral were left, and the patient did well.

CASE.

A young woman, who lived with me as a ſervant, ſuffered for more than two years ſevere pain, and conſiderable conſtitutional indiſpoſition, from a tumour of this kind, which had cauſed inflammation and enlargement of three of the axillary glands. Being aſſured that it was not carcinomatous from its diminution under ſurgical treatment, I waited in hopes that ſome beneficial change would ſpontaneouſly take place; but at laſt, by her requeſt, and, with the coinciding opinion of Sir Charles Blicke, I removed the original tumour, leaving the diſeaſed glands in the axilla. The ſource of irritation being taken away, they gradually ſubſided, and the patient ſoon grew fat, and became and remained remarkably healthy. I have known many ſimilar caſes. As I have

preſerved

preſerved no notes, and do not perfectly recollect any caſe, of a tumour of this ſtructure occurring in a diſtinct form, unleſs ſome of thoſe about the breaſt may be ſo conſidered; and as I wiſh to ſhew that all theſe diſeaſes occur diſtinctly as well as in glands, I ſhall, as an inſtance of a pancreatic appearance in a diſtinct tumour, refer the reader to the curious Caſe publiſhed in London by Dr. Bouttatz of Moſcow, of a tumour which grew beneath the conjunctiva of the eye, and protruded it between the eyelids. The tumour was ſeven inches long and three inches and a half in circumference, and weighed two pounds and a half. The ſtructure, which is repreſented in a plate, anſwers correctly to that which I have denominated pancreatic, and it had alſo the ordinary characters of this diſeaſed ſtructure, which are thoſe of ſlowly and regularly increaſing, not prone to inflammation nor tending to ſuppuration. The tumour, as might be naturally ſuppoſed, was cloſely connected with the tunica conjunctiva againſt which it preſſed, but the baſe of it was eaſily elevated from the cornea which ſtill

retained

retained its natural tranſparency, and the patient regained his ſight on its removal.

Cyſtic Sarcoma.

The next ſpecies of ſarcomatous tumour, as it contains cells or cyſts, may be named Cyſtic Sarcoma; and this ſpecies will be found to comprehend varieties. This ſpecies ſometimes occurs as a diſtinct tumour, but is more frequently met with in the teſtis and ovary. In one kind of diſeaſe of the teſtis, the part is perhaps enlarged to ſix times its natural ſize, and conſiſts of a congeries of cells, containing a ſerous fluid; their ſize is that of currants or grapes, but of an oval figure. The ſides of the cyſts are ſo vaſcular as to be made red by injection; and ſometimes the injection is even effuſed and tinges the contents of the cyſt. Dr. Baillie has favoured us with an elegant and correct repreſentation of this diſeaſe, in his Series of Engravings intended to illuſtrate the Morbid Anatomy of ſome of the moſt important Parts of the Human Body *. I

* *Vide* Faſc. 8. Plate 8. Fig. 2.

have

have known this alteration of ſtructure the conſequence of a blow received on the part; but, in general, it occurs without evident injury. The firm or ſarcomatous part of an ovary, affords a good ſpecimen of the ſtructure I am deſcribing; the cells are here much larger, and are ſo vaſcular as to be made quite red by injection.

To ſhew that this ſtructure is not peculiar to theſe parts, I may mention the following caſe: a tumour was taken from the face of a boy by Sir Charles Blicke, which, when divided, was found to conſiſt entirely of an aſſemblage of cells filled with a watery yet coagulable fluid.

In the teſtis, cyſts are not unfrequently found containing a kind of caſeous ſubſtance. In this caſe too, the ſides of the cyſt are vaſcular. The cyſts are generally large, and ſometimes there is but one. I have called the ſubſtance caſeous, becauſe it reſembles cheeſe in conſiſtence, and in colour; being of a yellowiſh caſt, and of an unctuous appearance

pearance, but it is not at all unctuous to the touch. It may be proper to mention, that this caſeous ſubſtance is ſometimes irregularly diſtributed throughout the vaſcular ſubſtance of a diſeaſed teſtis, without being confined in diſtinct cyſts. I believe this kind of ſarcocele is particularly unyielding to medical treatment.

Maſtoid, or Mammary Sarcoma.

There is a ſpecies of ſarcomatous tumour, which indeed I have not frequently met with, but which ſo ſtrikingly reſembles the mammary gland in colour and texture, that, wiſhing to diſtinguiſh it on account of the following caſe, I have named it Mammary Sarcoma.

I have ſeen this ſubſtance (which is white and firm, and has a ſimilarity of appearance throughout) in the midſt of adipoſe tumours; but my attention was not particularly excited to it till the following caſe occurred.

A mo-

A moderately healthy middle-aged woman came from the country to St. Bartholomew's Hoſpital, on account of a tumour of the ſize of a very large orange, which had grown gradually on the front of her thigh: it lay beneath the integuments and above the faſcia. It was removed by an operation, and the integuments covering the tumour were alſo taken away, as in the removal of the cancerous breaſt. The ſides of the wound were brought together by ſticking-plaſter, and, at firſt, ſeemed diſpoſed to heal; but afterwards a conſiderable induration of the ſurrounding parts took place, and the wound degenerated into a malignant ulcer, which ſpread extenſively, and was incorrigible by any medical means employed. As the ulcer ſpread, ſo, in the ſame proportion, did the hardneſs of the parts which ſurrounded it. The pain and fever ſo exhauſted the patient, that in about two months ſhe died.

This tumour, the appearance of which was exactly of the kind that has been deſcribed, ſeemed to have no diſtinct capſule, but to be gradually

gradually loſt in the ſurrounding parts. The whole of the diſeaſed part ſeemed to have been removed, yet it is probable that the contiguous parts had a diſpoſition to diſeaſe, which was aggravated, and rendered more virulent, by the injury of the operation. Could the circumſtances have been foreſeen, it might have been right to have removed the parts ſurrounding this tumour more extenſively, as ſuggeſted in one of the preliminary obſervations.

There is a ſimilar kind of diſeaſed ſtructure, but of a ſofter texture, which is frequently found as a diſtinct tumour, or in glandular parts; which perhaps might, with propriety, be conſidered as a variety of the ſame ſpecies of ſarcoma. It has the ſame uniformity of ſurface, but it is not always of a white colour, being occaſionally of a browniſh or reddiſh tint. I have ſeen a ſubſtance of this kind forming a tumour ſurrounding and compreſſing the œſophagus, and cauſing a contraction of that tube. I have ſeen this kind of ſarcoma in glandular parts, in which the progreſs

greſs and event of the caſe did not indicate the diſeaſe to be of a noxious nature. The general reſult of my obſervations, however, has induced me to believe, that this diſeaſed ſtructure may degenerate into an intractable ulcer, which will communicate its diſeaſe to rhe ſurrounding parts, and I have therefore placed this ſpecies of ſarcoma between thoſe which ſeem to poſſeſs no malignity and thoſe which follow, and which are of a very deſtructive nature.

Tuberculated Sarcoma.

The next ſpecies of ſarcoma which I have to deſcribe may be named Tuberculated Sarcoma. It conſiſts of an aggregation of ſmall, firm, roundiſh tumours, of different ſizes and colours, connected together by a kind of cellular ſubſtance. The ſize of the tubercles is from that of a pea to that of a horſe-bean, or ſometimes larger; the colour of a browniſh red, and ſome are of a yellowiſh tint. In Dr. Baillie's Plates there is one of the tuberculated liver *, which expreſſes the appearance

* *Vide* Faſc. 5. Plate 2.

of

of this kind of ſarcoma as well as can poſſibly be done by an engraving.

The inſtances which I have ſeen have been chiefly in the lymphatic glands of the neck. The tumours have ulcerated; have become painful and intractable ſores; and have deſtroyed the patient. The diſeaſe appears to poſſeſs a very malignant nature.

A remarkable caſe of this kind occurred in St. Bartholomew's Hoſpital in 1797. A man between forty and fifty years of age, had a large tumour at the ſide of his neck, beneath the platyſma myoides. It meaſured about eight inches in length, and four in breadth. It was hard and irregular on the ſurface, ſeeming like a cluſter of diſeaſed lymphatic glands. It was extremely painful, and had greatly impaired his health. He affirmed that it had not been more than ſix months ſince its firſt appearance, and in the courſe of this time, numerous ſmall tumours of ſimilar denſity and ſtructure had grown beneath the ſkin all over the trunk of the body,

but

but chiefly on the neck and abdomen. The ſkin and the front of the tumour in the neck had ulcerated, and become a painful phagedænic ſore; and the patient died with hectic fever, in about ſix weeks after his admiſſion into the Hoſpital. The ſtructure of all the tumours was alike, and ſuch as has been deſcribed: the body was examined by the ſtudents of the Hoſpital, who ſaid that there were no tubercles on the viſcera, as there commonly are in caſes of this diſeaſe.—As this diſeaſe is uncommon, it may not be improper to relate another caſe on which I was conſulted in the courſe of the laſt year.

A gentleman had a tumour in the lymphatic glands of the axilla, which he had taken notice of about a month, and which was ſuppoſed to be of a ſcrofulous nature. I was conſulted as to the propriety of his going to the ſea-ſide. The tumour was of the ſize of an egg, and its ſurface was irregular from the projection of numerous tubercles. This circumſtance ſtruck me, and led me to inquire if he had no other little

tumours in the ſkin. He told me there was one in the groin, which appeared on examination to be a diſtinct tubercle; and, on further inquiry, I found that the glands above the collar-bone, by the ſide of the neck, were in ſome degree affected. I had no doubt of the nature of the diſeaſe, and told the phyſician, that, in my opinion, it would terminate fatally. After about a fortnight, when I ſaw the patient again, theſe tubercles had multiplied all over the ſkin, both in the front and back part of the body; they were hard and painful, and gave him the ſenſation as if he was lying on a number of hobnails. The diſeaſe in the glands, both below and above the collar-bone, had greatly increaſed, and the arm was very œdematous. The diſeaſe progreſſively increaſed; the ſkin ſeemed to peel off in thin ſloughs from the ſurface of the enlarged glands in the axilla; but no ſloughing or ulceration had taken place in the tumour when the patient died, which was about five weeks after I firſt ſaw him. On examining the body, the tubercles every where had the appearance which has been deſcribed; and

many

many ſimilar tubercles were found on the ſurface of the lungs, heart, liver, ſpleen, omentum, and meſentery. The abſorbent glands of the meſentery, and the other internal abſorbent glands were, however, unaffected by this diſeaſe.

Medullary Sarcoma.

The ſarcoma which is next to be deſcribed is generally found in the teſtis, and is diſtinguiſhed by the name of the ſoft cancer of that part. The term cancer is objectionable, becauſe it conveys an erroneous idea of its nature; for this diſeaſe, though perhaps equally deſtructive, will be ſhewn to be unlike cancer in its nature and progreſs.

The tumour, in thoſe caſes of the diſeaſe which I have moſt frequently met with, has been of a whitiſh colour, reſembling, on a general and diſtant inſpection, the appearance of the brain. The diſeaſe is uſually of a pulpy conſiſtence; and I have, therefore, been induced to diſtinguiſh it by the name of medullary ſarcoma. Although I have

more frequently met with this diſeaſe of a whitiſh colour, yet I have often ſeen it of a browniſh red appearance. Which is moſt common I cannot decide: the ſtructure and feel of both are the ſame, and their progreſs is alſo ſimilar; they are therefore to be conſidered as varieties of one ſpecies. The ſhorteſt way in which I can communicate a knowledge of this diſeaſe, and render thoſe remarks, which I have to make on it intelligible, will be, by relating a caſe in which it proceeded to a very conſiderable extent before it deſtroyed the patient.

CASE.

A tall thin healthy-looking man, of about forty years of age, had, about fifteen years before, a ſwelled teſticle from a gonorrhæa; the epididymis remained indurated. Six years afterwards it became enlarged, and a hydrocele at the ſame time formed. Half a pint of water was diſcharged by a puncture, but inflammation ſucceeded the operation, and this teſtis became very large. An abſceſs formed,

formed, and burſt in the front of the ſcrotum, and the teſtis ſubſided in ſome degree. Mercury was employed to reduce it, but without effect. The part however was indolent, and gave the patient no trouble but from its bulk.

About a year afterwards a gland enlarged in the left groin (the ſame ſide as the teſtis): another then became ſwoln in the right groin, and, in the courſe of two years, ſeveral glands in each groin had obtained a very conſiderable magnitude. At this period he was admitted into St. Bartholomew's Hoſpital, under the care of Mr. Long. The teſtis was, at this time, between four or five inches in length, and about three in breadth; it reſembled its natural form, and was indolent in its diſpoſition. The ſpermatic chord was thickened, but not much indurated. Four or five glands were enlarged in the groin on both ſides; each of which was of the ſize of a very large orange; and, when obſerved together, they formed a tumour of very uncommon ſhape and magnitude.

They gradually increaſed in ſize for ſeveral months, till at laſt the ſkin appeared as if unable to contain them any longer. It became thin, inflamed, and ulcerated; firſt in the left groin, and expoſed one of the moſt prominent tumours. The expoſed tumour inflamed and ſloughed progreſſively, till it entirely came away. As the ſloughing expoſed its veſſels, which were large, they bled profuſely, inſomuch that the ſtudents endeavoured, but in vain, to ſecure them by ligatures: for the ſubſtance of the tumour was cut through, and torn away in the attempt. Preſſure by the finger, continued for ſome time, was the only effectual mode of reſtraining this hæmorrhage.

The loſs of one gland relieved the diſtended ſkin, which had only ulcerated on the moſt prominent part of the tumour, and had not become diſeaſed. It now loſt its inflamed aſpect: granulations formed, and a cicatrix took place. In the oppoſite groin a ſimilar occurrence happened. One gland, expoſed by the ulceration of the ſkin, ſloughed out,

being attended by the circumſtances juſt recited. However before the ſkin was cicatrized, ulceration had again taken place in the right groin, in conſequence of the great diſtenſion of the ſkin from the growth of the tumour; and ſloughing had begun in the tumour, when the patient, whoſe vital powers had long been greatly exhauſted, died.

The teſtis was injected, and, when divided, was found to be of a whitiſh colour, and moderately firm conſiſtence, and was made red by the injection in various parts. The tumour formed by the inguinal glands on each ſide was as large as a man's head, and the ſtructure was very ſimilar to that of the teſtis but more pulpy. On opening the body the pelvis was almoſt filled with ſimilarly diſeaſed glands, and the vertebræ were hidden by others as high up as the diaphragm. The diſeaſe in the upper ones was not however ſo far advanced as in the others: ſome of the former, which lay cloſe to the diaphragm, and were not larger than a walnut, being cut into, a thick fluid, reſembling

cream in colour and conſiſtence, eſcaped, and was expreſſed, and the gland was left a contexture of looſe fibrous ſubſtance.

The ſtate of the glands newly affected ſhews, that the actions of this diſeaſe cauſe a ſecretion of fluid-like cream; that this fluid acquires conſiſtence during its reſidence in the part; and that it is the cauſe of the increaſe of ſize in the gland. The profuſe hæmorrhage, which took place during the ſloughing, ſhews that there is an increaſe of veſſels proportionate to the augmentation in bulk of the diſeaſed part *. The ſimple ulceration

* Whether there are in this diſeaſe any new veſſels formed may fairly be doubted; the depoſited ſubſtance acquires ſolidity by reſidence, but it is not of that nature which ſeems to admit of becoming organized. Indeed it may reaſonably be queſtioned, whether veſſels will, in any inſtance, grow into any depoſited ſubſtance, except the gelatinous part of the blood, as that ſeems to be the common and natural matrix for them. Yet ſome tubercles in the liver can be injected; where the diſeaſe appears to be formed of a ſecretion made from cyſts, and of a different nature from the gelatinous parts of the blood: yet veſſels have apparentlyg rown into the depoſited matter. I am alſo much miſtaken if I have not ſeen tubercles in the lungs ſuppurate, though they were

ation of the ſkin from diſtenſion, and the ſubſequent healing of the ulcer ſhew, that this

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were of a kind which anatomiſts in general conſider as inorganic, becauſe they have not been able to inject them. Does not this change from a ſolid ſubſtance into pus imply that they are vaſcular, ſince they go through the ſame changes that vaſcular parts do? It may be ſaid that the change is brought about by the ſurrounding veſſels, or by thoſe of their cyſts; but, in the inſtances alluded to, this ſuppoſition appeared to me improbable. The ſubject ſeems curious, and I mention it merely to excite attention. I wiſh alſo here to ſtate ſome facts which, though not important, may yet be uſeful; and which have left this impreſſion upon my mind, that we do wrong to deny the life or vaſcularity of parts merely becauſe we cannot demonſtrate their veſſels by anatomical artifices. The arguments cited by Mr. Hunter againſt the vaſcularity of the teeth are remarkably ſtrong, and yet that accurate obſerver could not convince his mind, that the decay of the teeth was merely a chemical proceſs, which it ſhould be, if they were inorganic. It appeared to me, that there was ſo much animal ſubſtance in the bone of the tooth as to render it improbable that it would remain in the temperature, in which it exiſts throughout life, without undergoing ſome chemical change; and indeed the progreſs of the decay of a tooth ſeemed to me more like an animal than a chemical proceſs. In diſcuſſing this ſubject in a medical ſociety I was led to aſk, whether the decayed part of a tooth did not ſometimes become painful before the cavity containing the veſſels and nerves of the tooth became expoſed; for, in that caſe, the bone itſelf muſt poſſeſs ſenſation.

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this morbid affection is unlike carcinoma, which communicates its diſeaſe to all contiguous

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As far as my opportunities of obſervation enable me to reply to this inquiry I ſhould anſwer it in the affirmative; and it is alſo known, that the whole crown of the tooth may be deſtroyed to the level of the gum, and yet the patient may occaſionally eſcape the tooth-ache. Suppoſing then that the decay of the tooth was owing to a proceſs reſembling ulceration, without any attempt at reparation, ſuch as we occaſionally ſee even in ſoft parts, I was led to inquire further, whether the ſurface might not be ſometimes irritable and ſometimes indolent; whether the diſeaſe might not ſometimes proceed rapidly, and at another be nearly ſtationary. If this ſuppoſition above mentioned had any truth in it, I thought we might put it to this teſt, in order to aſcertain the probability or falſity of the conjecture. We might deſtroy the irritable ſurface of the decaying part as we do that of an ulcer with cauſtic, and thus diminiſh or remove the pain. This I have done in a great number of inſtances with ſucceſs; and the mode which I have adopted is to moiſten the black decayed ſurface with muriatic acid one half or one third diluted with water. This application gives no pain, except ſometimes when it gets into the cavity of the tooth, but it chemically decompoſes the diſeaſed ſurface. I uſually repeat the application three times, allowing a ſhort interval between each. The ſurface which has been thus deſtroyed is no longer ſore; it may be touched with a probe, and even cold water may be applied to it without cauſing pain. As far as my obſervation enables me to form an opinion on this ſubject, the moſt common kind of tooth-ache takes place in the

guous parts: neither has it the hardneſs, nor the diſpoſition to ulcerate, which characterize

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the following manner: The black ſurface of the tooth becomes ſore and painful when touched, particularly by any thing cold; and, after ſome time, theſe ſymptoms are aggravated, and the whole tooth ſeems tender in every part, from inflammation apparently excited by the irritation of the diſeaſed part. The deſtruction of the irritable decayed ſurface does not, of courſe, immediately remove the general inflammation, but all ſpringing pain, as many patients have called it, ceaſes, and the general inflammation gradually ſubſides.

In the few caſes where this mode of treatment did not ſucceed the failure ſeemed to ariſe either from the impracticability of touching the whole of the decayed ſurface, and from the decay extending into the cavity of the tooth; in which caſe the acid, by touching the nerves, gives great pain, and may perhaps rather augment than diminiſh the inflammation. Perhaps alſo this plan of treatment may ſometimes fail from the pain ariſing from inflammation, beginning in the cavity of the tooth, in the firſt inſtance, and not ariſing, as has been ſuggeſted, from an irritable and painful ſtate of the decayed ſurface. I have alſo deſtroyed one half of the decayed ſurface with the acid, and proportionately diminiſhed the patient's ſufferings, and then applied the remedy to the other half. I have alſo obſerved, that ſome patients have complained of moſt pain when the probe was applied to that part of the tooth neareſt the ſurface; to that which lay, as it were in a degree concealed, under the projecting

ize cancer. The general diſeaſe of the abſorbing glands ſhews, that the diſeaſed action is readily propagated in the courſe of thoſe ſuſceptible veſſels; and the glands of the pelvis being affected equally with thoſe higher up, renders it probable that it induces the diſeaſe, as well by imparting irritation to them, as by furniſhing a matter capable of ſtimulating them when they have imbibed it; an opinion that will be more ſtrikingly verified by the next caſe which I ſhall relate.

This ſpecies of ſarcoma, though it uſually affects the teſtis, occaſionally occurs in other parts. I ſhall authenticate this fact by the brief relation of another caſe, which will

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projecting ſhell of the broken enamel. If the above ſtatement be found, on further examination, to be fact, I think it muſt be granted, that the bone of the tooth has nerves, and conſequently veſſels. I am alſo much miſtaken if I have not ſeen the bone of the tooth tinged with bile like the other bones in perſons deeply jaundiced. This circumſtance was pointed out to me by Mr. Sutton, of Greenwich, who was at the time he made the obſervation a very induſtrious ſtudent, and Houſe-Surgeon at St. Bartholomew's Hoſpital.

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ſerve alſo to throw additional light on the nature and progreſs of this diſeaſe.

A boy about twelve years of age was brought to the Hoſpital for advice, on account of a tumour in the front of his thigh: it had been growing three or four months, and had then attained the ſize of a large orange. The baſe of it was ſituated cloſe upon the bone. It increaſed, notwithſtanding applications that were employed to diſperſe it, and the patient became confined to his bed. After ſome time the leg became œdematous to a very great degree; the inguinal glands were enlarged, but not in a degree proportionate to the œdema, none of them having attained to more than the ſize of a ſmall walnut. The parts in the ham were alſo conſiderably ſwoln. In a ſhort time the cauſe of the great degree of œdema was manifeſted; for the lower part of the abdomen became diſtended by a tumour, that ſeemed to riſe out of the pelvis and compreſs the iliac veſſels. The boy's health, as may

be

be ſuppoſed, gradually declined, and, when the diſeaſe had attained to this ſtate, he died.

On examining the parts it was found, that the tumour, though it lay cloſe to the perioſteum of the thigh bone, had no connection with it; that it was in ſtructure like the diſeaſe laſt deſcribed; and that the diſeaſe had extended, through the medium, and in the courſe of the abſorbing veſſels, downwards to the ham, where the glands were enlarged and formed a conſiderable tumour; and upwards into the pelvis, where the internal iliac glands more than filled one ſide of that cavity, riſing out of it, as has been ſaid, ſo as to diſtend the lower part of the abdomen. The diſeaſe had alſo extended ſo as ſlightly to affect the lumbar glands. The tumours in the ham and pelvis were of the ſame ſtructure as the original tumour. The inguinal glands, though affected apparently from the ſame diſeaſe, were not conſiderably enlarged.

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This caſe alſo ſhews the uncommon facility with which this diſeaſe is propagated along the abſorbing veſſels; and its having extended downwards to the ham, as well as upwards into the pelvis, confirms the opinion, that it extends itſelf by imparting irritation to the veſſels, as well as, perhaps, by furniſhing a matter which, if imbibed, may communicate the ſame irritation.

I have mentioned, as a variety of this diſeaſe, that in which the colour is different, being between a brown and that of the blood, but in texture and organization it does not appear diſſimilar. It ſeems therefore as if the diſeaſed action cauſed the ſecretion of a fluid, ſometimes of a milky, ſometimes of a more duſky hue; which gradually acquires ſolidity and augments the bulk of the part. The diſeaſed part acquires in general a conſiderable ſolidity when it has continued for ſome time, ſo as ſcarcely to deſerve the names of ſoft cancer, or medullary ſarcoma. The hardneſs is alſo, in ſome inſtances which I have ſeen, increaſed, apparently by a thickening

of

of the cellular ſubſtance which pervades the gland.

It ſeems probable, however, that the ſame kind of diſeaſed action may not be always followed by the like alteration of ſtructure, in the part which it affects. Mr. Aſtley Cooper, in his Paper on Obſtructions of the Thoracic Duct, mentions an inſtance in which matter, imbibed from a teſtis affected with a diſeaſe like the preſent, obſtructed that veſſel. His deſcription of the teſtis is, that it was "a pulpy maſs, compoſed of broken coagulable lymph, and blood-coloured ſerum *."

I remember one inſtance of the inguinal and lumbar glands being affected with a diſeaſe ſimilar to thoſe juſt deſcribed, from a diſeaſed teſtis of a different ſtructure. The teſtis was removed in the Hoſpital, and was found much enlarged, and vaſcular throughout, except where ſome ſoft cheeſe-like matter

* *Vide* Medical Records and Reſearches, p. 96.

was

was depoſited. Some of the inguinal glands enlarged, ulcerated, and ſloughed out, and the wound ſeemed diſpoſed to heal. The lumbar glands were affected, became extremely painful, and the patient being previouſly much exhauſted, ſunk under this laſt complaint.

He had been removed to ſome diſtance from the Hoſpital, and I could not obtain permiſſion to examine the body till four days after his deceaſe. I took out the lumbar glands and put them in water; and, the weather being extremely hot, when I examined them the next day, I found that all the unorganized depoſited matter which had enlarged them, had become putrid, and was waſhed away, leaving the capſule of the gland, and a congeries of flocculent fibres occupying the interior part of it: theſe were doubtleſs the veſſels and connecting cellular ſubſtance of the glands not indurated (as I have ſeen it in ſome other inſtances) by inflammation.

In the advanced ſtage of this diſeaſe ſometimes, lymphatic glands out of the courſe of

abſorption, and of the participation of irritation, become affected with the ſame diſeaſe; and a ſecretion of this thick cream or bloody-coloured fluid takes place on the ſurface, or in portions, even in the liver or lungs, or other viſcera. I have heard this circumſtance accounted for, by ſuppoſing that the abſorption of the matter depoſited in the originally diſeaſed parts was ſo abundant as to induce the neceſſity of depoſiting it in various places; but it ſeems to me more natural to attribute it to the more general prevalence of the ſame diſeaſed diſpoſition throughout the body. For we frequently find, that ſolid tumours of ſimilar ſtructure exiſt in various parts of the ſame ſubject; and ſometimes they rapidly multiply as the diſeaſe advances; as was mentioned in the caſe which is related of tuberculated ſarcoma.

Carcinomatous Sarcoma.

The laſt ſpecies of ſarcomatous tumour which I have to deſcribe, is the Carcinomatous. It is not here deſigned to give a full or diſtinct hiſtory of Carcinoma, but only a general and comparative

comparative account of thoſe circumſtances in which it reſembles or differs from other tumours. This kind of tumour, on account of its peculiar hardneſs, is emphatically termed Scirrhus, while it remains entire and free from ulceration. But the word ſcirrhus is frequently applied to other indurations, and it ſeems better, in order to avoid ambiguity, to uſe the ſame term to denote all the ſtages of this diſeaſe, naming it carcinoma, in the firſt place, and ulcerated carcinoma when that change has occurred. This diſeaſe is not, in every inſtance, ſo peculiarly hard as to entitle it to the epithet ſcirrhus; and however indurated it may be, it ſtill muſt be accounted a kind of fleſhy tumour; therefore I may be allowed to call it carcinomatous ſarcoma.

I ſhall arrange the obſervations which I have to offer under three heads: 1ſt, The hiſtory of carcinoma. 2dly, Its anatomical ſtructure; and, 3dly, I ſhall compare this diſeaſe with others which reſemble it. I ſhall ſuppoſe the carcinoma to ariſe in the female

breaſt, as there it moſt frequently occurs, and can be beſt inveſtigated.

It ſometimes condenſes the ſurrounding ſubſtance ſo as to acquire a capſule; and then it appears, like other ſarcomatous tumours, to be a part of new formation: in other caſes the mammary gland ſeems to be the nidus for this diſeaſed action. The boundaries of the diſeaſe cannot be accurately aſcertained in the latter caſe, as the carcinomatous ſtructure, having no diſtinguiſhable inveſtment, is confuſed with the reſt of the gland. In either inſtance carcinoma begins in a ſmall ſpot and extends from thence in all directions, like rays from a centre. This obſervation will ſerve to diſtinguiſh it from many other diſeaſes which, at their firſt attack, involve a conſiderable portion, if not the whole of the part, where they occur. The progreſs of carcinoma is more or leſs quick in different inſtances. When ſlow, it is in general unremitting; at leaſt I am inclined to think that the diſeaſe, though it may be checked, cannot be made to recede by that medical treatment

ment which leſſens the bulk of other ſarcomatous tumours. I ſtate this opinion however with ſome heſitation, for I have been informed by ſurgeons, that diſeaſes, the event of which proved them to be carcinomatous, have ſuffered a conſiderable reduction in ſize by that kind of local treatment mentioned in the preliminary obſervations. This circumſtance affords, in my opinion, another criterion, by which it may in general be diſtinguiſhed. This obdurate and deſtructive diſeaſe excites the contiguous parts, whatever their nature may be, to the ſame diſeaſed action. The ſkin, the cellular ſubſtance of muſcles, and the perioſteum of bones all become affected, if they are in the vicinity of cancer. This very ſtriking circumſtance in the hiſtory of carcinoma diſtinguiſhes it from moſt of the diſeaſes already deſcribed. In medullary ſarcoma the diſeaſe is propagated along the abſorbing ſyſtem, but the parts immediately in contact with the enlarged glands do not aſſume the ſame diſeaſed actions. Neither in the tuberculated ſpecies does the ulceration ſpread along the ſkin, but deſtroys that part only where it covers the diſeaſed glands.

It was obſerved by Mr. Hunter that a diſpoſition to cancer exiſts in the ſurrounding parts, prior to the actual occurrence of the diſeaſed action. This remark, which is verified by daily experience, led to the following rule in practice: "That a ſurgeon ought not to be contented with removing merely the indurated or actually diſeaſed part, but that he ſhould alſo take away ſome portion of the ſurrounding ſubſtance, in which a diſeaſed diſpoſition may probably have been excited." In conſequence of this communication of diſeaſe to the contiguous parts, the ſkin ſoon becomes indurated, and attached to a carcinomatous tumour, which, in like manner, is fixed to the muſcles, or other part over which it was formed.

As a carcinomatous tumour increaſes, it generally, though not conſtantly, becomes unequal upon its ſurface, ſo that this inequality has been conſidered as characteriſtic of the diſeaſe, and it is a circumſtance which deſerves much attention. A lancinating pain in the part frequently accompanies its growth; but in ſome caſes this pain is wanting. It attends

attends alſo on other tumours, the ſtructure of which is unlike carcinoma; of which I have given an inſtance in ſpeaking of pancreatic ſarcoma. This pain cannot therefore be conſidered as an infallible criterion of the nature of the diſeaſe.

The diſeaſed ſkin covering a carcinomatous tumour generally ulcerates, before the tumour has attained any great magnitude; a large chaſm is then produced in its ſubſtance by a partly ſloughing, and partly ulcerating proceſs. Sometimes, when cells contained in the tumour are by this means laid open, their contents (which are a pulpy matter of different degrees of conſiſtence, and various colours) fall out, and an excoriating ichor diſtils from their ſides. This diſcharge takes place with a celerity, which would almoſt induce a perſon ignorant of the facility with which ſecretion is performed, to believe that it cannot be produced by that proceſs.

When the diſeaſed actions have, as it were, exhauſted themſelves by their vehemence,

an attempt at reparation appears to take place, ſimilar to that which occurs in healthy parts. New fleſh is formed, conſtituting a fungus of peculiar hardneſs, as it partakes of the diſeaſed actions by which it was produced. This diſeaſed fungus occaſionally even cicatrizes. But though the actions of the diſeaſe are thus mitigated, though they may be for ſome time indolent and ſtationary, they never ceaſe, nor does the part ever become healthy.

In the mean while, the diſeaſe extends through the medium of the abſorbing veſſels. Their glands become affected at a conſiderable diſtance from the original tumour. The progreſs of carcinoma in an abſorbent gland is the ſame as [illegible]t which has been already deſcribed. The diſeaſe is communicated from one gland to another, ſo that after all the axillary glands are affected, thoſe that lie under the collar-bone at the lower part of the neck, and upper part of the cheſt become diſordered. Occaſionally a gland or two become diſeaſed higher up in the neck, and apparently out of the courſe, which the abſorbed fluids would take.

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The abſorbent glands, in the courſe of the internal mammary veſſels become affected as the diſeaſe continues. In the advanced ſtage of carcinoma a number of ſmall tumours, of ſimilar ſtructure to the original diſeaſe, form at ſome diſtance, ſo as to make a kind of irregular circle round it.

Here it is no wonder that I conclude the accounts of the dreadful effects of this pernicious diſeaſe. For when it has done ſo much miſchief, the ſtrongeſt conſtitutions ſink under the pain and irritation which the diſeaſe creates, aggravated by the obſtruction, which it occaſions to the function of abſorption in thoſe parts, to which the veſſels leading to the diſeaſed glands belong. Towards the concluſion of the diſeaſe the patient is generally affected with difficulty of breathing and a cough. In caſes where the external diſeaſe has been removed, the ſame ſymptoms of diſordered reſpiration take place, and the patients die of the internal diſorder, which is not apparent till the body is inſpected.

It has been a ſubject of debate and conſideration, whether the diſeaſe of the abſorbent glands, which takes place in carcinoma, be the effect of the ſtimulus of matter imbibed by thoſe veſſels from the original diſeaſe, or of irritation propagated along them. The reaſon for ſuppoſing that no poiſon is imbibed is, that if it were conveyed into the blood, it would produce general diſeaſe in the conſtitution; but no more fever or general diſorder is found to exiſt in carcinoma than what would naturally be produced by the irritation which the affected parts occaſion. It does not ſeem eſſential to my preſent deſign to diſcuſs this ſubject at length: it is however right to obſerve, that we ſcarcely ever ſee glands diſeaſed out of the courſe which the abſorbed matter would naturally take, though they are affected in this manner in diſeaſes which can be propagated ſimply by irritation. When the glands of the axilla are obſtructed by diſeaſe, the abſorbed matter will paſs by anaſtomoſing channels, into the internal mammary abſorbents, and if occaſionally one or two gland

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in the neck are found diſeaſed, they may become affected in the ſame manner, by the fluids being obliged to take a circuitous route. It may be proper to enquire, whether thoſe tumours, which ariſe in the circumference of carcinoma, are not cauſed by the abſorbed matter being made to ſtop for a time in the veſſels, and thus to afford that irritation which induces diſeaſe in them and the contiguous parts?

The difficulty of breathing and cough which generally occur in the laſt ſtages of carcinoma, have been ſaid to ariſe from the diſeaſe in the glands on the inſide of the thorax. I have never ſeen them ſo greatly diſeaſed, as to appear adequate to this effect. I once thought they might contribute to it by preſſing on the nerves, where they enter the thorax: of late I have ſcarcely doubted but that the diſturbed ſtate of reſpiration has ariſen from an affection of the liver, which almoſt conſtantly occurs in the laſt ſtages of carcinoma.

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There is another circumſtance in the hiſtory of cancer which deſerves attention and inveſtigation; that is, Whether a diſeaſe not originally cancerous can become ſo in its progreſs? We can only form our opinions on this ſubject from analogy and obſervation. Analogy leads us to believe, that ſuch an alteration in the diſeaſed actions may readily take place. Venereal buboes often change their nature after the adminiſtration of mercury, and become troubleſome ſores, to which that medicine is rather detrimental than beneficial. Injuries induce inflammation and enlargement of parts, which afterwards degenerate into ſcrofulous diſeaſes. But, though analogy ſeems ſo ſtrongly to favour the opinon, I cannot take upon myſelf to ſay, that my obſervations have confirmed it. When tumours have been removed, the hiſtory of which correſponded to that of cancer, a cancerous ſtructure was obſerved in them; and, on the contrary, in diſeaſes of an apparently different nature, a different organization has been found. I once, indeed, aſſiſted at an operation where the tumour was of that kind which I have

denominated

denominated pancreatic; and I heard afterwards, that the patient died in the country of a diſeaſe which was reputed cancerous. Again, in inveſtigating this ſubject it deſerves to be remarked, and every ſurgeon muſt, I believe, be famliarly acquainted with this fact, that many diſeaſed tumours remain in the breaſt for a great length of time, perhaps during life, without undergoing any change in their nature; or, in other words, without becoming cancerous.

It is difficult to convey correct ideas of the ſtructure of carcinoma by words, or even by drawings. In the generality of inſtances the diſeaſed part is peculiarly hard, and there are intermixed with it firm whitiſh bands, ſuch as Dr. Baillie has deſcribed and repreſented in his Book and Plates of Morbid Anatomy. There is indeed no other ſtriking circumſtance, which can be mentioned as conſtantly claiming attention in the ſtructure of this diſeaſe. Theſe firm whitiſh bands ſometimes extend in all directions from the middle towards the circumference of a carcinomatous tumour, like rays from a center, having little intervening

intervening matter. Sometimes they interſect it irregularly; having interpoſed between them a firm browniſh ſubſtance, which may be ſcraped out with the finger. Sometimes they form cells containing a pulpy matter of various colours and conſiſtence; and ſometimes theſe bands aſſume an arboreſcent arrangement, ramifying through the diſeaſed ſubſtance.

Firm white bands, like thickened and compact cellular ſubſtance, are ſeen as the diſeaſe advances, to extend themſelves from the original tumour amidſt the fat in which it is occaſionally imbedded, intercepting portions of fat in the irregular areolæ which they form. This appearance led Dr. Adams to conjecture, that the fat might be originally diſeaſed, and that theſe white bands might be a thickening of the cellular ſubſtance, which enſued as a natural conſequence. This circumſtance deſerves conſideration on account of its practical application; for if, after removing a carcinomatous tumour, the ſurgeon attends to the part which has been taken away, he will ſee if any of theſe bands have been

been cut through, and, conſequently, whether ſome of this diſeaſed ſubſtance, which ought to be removed, has not been accidentally left. This circumſtance cannot be obſerved by looking at the bleeding ſurface of the wound, but may be readily aſcertained by examining the part which has been removed.

Theſe are the chief circumſtances, which I think ſufficiently characterize carcinoma, and diſtinguiſh it from other ſarcomatous tumours. The account of them is brief, and much has been omitted, becauſe it was not deſigned particularly to diſcuſs the ſubject of carcinoma, but merely to point out its diſtinguiſhing characters. I now proceed to ſpeak of diſeaſes reſembling cancer; though, in ſo doing, I ſhall digreſs a little from the principal ſubject of this paper, that is, to deſcribe the diſtinguiſhable kinds of ſarcomatous tumours, and give their hiſtory.

According to the preceding account, carcinoma begins in a ſmall ſcirrhus, which gradually

gradually enlarges and afterwards ulcerates. It does ſo in the breaſt, lip, tongue, and cervix uteri; yet it may be enquired if it does ſo in every inſtance. Parts ſometimes ſuperficially ulcerate at firſt, and afterwards acquire ſurrounding hardneſs, and ſtrikingly reſemble carcinoma, if they do not ſtrictly deſerve that name. This is the way in which ſome diſeaſes proceed, which occur near the ſide of the noſe or eye, and which gradually deſtroy the parts in which they are ſituated, and cannot be cured by any mode of local or general treatment. The intelligent reader will not ſuſpect me of confounding theſe more malignant diſeaſes with the herpes exedens naſi, in which the morbid actions gradually ceaſe, and the firſt affected parts get well whilſt the ſurrounding parts become diſeaſed.

Here ſome additional diſcriminating circumſtances ſeem to be wanted, by which we may diſtinguiſh between theſe ulcers and common carcinoma. I have never remarked, that ſuch ulcers have affected the abſorbent glands, though I do not feel aſſured that this occurrence

occurrence never takes place. It therefore remains to be determined by future caſes, how far this circumſtance may enable us to decide on the nature of theſe diſeaſes. I ſhall next relate the principal circumſtances of a remarkable caſe of this kind of diſeaſe, which will ſerve to elucidate the ſubject, and alſo to exhibit a ſpecimen of the diſeaſes to which I allude.

CASE.

A man was admitted into St. Bartholomew's Hoſpital with a tumour beneath the jaw, having a great degree of ſurrounding hardneſs, and containing three cells, like thoſe of carcinomatous tumours. The hiſtory which he gave of the diſeaſe was very curious: he ſaid that a redneſs took place ſuperficially in the ſkin, which gathered and burſt, and diſcharged good matter; that the opening enlarged, and the ſurrounding parts indurated, and thus produced an appearance like a cell in a carcinomatous tumour; then,

another portion of ſkin became diſeaſed in the ſame manner, and with the ſame conſequences, till, by degrees, the general tumour had acquired its preſent magnitude. To the truth of this account we had an opportunity of bearing teſtimony; for this occurrence took place twice in ſucceſſion during his reſidence in the Hoſpital; and thus two more cells were added to the general maſs. The inflammation of the ſkin, and the ſuppuration, which was healthy in appearance, took place beneath the tumour, and made it reach almoſt as low as the ſternum. As the patient's health had conſiderably declined by the irritation of the conſtitution which this diſeaſe kept up, and as no amendment of the diſeaſe had taken place in conſequence of the applications or medicines which were employed, he left the Hoſpital, and went into the country.

Diſeaſes alſo, which ſtrikingly reſemble carcinoma in appearance, form in the following manner. An enlarged lymphatic gland ſhall gradually become ſoft, and contain a fluid.

a fluid. In this ſtate it ulcerates or is opened; but inſtead of ſubſiding, it inflames; the ſurrounding parts become indurated; the integuments acquire a duſky hue; the opening and cavity enlarge, and aſſume the appearance of a cyſt, from the ſides of which fungus ariſes, and turns over the everted edges of the opening. I have alſo ſeen, after the burſting of an encyſted tumour the ſurrounding parts indurate, and throw out a fungus, forming a diſeaſe appearing like cancer, and which could not be cured.

Are ſuch diſeaſes as I have here deſcribed to be accounted carcinomatous? if not, What are the characters which diſcriminate between them and carcinoma? As I have no preciſe or ſatisfactory information to communicate, I forbear to ſay any thing on the ſubject.

There are tumours, the ſtructure of which may not correſpond with any of the deſcriptions that I have given. I feel, however, unable, from my own obſervations, to depict any other ſpecies. It ſeems to me, that theſe

diſeaſes reſemble colours in this reſpect, that a few of the primary ones only can be diſcriminated and expreſſed, whilſt the intermediate ſhades, though diſtinguiſhable by cloſe attention and comparative obſervation, do not admit of deſcription or denomination. There are ſingle tumours, in the compoſition of which ſeveral of the above-deſcribed ſtructures may be found, and, perhaps, ſome part of which may not correſpond to any deſcription that has been given. If, however, the hiſtory of theſe diſſimilar diſeaſes, which appear in the form of tumours, was accurately recorded, and their ſtructure noted, we might perhaps from the former be led to judge of the latter; and thus attain a knowledge of the intrinſic nature of the diſeaſe which would enable us to act rightly in practice.

Encyſted Tumours.

In the claſs of local diſeaſes, and in the order of tumours, cuſtom ſeems to have placed the genus of Encyſted Tumours, next

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to thoſe of the ſarcomatous kind. The arrangement indeed appears proper; for they are ſo allied in appearance, and in the ſenſation which they impart on examination, that they are not unfrequently miſtaken for each other; and yet, in general, the encyſted tumours have ſufficiently diſtinguiſhing characters, to enable a ſurgeon to determine their nature prior to the performance of an operation. The diſcriminating characters are,—a regularity of ſurface and ſhape, and a pulpineſs to the touch. Yet moſt ſurgeons will, I believe, acknowledge, that they have ſeen tumours diſperſed, which they have taken for wens; and have even, when they have removed them under that belief, diſcovered the diſeaſe to have been a ſoft regularly ſhaped ſarcoma, and not a cyſt containing a pulpy ſubſtance.

Reſpecting the ſtructure of encyſted tumours I have nothing to remark, but what is, I believe, generally known. The cyſts moſt frequently are compoſed of many lamellæ, which are ſometimes ſo compacted, as

to be ſcarcely diſtinguiſhable. Theſe cyſts vary conſiderably in thickneſs; being ſometimes very thick and tough, and at others extremely thin and tender. They ſometimes moſt tenaciouſly adhere to the contiguous parts, ſo as to make it difficult to ſeparate them; and, at others, they are ſo looſely connected, that, when an inciſion is made which lays bare the cyſt, the whole tumour ſtarts out without any diſſection.

That the interior ſurface ſecretes the contents formed in the cyſt, is in my opinion indiſputable. That it is a ſecreting ſurface I believe; becauſe, when a wen has ſpontaneouſly opened by ulceration, I have ſeen the cyſt produce granulations from its ſurface. When alſo, the front of the bag has alone been taken away, and the ſkin cloſed over the back of it, an union takes place between the ſkin and cyſt. When alſo a wen has burſt, or has been punctured, ſo that a ſmall aperture has been left in it, I have ſeen the cyſt fill repeatedly by a ſecretion of the ſame nature, but more fluid than the contents which were

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at firſt found in it, and which has occaſionally been expreſſed from the aperture.

Some notions have of late been entertained, that theſe cyſts may be of the nature of hydatids; it may not, therefore, be improper, in order to enable the reader to form his own judgment on this ſubject, to mention the following caſe.

A gentleman had a wen in his cheek, which ſpontaneouſly burſt, and on which Mr. Hunter tried various ſtimulating means to induce the cyſt to granulate or adhere, ſo that no further collection might enſue. His endeavours, however, were unavailing; for, after the opening cloſed, the cavity of the cyſt filled again, and the wen was as complete as before, and had increaſed in magnitude. It was ſituated unfavourably for removal, and the patient was averſe to an operation. It lay ſo deeply on the buccinator muſcle, as to be as perceptible from the mouth as on the cheek; and there was a great riſk of dividing the parotid duct, in an operation undertaken

for the removal of the tumour. The deformity which the wen occaſioned, was, however, conſiderable, and the patient was very deſirous of having the tumour leſſened, though very averſe to having it extirpated. He had for this purpoſe uſed ſalt and water, which made the ſkin inflame. Having conſulted me, I told him that if ſtimulating applications were to do good, they could only effect it by cauſing the ſkin to ulcerate, and the contents of the wen to be diſcharged, as had formerly happened; all which might be accompliſhed in a more direct, and leſs teazing manner, by juſt pricking the bag with a lancet, and ſqueezing out its contents. I thought it alſo probable, that the ſmall wound would heal, and that the operation might be occaſionally repeated. The patient was pleaſed with the propoſal, and it was put in execution. The contents were of the conſiſtence which is termed meliceritous, and had a peculiar odour. No inflammation enſued, and the wound healed; but, after a little time, it opened again, and gave diſcharge to a ſmall quantity of watery liquor,

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of preciſely the ſame odour as the original contents, and the little puncture again cloſed up. From that time to the preſent, which is now ſome years, the wound has occaſionally opened, diſcharging a ſmall quantity of ſometimes a more fluid, ſometimes a more meliceritous ſubſtance; and, after this diſcharge, the aperture cloſes up. This circumſtance occurs but ſeldom; perhaps every ſecond or third month. The aperture is ſo ſmall as not to be diſcernible; no plaiſter is worn upon it, and the patient has got rid of a conſiderable deformity, upon what he thinks very eaſy and ſatisfactory terms.

I have heard that wens have been treated in the following manner: they have been pricked in various parts of their ſurface with a needle, and the contents expreſſed, ſo that the neceſſity for a more ſerious operation has been prevented.

Theſe circumſtances are mentioned to illuſtrate the functions of the cyſts of theſe tumours; and to ſhew what may be done in

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ſome caſes, as a palliation of theſe diſeaſes. It is not, however, meant to recommend ſuch practice; for, on the contrary, it will be ſhewn afterwards, that it is dangerous to tamper with encyſted tumours; and, indeed, I ſhould not have ventured on this palliative mode of treatment, in the caſe related, had I not known from the effects of the former conduct, which had been purſued, that the cyſt and contiguous parts were of an indolent nature, and not diſpoſed to react in conſequence of violence done to them.

The contents of encyſted tumours have been denominated from their conſiſtence, ſteatomatous, atheromatous, and meliceritous. To this ancient diſtinction muſt be added another: the cyſt ſometimes ſecretes a ſubſtance like nail or horn; which is protruded when the ſkin ulcerates, hardens, and is puſhed forwards in proportion as the cyſt ſecretes more of this ſubſtance, ſo as to appear like horns; as has been ſhewn by Mr. Home in the Philoſophical Tranſactions.

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There is yet another curious circumſtance to be noticed with relation to cyſts; which is, that they have ſometimes hairs growing from their interior ſurface. This is the caſe of thoſe cyſts which are not unfrequently met with in the ovary *.

But though the cyſts of encyſted tumours muſt be conſidered as poſſeſſing the organization of other parts, and as ſecreting and abſorbing ſurfaces; yet their veſſels are probably very minute, and not endued with a degree of ſtrength adequate to the ordinary reparation of injury. If they produce granulations they are flabby, and not diſpoſed to heal.

It is no uncommon circumſtance to meet with wens, that have burſt ſpontaneouſly, and have thrown out a fungus, which, like a foreign body, prevents the ſurrounding integuments from healing.

* Some of the tubercles which occur in the viſcera ſeem to be formed by the depoſition of various kinds of ſubſtances from the ſurface of a cyſt, which appears to be the firſt formed and moſt eſſential part of the diſeaſe.

Moſt parts that are weak, are irritable when excited, and apt to aſſume diſeaſed actions. This frequently happens in a ſtriking manner in the cyſts of theſe tumours; and as, perhaps, ſurgeons are not ſufficiently apprized of the bad conſequences ſometimes occurring from the inflammation of wens, and as it is proper to ſhew the danger of irritating theſe diſeaſes, I ſhall relate a few caſes to illuſtrate this fact.

A woman, about forty years of age, was admitted into St. Bartholomew's Hoſpital, with a frightful fungus growing on the front of the belly, below, and to the right of the navel. She had been a healthy luſty woman, but was greatly deranged in health by the pain and irritation which this had occaſioned. She deſcribed it as being a wen which had burſt, and her account was afterwards verified by diſſection. The fungus bled, and ſhe could ſcarcely bear the ſofteſt dreſſings to be applied to the part. Nothing mitigated her ſufferings ſo much as lint dipt in a ſolution of opium, and kept moiſt by very frequently

ſqueezing on it, from a ſponge, a ſufficient quantity of the ſolution. Nothing allayed the conſtitutional irritation but large doſes of opium. She died exhauſted in the courſe of a fortnight.

I removed the cyſt from off the aponeuroſis of the external oblique muſcle, where it covers the rectus, leaving the tendinous expanſion quite clean and unaffected. The cyſt had ulcerated in two ſmall places, ſo that the fungus which it contained was viſible from behind.

A man between forty and fitfy years of age, who was in St. Bartholomew's Hoſpital, had a wen on his back, which ulcerated, diſcharged an atheromatous ſubſtance, and afterwards inflamed, and threw out a fungus. Extenſive eryſipelatous inflammation took place in the ſurrounding integuments, and his conſtitution was greatly deranged by irritation and fever. When he was almoſt exhauſted by theſe circumſtances, and before any local amendment had taken place, another

other wen of the ſame nature, which he had on his right thigh, ulcerated, and was followed by the ſame conſequences, and, conjointly, they ſoon deſtroyed him.

A gentleman, of a ſtout make, and about forty years of age, had a tumour, ſuppoſed to be ſarcomatous, which had formed beneath the integuments on the lower edge of the pectoral muſcle. It was attended with ſevere pain occaſionally, at which time it rapidly increaſed in ſize, and produced a great deal of fever and irritation *, which made him look very ſickly, and grow very thin, and cauſed ſome perſons to deem the diſeaſe cancerous.

When the tumour had acquired a magnitude of about four inches in length, and three

* Circumſtances like theſe ſhould, I think, be particularly attended to in the hiſtory of tumours; for they may ſerve, perhaps, to characterize the diſeaſe in which they occur. Tumours of an innocent nature commonly increaſe in an equal ratio, and do not excite irritation in the contiguous parts, or in the conſtitution. Yet this, as a general rule, has exceptions. Some of which have been ſtated under the head of pancreatic ſarcoma, occurring in or about the mammary gland.

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in breadth and depth, he ſubmitted to its removal; the integuments were divided and turned back, and the tumour diſſected off the ſurface, and, in ſome degree, from under the edge of the pectoral muſcle.

When the tumour was examined, it was found to be compoſed of a ſteatomatous ſubſtance, contained in a thin capſule. The ſubſtance reſembled that which I have deſcribed as being ſometimes found in cells in the teſtis, or intermixed with the diſeaſed organization of that part. It was firm, and reſembled cheeſe in its yellow colour and unctuous appearance; but it was not unctuous to the touch.

The wound made in the operation ſoon healed, and the patient's health was reſtored to as good, or ſeemingly a better ſtate than before the formation of this diſeaſe. He alſo regained his uſual athletic form. But in leſs than three months after his recovery, two new tumours formed, one above, and the other below the cicatrix of the wound. The

patient

patient did not particularly attend to them till they had attained a ſize equal to that of a large walnut. To diſſect out both theſe tumours, and make ſo free a removal of parts as to render it probable that no new growth would enſue, ſeemed to be a very formidable operation; and, as the nature of the former tumour was known, and it was ſuppoſed that theſe were of the ſame nature, it was agreed to puncture the upper one, to expreſs the contents, and await the event. This was done by a puncture of half an inch in length, made by an abſceſs lancet. The contents were exactly like thoſe of the original tumour. Vehement eryſipelatous or irritative inflammation took place, and ſloughing about the diſeaſed part: the inflammation rapidly extended to the oppoſite ſide of the thorax, and then down the integuments of the abdomen to the groin. The derangement of the conſtitution was as violent as the local diſeaſe, and in about a week the patient died.

Theſe caſes are related to ſhew the danger of irritating wens, either of an irritable nature, or

or occurring in irritable habits; and becauſe I have not met with ſuch caſes deſcribed in books in a manner adequate to the importance of the ſubject.

It deſerves to be noticed in this brief account of encyſted tumours, that the diſpoſition to form wens prevails frequently in many parts of the body at the ſame time. It is not very uncommon to ſee many, even twenty or thirty wens alike in their ſtructure and contents in various parts of the ſame ſubject. Nay, the diſpoſition ſeems ſometimes to be hereditary, and tranſmitted from parents to their children.

The ſubject would appear to me to be incomplete, were I not to notice the formation of cavities, containing different ſubſtances, and which can neither be accounted encyſted tumours, nor abſceſſes. The cyſts are like the cyſts of abſceſſes; they are ſecreting ſurfaces, not regular in ſhape, but varying according to the form of the parts, amongſt which they are produced. They adhere alſo, like the

ſides of abſceſſes, to the circumjacent parts, and are not eaſily ſeparable from them like the cyſts of wens. Theſe cyſts ſometimes contain a kind of ſerum and hydatids, like the cyſts formed in the liver, and other viſcera. Sometimes they contain a number of granular ſubſtances of a white colour, having a poliſhed ſurface, and generally an oval figure. They reſemble pearl barley, but the granules are generally ſmaller. I have ſeen the cyſts containing hydatids, in the back and about the hip. I never met with any containing theſe granular bodies but about the hip, and, in the thecæ of tendons, I have therefore conjectured that thoſe near the hip might have been originally formed in the burſa mucoſa of the great gluteal muſcle.

The majority of theſe caſes, which I have ſeen, have ultimately, but very ſlowly, done well. However ſome cyſts, upon becoming open, produce great and fatal irritation in the contiguous parts. Sometimes cyſts, as Mr. Hey has lately remarked, produce that appearance

pearance which he has called fungus hæmatoides. Of this circumſtance, as it appertains to the preſent ſubject, I ſhall relate an inſtance; but to ſpeak more largely of it would be deviating from the plan of this paper, and would be unneceſſary, as the numerous and accurate caſes which Mr. Hey has related, ſhew that this diſeaſe may exiſt without being connected with cyſts.

A girl about ſixteen years of age, who was in St. Bartholomew's Hoſpital, had a collection of fluid under the triceps extenſor cubiti, near to the olecranon. When I firſt ſaw it, it was not larger than a pullet's egg, but it increaſed, notwithſtanding the means which were employed to diſcuſs it; and, in about twelve months, it preſented itſelf beneath the integuments on the outſide of the arm, in the ſpace between the extenſor and flexor muſcles, a little above the elbow. Upon compreſſing the projecting integuments, an agitation of fluid was felt beneath the triceps muſcle in the inſide of the arm, and the collection ſeemed to extend high up on the back

part of the os brachii. As the parts containing the fluid ſeemed more diſpoſed to increaſe in dimenſions, than to give way and diſcharge their contents, the collection was opened where it pointed, and a quantity of ſerum was diſcharged. On introducing the finger, ſome ſtrata of coagulated blood came away, and this was ſucceeded by ſo great an hæmorrhage, that it became neceſſary to enlarge the wound, in order to ſearch for the bleeding veſſels. In proportion as this was done, and more coagulated blood was detached from the ſides of the cyſt, which had contained both it and the ſerum, the hæmorrhage increaſed, and the blood flowed ſo profuſely from ſo many and ſuch large arteries, that it was impoſſible to controul its effuſion. Amputation ſeemed unavoidable, and was performed as high up as poſſible, but not clearly above the cyſt, ſome part of which remained amongſt the muſcles of the ſtump.

On examining the amputated limb, a thick and firm ſtratum of coagulated blood was found adhering to the ſides of a cyſt, which

extended from a little above the obecranon, where it was large, to nearly the upper part of the os brachii, where it gradually tapered to a ſmall ſize. The upper part of the cyſt was cut off from the reſt by the amputating knife, and of courſe remained upon the ſtump. At firſt, the ſtump appeared to do well, but ſhortly after the ſides of the wound ſeparated, conſiderable inflammation came on, and a fungus was thruſt forth. Great fever and irritation accompanied this local diſorder, and the girl died.

The treatment of encyſted tumours reſembles that of the ſarcomatous kind. By abſtracting blood and heat from the part it is probable the growth of them will be ſtopped, and the diſeaſe made for a time ſtationary. They are not likely to be diſperſed; and, as the magnitude is increaſed by delay, and the ſpontaneous opening of the cyſt generally leaves a vexatious and intractable ſore, and ſometimes is attended with more dangerous conſequences, the early removal of the diſ-

eaſe is the beſt practical conduct that can be purſued.

Another genus of tumours is the oſſeous. Thoſe which hang pendulous into joints are ſometimes bony. Oſſeous tumours alſo form, though not frequently, in other parts: of this circumſtance I ſhall relate the following inſtance. A woman was admitted into St. Bartholomew's Hoſpital, with a hard tumour in the ham. It was about four inches in length and three in breadth. She had alſo a tumour on the front of the thigh a little above the patella, of leſſer ſize and hardneſs. The tumour in the ham, by its preſſure on the nerves and veſſels, had greatly benumbed the ſenſibility, and obſtructed the circulation of the leg, ſo that it was very œdematous. As it appeared impoſſible to remove this tumour, and, as its origin and connections were unknown, amputation was reſolved on. On examining the amputated limb, the tumour in the ham could only be divided by a ſaw; ſeveral ſlices were

were taken out of it by this means, and appeared to conſiſt of coagulable and vaſcular ſubſtance, in the interſtices of which a great deal of bony matter was depoſited. The remainder of the tumour was macerated and dried, and it appears to be formed of an irregular and compact depoſition of the earth of bone. The tumour on the front of the thigh was of the ſame nature with that in the ham; but containing ſo little lime, that it could be cut with a knife. The thigh-bone was not at all diſeaſed; which is mentioned, becauſe, when bony matter is depoſited in a limb, it generally ariſes from a diſeaſe of the bone. This caſe, however, ſhews that the veſſels of a tumour may ſecrete phoſphate of lime, and convert it into an oſſeous ſubſtance, without any manifeſt cauſe exiſting to excite ſuch oſſific inflammation.

Vaſcular tumours alſo may doubtleſs become converted into a ſubſtance reſembling cartilage like thoſe found in joints; and their hardneſs might then exclude them from the genus ſarcoma. I have not however met

with ſuch inſtances, though it is not very uncommon to find a ſubſtance reſembling cartilage intermixed with the other vaſcular ſubſtance of a ſarcocele of the teſtis.

The diſeaſes which I have been deſcribing may be conſidered as edifices which are built up by diſeaſed actions, and in which thoſe diſeaſed actions continue to reſide. The actions themſelves do not admit of examination, though the ſtructures do which they erect. Therefore as Dr. Baillie has obſerved, it is by an examination of diſeaſed ſtructure that we muſt be ſlowly led to a knowledge of diſeaſed actions. It does not follow as a certain conſequence, that ſimilar diſeaſed actions will, in every inſtance, produce preciſely the ſame diſeaſed ſtructure; though it is highly probable that they will do ſo in general. This obſervation would diminiſh our ſurprize if, in ſome rare inſtances, we found cancer exiſting where a cancerous ſtructure was not ſtrikingly manifeſt; or if, in others, a ſtructure like that of cancer, was obſerved where no cancerous actions were apparent. The ſcirrhus

tumours,

tumours, which form beneath the peritoneal covering or lining of the uterus, have ſomething of the ſtructure of cancer, and yet they are not cancerous. In all caſes where tumours are formed we muſt ſuppoſe an increaſe, and, in ſome degree, a diſordered action of the veſſels which form them, but, in many, theſe actions poſſeſs but little diſeaſed peculiarity. As in every caſe of growth, in the re-production of deſtroyed parts, the gelatinous ſubſtance of the blood is firſt depoſited, and afterwards rendered vaſcular, therefore I have conſidered a tumour formed in this manner as one of the moſt ſimple kind and poſſeſſing the leaſt of diſeaſed peculiarity; but I am aware that I may have included under this general character tumours of eſſentially different natures. In the adipoſe ſarcoma there muſt be ſome peculiarity in the arrangement and actions of veſſels which form this tumour; but it muſt be accounted a natural rather than a morbid peculiarity. The pancreatic ſarcoma, I ſhould ſuppoſe, differed but little from the firſt ſpecies. It may be conſidered as a new growth characterized merely

merely by the peculiarity of its appearance, in conſequence of its being ſeparated into may diſtinct parts, which ſometimes cohere by a looſer kind of texture, and ſometimes are ſeparated by a firmer ſubſtance. The connecting medium appears like the thickened cellular ſubſtance of the part in which the newly organized matter is formed. Indeed I have ſometimes preſſed out the ſeparated portions of this ſubſtance from the connecting medium which environed them. In the mammary ſarcoma I ſuſpect ſome diſeaſed peculiarity to exiſt, as has been mentioned in ſpeaking of that ſubject. In tbe tuberculated ſarcoma the prediſpoſition to that diſeaſe ſeems general on the part of the conſtitution. In the medullary ſarcoma the diſeaſe ſeems local, in the firſt inſtance, and propagated by means of the abſorbing veſſels to their glands, and frequently in a courſe retrograde to that which the abſorbed fluids would naturally take; but in the advanced ſtate of the diſeaſe the morbid diſpoſition appears to be general. In carcinomatous ſarcoma the diſeaſe appears to begin

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in a point or ſmall diſtrict, and to extend in every direction, as rays do from a center, affecting every ſurrounding part whatever may be its nature. The diſeaſed actions alſo, though they may be at times more violent or more tranquil, never ceaſe. This diſeaſe is alſo extended through the medium of the abſorbing veſſels in the direction which the abſorbed matter would naturally take.

On Diseases resembling Syphilis.

HAVING thus ventured again to appear before the Public, I shall take the opportunity of exciting its attention to some cases which have occurred to me of diseases resembling Syphilis. Mr. Hunter, in his excellent Treatise on the Venereal Disease, has related several cases supposed to be of that nature, and some of which were certainly not so, as they got well without mercury; but in the greater number the employment of this medicine rendered their nature doubtful. Mr. Hunter also, who was as cautious in drawing conclusions as he was accurate in making observations, expresses himself in many instances so diffidently on the subject, as, in my opinion, not sufficiently to impress the minds of his readers with the certainty, importance, and frequency of such facts. He concludes his observations by intimating "that undescribed diseases, resembling the venereal, are very numerous,

numerous, and that what he has ſaid is rather to be conſidered as hints for others to proſecute this inquiry further than as a complete account of the ſubject." As it has occurred to me very frequently to meet with ſuch caſes, and as the neceſſity for diſcriminating them from venereal diſeaſes appears to me of the higheſt importance, I ſhall proſecute the ſubject by relating ſome unequivocal caſes of diſeaſes ſtrikingly reſembling ſyphilis, and which, however, were not ſo, provided it be admitted that ſyphilis does not ſpontaneouſly get well without the aid of medicine.

The neceſſity for diſcrimination between theſe diſeaſes will appear upon a ſlight conſideration of the ſubject. If a ſurgeon, who does not ſee that extent of practice which occurs in a metropolis, adminiſters mercury in one of the diſeaſes reſembling ſyphilis, he finds perhaps that the ſymptoms yield ſlowly; and even after a conſiderable and debilitating courſe of that medicine they may recur. They are then counteracted by a ſtill more ſevere uſe of mercury till they perhaps ſpontaneouſly

taneouſly ceaſe, which may not happen till the patient's conſtitution is ſo enfeebled, that if it does not fall into other ſtates of diſeaſe it very ſlowly regains the ſtandard of health. Such caſes would induce the ſurgeon to conſider the venereal diſeaſe as peculiarly difficult of cure, and liable to recur on the remiſſion of even a ſevere courſe of mercury. The conſequence of this opinion is, that he employs mercury to an unneceſſary and injurious degree in his general practice.

I do not mean by theſe remarks to infer, however, that, in my opinion, the venereal diſeaſe is equally ſuſceptible of cure in every inſtance by mercury; nor am I an advocate for what has been termed an alterative courſe of this medicine. Caſes which frequently occur have convinced me that it requires a very conſiderable mercurial effect to cure the venereal diſeaſe in ſome inſtances; and that this effect muſt be continued for a conſiderable time in order to inſure a cure. Mr. Hunter probably wiſhed the ſubject of diſeaſes reſembling ſyphilis to be proſecuted, in

hopes that ſome diſtinctive characters might be diſcovered as peculiar to them; but the following caſes ſhew that theſe diſeaſes enſue from primary infected ſores of very diſſimilar appearances, and ſometimes ariſe without any primary ſore having been obſerved. The reader will beſt underſtand my motives for relating theſe caſes after he has peruſed them. The firſt is the caſe of a gentleman who was, at the time it happened, which is many years ago, a moſt attentive and intelligent ſtudent at St. Bartholomew's Hoſpital.

CASE.

This gentleman thought that he had infected a ſlight cut on his hand (which was ſituated in front of and juſt below the little finger) with the diſcharge from a bubo in the groin that he had occaſion to open. The wound fretted out into a ſore about the ſize of a ſixpence, which he ſhewed me, and which I affirmed had not the thickened edge and baſe, and other characters of a venereal chancre. I therefore recommended him to

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try the effect of local means, and not to uſe mercury.

In about a month the ſore, which had ſpread a little, became again contracted in its dimenſions, and aſſumed an healing appearance. At this time pain was felt extending up the arm, and ſuddenly a conſiderable tumour aroſe over the abſorbing veſſels, which proceed along the inner edge of the biceps muſcle. This tumour became nearly as big as a ſmall orange. As the original ſore ſeemed now diſpoſed to heal, and as there was no ſurrounding induration, I could not believe it venereal, and therefore recommended him ſtill to abſtain from mercury, and apply leeches, and linen moiſtened in the aq. litharg. acet. comp. to the tumour formed over the inflamed abſorbents. For it ſeemed to me that if venereal poiſon had been imbibed from the ſore, it would have paſſed on to one of the axillary glands, and would have cauſed induration and inflammation to take place there, more ſlowly than had occurred on the preſent occaſion.

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Under this treatment the tumour was diſcuſſed, and the ſore at the ſame time healed. About three weeks afterwards the patient called on me, and ſaid that there were venereal ulcers in his throat; and in each tonſil there was an ulcer deeply excavated, with irregular edges, and with a ſurface covered by adhering matter; ulcers, in ſhort, which every ſurgeon, who depends on his ſight as his guide, would have pronounced to be venereal. Shortly after alſo, ſome copper-coloured eruptions appeared on his face and breaſt. He ſhewed his diſeaſes to ſeveral ſurgeons, on whoſe opinion he relied, who, without heſitation, affirmed that they were venereal, and that the mercurial courſe had been improperly delayed.

Whilſt the patient was looking out for lodgings, in order that he might go through the mercurial proceſs, a circumſcribed thickening and elevation of the pericranium covering the frontal bone appeared; it was of the circumference of an half-crown piece; and was, in ſhort, what every ſurgeon, who is

guided only by his ſight and touch, would, without heſitation, have called a fair corona veneris. I now told the patient that I was more inclined to believe his diſeaſe was not ſyphilitic, from the ſudden and ſimultaneous occurrence of this node with the ſore throat, &c. Other ſurgeons thought differently; and I believe this very ſenſible and amiable young man imagined that his health would become a ſacrifice if he any longer attended to my opinion. He was preparing to ſubmit to a mercurial courſe, when very important concerns called him inſtantly into the country. He went with great reluctance, taking with him mercurial ointment, &c.: and after a fortnight I received a letter from him, ſaying that he found his complaints benefited by his journey, that buſineſs had prevented him from beginning the uſe of mercury for a few days, that he now found it was unneceſſary, for his ſymptoms had almoſt diſappeared, and ſhortly afterwards he became perfectly well.

At the time, and ever ſince, I conſidered this caſe as meriting publication, as being the

moſt unequivocal inſtance extant of a diſeaſe occurring, which could not from appearance be diſtinguiſhed by ſurgeons of the greateſt experience from ſyphilis, and which, however, was undoubtedly of a different nature; and I believe that there is no one, who would not have decided on this caſe, as thoſe did who declared it to be venereal, unleſs they had had an opportunity of watching its progreſs very attentively. This caſe probably made me more ſcrupulous than I ſhould otherwiſe have been in admitting diſeaſes to be venereal, till their unabating progreſs eſtabliſhed their nature beyond the poſſibility of doubt; and from this heſitation in deciding I have been enabled to prove, that a great number of caſes, in which mercury would have been employed, have got well without the uſe of that medicine. It has happened to me, as it did to Mr. Hunter, to meet with theſe caſes very frequently, and I therefore conclude that they muſt occur frequently to others; and my object in relating theſe inſtances is to induce ſurgeons to reflect on the beſt mode of diſcriminating between them

and thoſe truly venereal. I have kept no particular account of the numerous caſes which I have met with, but the five following inſtances happened in my own private practice within a few months, and the circumſtances of them are ſtill freſh in my memory. The caſes are drawn up from narratives which I requeſted the patients themſelves to make out of their own diſeaſes.

CASE.

A gentleman had a ſore on the lower part of the prepuce near the frœnum, which was much irritated by travelling from the country. When he came to town there was a good deal of ſurrounding inflammation, and a thickening adjoining the edges of the ſore, which were irregular, and ſeemingly diſpoſed to ſpread. An appearance of granulations had taken place on the ſurface of the ulcer, which was at this time as large as a ſhilling. I gave him the pilulæ hydrargyri, whilſt I tried by local means to quiet the irritation of the ſore, and of the ſurrounding parts. As

the ſore appeared to heal ſlowly, and ſeemingly in proportion to the quantity of mercury taken, the patient rubbed in at the ſame time ſome mercurial ointment, and continued to do ſo till after the ſore was well, which was in about a month. In three weeks after he had left off theſe medicines this patient applied to me on account of an ulceration on the velum pendulum palati, and on the ſurface of one tonſil; and ſoon afterwards ulcers took place on the edges of the tongue, on the inſide of the lips and cheeks. Copper-coloured ſpots alſo came out on his arms and legs, and all over his body. They were very numerous, but none appeared on his face. By waiting and watching the progreſs of the diſeaſe, I found that ſome of the ulcers amended ſpontaneouſly, and that the palate got well. I therefore exhorted him to refrain from mercurial medicine, and he went into the country. A medical gentleman, whom the patient conſulted, was very anxious to try ſomething to cure this diſeaſe, when his patient was ſeized with a ſevere febrile complaint, during the continuance of which all

theſe doubtful ſymptoms diſappeared, and there has not been any return of diſeaſe ſince that time.

CASE.

A gentleman had a ſmall ſore on the prepuce, at a little diſtance behind the corona glandis, which did not appear like a venereal chancre, and therefore no mercury was uſed. After about a fortnight, during which time it could ſcarcely be ſaid to be better or worſe, it ſuddenly became conſiderably indurated in its circumference, and the ſurrounding parts became inflamed. The hardneſs was ſo conſiderable that it reſembled one of thoſe indurated chancres which ſo frequently occur; and in conſequence of this ſtriking reſemblance, another ſurgeon, whom the patient conſulted at this time, inſiſted on his confining himſelf to his chamber, and uſing mercury attentively.

The quietude of the patient, with ſome little attention in regard to local applications, ſoon removed the inflammation and hardneſs, and

and the patient, who was controuled by nothing but his fears, diſcontinued his medicine after thrice uſing ſome mercurial ointment, and returned to his former mode of life.

About a month afterwards he called on me with an ulcer in each tonſil, one of which was deeply excavated, with irregular edges, and covered by adhering matter. Shortly afterwards copper-coloured ſpots appeared on his body, but they all went away in about a month without mercury.

CASE.

A gentleman applied to me with a very irritable ſore, or rather excoriation, extending itſelf over the left half of the corona glandis. It was unlike a venereal ſore, as may be ſuppoſed from this deſcription, yet, as the patient was young and healthy, I adviſed him to take ſome of the pilulæ hydrargyri to guard againſt the poſſible conſequences of abſorption, and to bathe the parts affected with the aq. litharg. acet. comp. c. opio, and to apply

folded linen moiſtened with the waſh round the penis. The prepuce ſoon became ſwoln and inflamed, ſo that he was unable to retract it, and the attempt gave him great pain. He was therefore directed to cleanſe the part by injecting frequently the decoction of white poppy heads of a lukewarm temperature. After a week he tried a very weak ſolution of vitriolated zinc, and other metallic ſalts, but they all increaſed his pain, and he was obliged to return to the uſe of the anodyne waſh. When he had perſevered in this courſe three weeks without any evident amendment, we conſulted another ſurgeon, who recommended the diſcontinuance of the mercurial medicine, and in lieu of it the free uſe of the bark. This medicine he took for a week without any amendment; he then tried the nitrous acid for ten days, and afterwards took cicuta.

In about two months he was able to retract the foreſkin, and then the ſolution of vitriolated zinc appeared to leſſen the irritability, and contribute to the ſkinning of the ſore, which

which was merely on the ſurface, not having been attended with any loſs of ſubſtance.

Afterwards, the penis being ſubjected to ſome accidental irritation, the ſame kind of ſoreneſs ſpread over the other half of the corona glandis; but this diſeaſe was not accompanied with ſo much tenderneſs as the former one, and got well in leſs than a month. As ſoon as it was well the patient had an ulceration of the velum pendulum palati, round which the cuticle aſſumed a whitiſh colour; the ulceration ſpread acroſs the palate, but it was evident that the part firſt affected got better whilſt the ulcer became worſe in the parts laſt affected. Two or three ulcers took place upon each edge of the tongue, and ſome on the inſide of the lips. At the ſame time many copper-coloured ſpots appeared on the face, breaſt, arms, and lower extremities; they came out in ſucceſſion, were of an oval ſhape, about the ſize of a ſixpence, and had a ſtrikingly venereal aſpect.

Believing

Believing that the primary ſymptoms of this diſeaſe were not ſyphilitic, and obſerving that ſome part of the ulcer on the palate healed, and that ſome of the ſores on the tongue and lips got better, whilſt new ones broke out, I recommended the patient to uſe no mercury. He went into the country, where all theſe maladies gradually diſappeared, and in about a month he was perfectly well.

CASE.

A perſon, whoſe irregular habits of life gave reaſon to ſuſpect the exiſtence of ſyphilis in the conſtitution, had ulceration of the tonſils, not ſuperficial, but deep. Theſe were accompanied with copper-coloured ſpots on the face and breaſt, and eruptions on the head amidſt the hair, accompanied with a great deal of ſcurf. Theſe got well by anointing the head with ung. hydrarg. nitrat. mixed with ſimple ointment, which made me doubt whether the other diſeaſes were really ſyphilitic, and cauſed me to delay the uſe of mercury. The complaints did not amend, nor did they get materially worſe. There

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was attending theſe diſeaſes a good deal of general indiſpoſition; the appetite failed, and no ſleep took place till the morning.

At this time a tenderneſs and thickening of the perioſteum of the tibia took place. Though other medicines did not appear to be of any ſervice I ſtill was averſe to the uſe of mercury. Tired of delay, the patient conſulted another ſurgeon, who declared the diſeaſe to be venereal, and deſired that mercurial ointment might be uſed. The patient accordingly rubbed in two or three nights without feeling any effect from the medicine, and then ſet off on a party of pleaſure to Brighton, where all the diſeaſes gradually diſappeared without any further uſe of mercury.

CASE.

A gentleman had an enlargement of a gland in the groin, probably from the abſorption of ſome infectious matter, though he was not conſcious of having had any ſore. A ſecond and a third gland became enlarged, the integuments

guments became thickened and inflamed, and a very large bubo formed. It ſuppurated and burſt in three places. The general tumefaction ſubſided, but by no means diſperſed, and ſinuſes remained where the abſceſſes had been. About this time I ſaw the patient, which was two months after the firſt appearance of the diſeaſe.

Shortly after this he had an ulceration, which ſpread over the velum pendulum palati, and, except that it was more ſuperficial, much reſembled a ſyphilitic ulceration. It continued ſo long without amendment that I began to think it was venereal. Bark was now given plentifully, and the ulcer evidently amended. The patient went afterwards to the ſea-ſide, where the bubo gradually diſperſed: many months however elapſed before it entirely diſappeared. The ulcerations of the velum pendulum palati alſo healed ſlowly, and ulcers which afterwards appeared in the back part of the pharynx, alſo got well without mercury.

Theſe caſes are not related as being curious, but becauſe they all, except the firſt, occurred to me within the ſpace of a few months, and becauſe ſufficient time has elapſed ſince their occurrence to ſhew that there is no probability that any ſubſequent diſeaſe will ariſe from the ſame ſource. It muſt be allowed that they are inconteſtable inſtances of diſeaſes getting well without mercury, which could not be diſtinguiſhed by mere inſpection from ſimilar diſeaſes truly ſyphilitic. For though mercury was employed in ſome of the caſes, it was uſed at ſuch a time, or in ſuch quantity, that it cannot in the leaſt influence our deciſion as to this point. For inſtance, in the firſt caſe the mercury was employed for the cure of the primary ulcer, and did apparently contribute to it, yet the ſecondary ſymptoms got well without mercuy, which, according to the opinions now prevailing among ſurgeons, is a proof that neither were venereal. It may indeed be ſuppoſed that the venereal poiſon may be modified by certain conſtitutions, and its effects ſpontaneouſly get well; and ſome

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may queſtion if the ſecondary ſymptoms were the conſequences of the ſores or abſorption to which I attribute them. What I have written is, I believe, in conformity to prevailing opinions, and I forbear to enter into uncertain diſcuſſions.

Theſe inſtances, however, though not ſelected for the purpoſe, ſhew that the primary infected ſores which are capable of producing ſecondary ſymptoms, which ſtrikingly reſemble thoſe of ſyphilis, do not themſelves poſſeſs any uniform characters. In the firſt caſe the ulcer had no uncommon appearance; it was of the ſize of a ſhilling, with fretful edges, and every where covered with granulations. In the ſecond there were no apparent granulations, and a great degree of induration ſuddenly ſurrounded it, giving it a ſtriking reſemblance to the indurated venereal chancre. In the third the ſore ſurface was extremely irritable; but though the diſeaſe exiſted for a long time the ulcerative proceſs did not eat into the part; and at the concluſion of the caſe there was no loſs of ſubſtance.

ſubſtance. In the fourth and fifth caſes the abſorption of the matter, which cauſed the ſecondary ſymptoms, either took place without any breach of ſurface, or the primary ſores were too inſignificant to excite attention. I lately attended a gentleman who had an ulcerated throat, and eruptions on the head, which broke out between the ſecond and third month after the appearance of a ſore on the prepuce, which ſore healed in a few days with no other treatment than bathing it with a ſolution of acetated lead, and applying to it a piece of lint moiſtened with that liquor. This circumſtance made him diſregard the primary ſore, but he was aſſured by a ſurgeon, whom he conſulted, that the ſecondary ſymptoms were venereal: they however got well without mercury.

It is probable that theſe morbific poiſons may be abſorbed without any evident ulcer, or from a trivial ulcer, which may heal ſpontaneouſly, much more frequently than the ſyphilitic poiſon; and if the conſequent conſtitutional ſymptoms are conſidered as venereal,

real, and treated as ſuch, I need not ſay what confuſion muſt be produced in the mind of the ſurgeon who purſues this conduct, and how bewildered his opinions muſt be reſpecting the venereal diſeaſe. If, for inſtance, in the caſe beginning at page 123, a ſurgeon had conſidered the ſecondary ſymptoms as venereal, and employed mercury ſucceſsfully for their cure, he would ſet this down as a caſe of venereal bubo occurring without a previous chancre, and be inclined in his general practice to uſe mercury in all caſes of buboes without chancre, leſt conſtitutional diſeaſes ſhould enſue. There, however, does not appear any thing that ſhould exempt the glands of the groin from enlargement, and diſeaſes to which others are ſubject, whilſt they are particularly liable to irritation and conſequent diſeaſe from the diſorders of the urethra and other parts, to which they are connected by means of their veſſels. The general uſe of mercury, therefore, in enlargement of theſe glands, unleſs circumſtances characterize them as venereal, muſt, I think, be conſidered as improper.

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In order further to exemplify the remark that the primary ſores excited by poiſons, capable of producing ſecondary ſymptoms reſembling ſyphilis, have no uniform characters, but put on various and diſſimilar appearances, I think it right to add another caſe of a phagedænic ulcer, which ſpread by ſloughing, and which I attended in the early part of laſt winter. This I have placed by itſelf, becauſe, as mercury was employed, the concluſions to be drawn from it are leſs certain than in the preceding caſes.

A gentleman had a very irritable ſore on the prepuce, juſt behind the corona glandis, which was covered with ſlough; this having been thrown off was ſucceeded by another ſlough, and the ſore ſpread laterally to the right and left; but it neither extended backwards ſo as to affect the ſkin covering the body of the penis, nor forwards ſo as to touch the glans; neither did it eat deeply into the part ſo as to affect the corpus cavernoſum. I tried various dreſſings, but none ſeemed to do much good. I touched the

ſurface of the ſore with argentum nitratum, but that did harm. I therefore was obliged to ſoothe this ſore ſince I could not correct it. A ſalve made of ſpermaceti cerate, with as much aq. litharg. acet. and tinct. opii as could be incorporated with it, ſeemed to anſwer beſt; and the parts were kept cool by enveloping them in linen moiſtened with the decoction of poppies. The moſt perfect quietude was enjoined, and the part laid upon a pillow with the extremity rather raiſed above an horizontal line. I had given the patient ſome pilulæ hydrargyri in the firſt inſtance, but his conſtitution was ſo deranged by the irritation of the ſore that it would have been abſurd to perſevere in the uſe of mercury. The ſore continued to ſlough, and to extend in a circular direction nearly all round the prepuce, the lower part of which became extremely ſwoln. This took up nearly two months: about five weeks after the commencement of the diſeaſe a ſpot appeared more than an inch from the corner of the mouth. It was ſoon covered over with a ſcab, which roſe far above the ſurface. It had

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encreaſed to the ſize of a ſixpence, when I thought right to dreſs it, that I might diſtinguiſh the ſurface of the ſore. I found that the ulcer was very deep, but I could not ſee the ſurface for a very viſcid diſcharge, which adhered to it like mucus. Poultices and various dreſſings were employed, but the appearance of the ſore was unchanged, and it gradually became of the ſize of a ſhilling. At length a kind of fungus ſhot from that edge of the ſore fartheſt from the mouth. A ſimilar ſpot had made its appearance on the ear, and was alſo increaſing. The activity in the diſeaſe of the prepuce had gradually declined, and I began again to try ſome medicated applications:—the ſore ſeemed much benefited by touching it daily with argentum nitratum; but when this was omitted the ſloughy appearance of the ſore again took place, and it increaſed in dimenſions. It was now agreed at a conſultation that this patient ſhould uſe mercury, and he rubbed in two drachms, by meaſure, every night for ſix weeks. As the mercury took effect it ſeemed to operate beneficially on the ſpot on the ear,

which gradually died away; and on the ſore of the penis, which alſo gradually acquired a healthy appearance, and the parts became ſound, except at one part where the prepuce was not quite deſtroyed, which ſtill retained an unhealthy appearance. The mercury, however, did not affect the ſore on the cheek; the fungus which I mentioned ſeemed to increaſe, and, after a time, ſkin formed over it, ſo that the ſore healed in an unhealthy manner at the edge fartheſt from the mouth. But it ſtill ſpread in the other direction till it reached the angle of the mouth, and it afterwards extended itſelf along each lip. On the upper lip it had ſpread to the extent of one-third of an inch, and ſtill retained the ſame diſeaſed appearance which characterized it at the beginning. It was deep, and its ſurface could not well be ſeen on account of a viſcid matter which adhered to it. It was now agreed in conſultation to leave off mercury, leſt the irritated ſtate of the mouth ſhould increaſe the deſtruction which the ulcer was committing on the lips. The ſore now no longer ſpread; it very ſlowly loſt its diſeaſed

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ſtate, and healed. This alſo happened in the remaining diſeaſed part of the ſore on the prepuce.

I have met with many ſimilar caſes ſince thoſe five that have been related, and of which, from their ſudden and almoſt ſimultaneous occurrence, I was induced to take a written account: within theſe two months I have ſeen two caſes of eruptions and three of ſorethroats. The eruptions took place particularly about the hands and feet: in one caſe the patient has been ſalivated for them; the diſeaſe, however, recurred, and afterwards got well without the uſe of mercury. In the other there were warts and ſores on the prepuce, and buboes in the groin, which ſuppurated and burſt: the eruptions ſo ſtrikingly reſembled thoſe of ſyphilis that all the medical men, who accidentally ſaw the patient, exclaimed that they were ſo, with a confidence proportioned to their profeſſional ſkill and accuracy of obſervation. Indeed in this caſe, and in others, I have been almoſt impelled to uſe mercury, in conſequence of the

opinion and wiſhes of the patient and thoſe of his friends. The hiſtory however of this diſeaſe did not accord with that of the venereal; the warts had preceded the ſores; ſome ſores healed, and others broke out; and at laſt ſome of the eruptions began to get well, and the reſt gradually diſappeared. One of the patients who had the ſore throat had been ſalivated, but the diſeaſe recurred. In the other two I forbore to uſe mercury, and I have reaſon to ſay they will do well without it. In one of the latter caſes there were ulcers on the tongue and inſide of the lips. This circumſtance of the recurrence of theſe diſeaſes, after mercurial courſes, is a ſtrong argument againſt its adoption till their nature is aſcertained as far as poſſible by prudent delay and attentive obſervation.

If, then, the occurrence of ſuch caſes be frequent, and the neceſſity of diſcriminating them from thoſe of ſyphilis be of great importance, we may ſolicitouſly enquire by what circumſtances we are to diſtinguiſh between diſeaſes ſo ſimilar in appearance, but

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ſo different in their nature. Mr. Hunter ſeemed to wiſh the proſecution of this ſubject, probably from the expectation that ſome characters appropriate to theſe diſeaſes might be detected: I have not, however, been able to diſcover any; the fictitious diſeaſe in appearance ſo exactly reſembles ſyphilis that no obſervation, however acute, ſeems to be capable of deciding upon its nature. Although the ulcers in theſe ambiguous caſes generally ſpread more extenſively along the ſurface of the part which they affect, yet this does not conſtantly happen, as is ſhewn in the caſe related at page 118. In this caſe, however, the induration which ſurrounded the chancre occurred ſuddenly, and went away as rapidly. The hiſtory, therefore, of the two diſeaſes was very diſſimilar *. It muſt alſo be remarked, that true

* On the ſubject of induration ſurrounding chancres I think it may be uſeful to relate the following caſe, and to mention that I have known ſimilar ones in a leſſer degree:

A ſtudent in ſurgery ſhewed me an indurated chancre, for the cure of which he had uſed a great quantity of mercury, which had affected his mouth for a long time, though not ſeverely. The ſore ſo exactly reſembled a bad indurated

true venereal ſpots and ulcers ſometimes aſſume the appearance of other diſeaſes, and do not poſſeſs their ordinary characteriſtics.

Since, then, our ſenſes fail us in our endeavours to diſcriminate between theſe two diſeaſes, and ſince the moſt important circumſtance is to diſtinguiſh whether the diſeaſe be venereal or not, we may enquire whether there are any circumſtances in the progreſs of theſe different diſeaſes which will ſerve us in diſtinguiſhing one from the other. It appears to me that there are; and theſe caſes are publiſhed not merely to ſhew the frequency of ſuch occurrences, and the neceſſity

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venereal chancre that I did not heſitate to recommend him to remain at home, and rub in ſo as to produce a ſlight ſalivation. But as no amendment was perceived after a fortnight's confinement, and under a conſiderable affection of the mouth, I was induced to enquire more ſtrictly into the local treatment of the ſore, which I found he was conſtantly irritating by various ſtimulating applications. He alſo affirmed that the hardneſs had ſeveral times gone away and returned again. By bathing the part with milk and water, and dreſſing it only night and morning with mild ſalve, the hardneſs quickly abated, and though he deſiſted from the mercurial courſe it ſoon became perfectly well.

for diſcrimination, but to engage a more general attention to the means by which ſuch diſtinction may be made. A very ſimple fact has enabled me in moſt caſes to diſtinguiſh between the two diſeaſes; yet, ſimple as it is, if it be generally true it is very important; and if it were univerſally true, it would be of the higheſt conſequence. The fact alluded to is, that the conſtitutional ſymptoms of the venereal diſeaſe are generally progreſſive, and never diſappear unleſs medicine be employed. It may be added too, they are as generally relieved under an adequate effect of mercury on the conſtitution. An attention to ſuch plain and ſimple circumſtances has been of great uſe in directing the medical treatment which I have purſued, and I am induced to ſolicit the public attention to them, that others may determine the value of ſuch remarks.

I have aſked the opinion of ſeveral ſurgeons of great practice and abilities reſpecting this queſtion; Whether conſtitutional ſymptoms of ſyphilis do ever ſpontaneouſly amend? and no one has decidedly replied in the affirmative,

mative, whilſt all, without heſitation, agreed that they were generally progreſſive till checked by the effect of mercury. It ſeemed uſeleſs to ſeek further information; for what ſurgeon is there at preſent, if he ſees diſeaſes that cannot be diſtinguiſhed by the ſight from ſyphilis, and hears that they aroſe in conſequence of a chancre, that would ſuſpend his judgment, and forbear to adminiſter mercury? If I have lived in the habit of ſo frequently detecting the impoſing appearances of the ſecondary effects of theſe diſeaſes, it is becauſe I have been upon the watch, and becauſe they have occurred in patients in whom I have ſeen the primary ſores, the appearance and progreſs of which have excited my ſuſpicion as to their nature. I have ſtated the rule as general, but not univerſal; for I could myſelf relate caſes of diſeaſes, in which, from the great abatement, and even diſappearance of ſymptoms, I have concluded the diſeaſe was not ſyphilitic; yet, from the duration of the diſorder, or from the ſubſequent aggravation of its ſymptoms, the patient has deſired, and I have recommended the uſe of mercury, and

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the diſeaſe has been treated as venereal without its real nature being aſcertained.

The rule which has been mentioned relates to the conſtitutional ſymptoms of the venereal diſeaſe, for the primary ones, chancres, do ſometimes heal ſpontaneouſly, generally however, though not conſtantly, leaving a thickening or induration of the affected part. They may alſo be induced to heal by topical means, without mercury, with ſimilar events. Some enlargements of glands in the groin will alſo in like manner ſubſide.

It may be fairly ſuppoſed that if ſome chancres heal ſpontaneouſly, that conſtitutional diſeaſes ariſing from the ſame cauſe, may, in like manner, ſometimes get better without medicine. The adminiſtration of nitrous acid, opium, and other remedies have been ſaid to have amended, if not entirely cured, theſe conſtitutional diſeaſes. But the queſtion is, will they get better ſpontaneouſly? and the queſtion can only be ſolved by experience. Delay will frequently enable

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a ſurgeon to decide; but there are caſes in which no amendment takes place, and the ſurgeon is as it were forced, from the progreſs of the diſeaſe, to employ mercury.

In recommending prudent delay and attentive obſervation I hope and believe that I am not recommending any thing likely to be of dangerous conſequences. The venereal diſeaſe is generally ſoon checked by the uſe of mercury; and in conſtitutions where much medicine is required to counteract its effects, that medicine may be given with freedom. By delay and obſervation we perhaps may perceive that eruptions and ſore throats, which could not from appearance be diſtinguiſhed from venereal, ſpontaneouſly amend: that ſome eruptions ſcale and become well, and the probability will of courſe be that the reſt will do ſo likewiſe: or that an ulcer mends in one part though it may ſpread in another, when the natural inference is that the diſeaſed actions in the ſore will gradually ceaſe, and health return ſpontaneouſly; and that what has occurred in one part of

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an ulcer will ſucceſſively take place in another.

In recommending delay it cannot, I ſuppoſe, be thought that I would adviſe any one to wait till an ulcer deſtroyed the velum pendulum palati, or did material injury to any important part. There are caſes where the progreſs of the diſeaſe obliges a ſurgeon to uſe mercury even though he may be ſuſpicious that it is not ſyphilitic. The effect of exciting a mercurial affection of the conſtitution in diſeaſes reſembling ſyphilis is, as far as my obſervation enables me to determine, very various. It ſometimes cures them very ſuddenly and very differently from the gradual amendment which it produces in truly venereal diſeaſes. Sometimes, however, theſe diſeaſes yield more ſlowly to its operation, and are cured permanently. Sometimes the diſeaſes recur in the ſame parts after a ſevere courſe of mercury; ſometimes mercury merely checks the diſeaſe, and can ſcarcely be ſaid to cure it; in which caſe it ſeems important to ſupport the ſtrength of the conſtitution,

tion, and to keep up that mercurial effect which controuls the diſeaſe, and can be borne without material derangement of the conſtitution for a great length of time. Sometimes alſo the uſe of mercury aggravates theſe diſeaſes.

Again, in ſome conſtitutions, the venereal diſeaſe may aſſume unuſual characters, and be very difficult of cure. It muſt then be ſcarcely poſſible to diſcriminate between theſe anomalous caſes of ſyphilis and thoſe of diſeaſes reſembling it, unleſs ſome new diſtinctions are diſcovered.

But I ſuppreſs any further obſervation on the ſubject, having accompliſhed the intention of this paper, which was to depict a kind of caſes which very frequently occurs in this metropolis, and which is, I believe, too commonly treated as venereal, but which may be diſtinguiſhed not to be ſo by a little prudent delay and attentive obſervation. The frequent caſes of ſuch diſorders which I have recently met with has ſuggeſted the idea that they are increaſing of late; nor is it improbable

bable ſince they are like ſyphilis, propagated by promiſcuous intercourſe from ſecretions, or ſores not ſo readily curable by mercury as thoſe that are venereal, and ſome of which are not from their nature ſo prohibitory of that intercourſe.

It is now nearly two years ſince this paper was drawn out as a ſubject for diſcuſſion at a medical ſociety; and, after ſuch an interval, the chance of any of the diſorders which are deſcribed in it returning is diminiſhed almoſt to nothing. I have ſince met with conſiderable numbers of ſimilar diſeaſes, which gives confirmation to the opinion that they are frequent occurrences. In ſome later caſes, when the diſeaſe has been long protracted, and the patient very anxious to get rid of it, I have given a little calomel for that purpoſe, but not ſo as to invalidate the opinion that the diſeaſe was not ſyphilitic. Having waited for inſtance, four months from the occurrence of a ſore throat with eruptions, and being certified by the progreſs of the diſorders that they were not ſyphilitic, I have directed

directed that one of the compound calomel pills * ſhould be taken every ſecond or third night, which generally diſpoſes the ſores in the throat to heal, but I have taken care to remit the uſe of even this ſmall quantity of mercury if it ſeemed to heal the ſores too ſpeedily, for it ſeems to me better to let the diſeaſe exhauſt itſelf than ſuddenly to cure it, as in the latter caſe it is very likely to return. In confirmation of this opinion I may mention, that, about five years ago, a gentleman applied to me to undergo a ſalivation for the cure of a ſore throat, for which he had been ſalivated three times, once in each ſucceeding year. I need ſcarcely ſay that it was one of thoſe ulcerated throats which have been deſcribed. All medicine was abſtained from; and in between three and four months the ſores ſpontaneouſly became well, and have never ſince recurred. The whole of this paper has been written upon the preſumption

* This pill, as preſcribed in the pharmacopeia of St. Bartholomew's Hoſpital, contains 1 grain of calomel, 1 grain of the precipitated ſulphur of antimony, and 2 grains of powdered gum guaiacum.

that

that diſeaſes which ſpontaneouſly get well are not ſyphilitic, which is, I believe, the general opinion. It may, perhaps, be queſtioned by ſome whether the diſeaſes here recorded may not be modifications of the venereal diſeaſe. The practical rules of conduct will not, however, be altered even if ſuch a ſuppoſition were verified, ſo that it does not ſeem neceſſary to diſcuſs this point: it may however be right to remark, that there are caſes which would induce the belief that ulcerated ſore throats, eruptions, and nodes on the bones, ſimilar to thoſe deſcribed in this paper, may occur from a general diſturbance of the conſtitution without the abſorption of any infectious matter.

SECT. II.

HAVING written the foregoing account, I intended here to conclude, having, in my own opinion, accompliſhed my purpoſe, which was to proſecute in ſome degree the ſubject which Mr. Hunter deemed worthy of inveſtigation, and to depict the circumſtances of diſeaſes which I believe very frequently occur, and which are often confounded with caſes of ſyphilis, to the detriment of patients, and the diſcredit of our profeſſion. But having requeſted the opinions of two of my medical friends on the foregoing paper, one of them ſaid that he thought the publication of it would be injurious, as it might induce the younger ſurgeons to abſtain from the uſe of mercury, to the prejudice of their patients; the other gentleman ſaid that he thought more explicit deſcriptions ſhould be given of the caſes in which mercury ſhould be withheld or employed. In conſequence of

theſe opinions I am induced to take a cloſer comparative view of diſeaſes that are, and of thoſe that are not, ſyphilitic.

I undertake the taſk reluctantly, becauſe the brevity with which I muſt ſpeak of theſe ſubjects may render my opinions liable to miſapprehenſion, and becauſe I do not feel competent to its proper performance. Yet, by this means, I think I ſhall do away the objection of one of my medical friends: for I believe that I am myſelf more likely to err in recommending the too free than the too ſparing adminiſtration of mercury in diſeaſes of this nature. Any ſurgeon who has obſerved the ruinous conſequences of repeated mercurial courſes in ſome conſtitutions would probably err in the ſame manner; and his diſlike to diſorder the conſtitution by mercury would probably lead him even to uſe it more freely than might be abſolutely neceſſary: this he would do in caſes clearly ſyphilitic, in order to prevent the poſſibility of the recurrence of diſeaſe, and a repetition of a mercurial courſe. In doubtful caſes, which are

cured by exciting the mercurial action in the conſtitution, he would adopt a ſimilar mode of treatment in order to ſuppreſs the diſeaſe for ſo long a time as to make it leſs likely to recur; or if any ſubſequent diſeaſe ſhould take place, to render it highly probable that this was not venereal, ſince it had broken out after ſuch a courſe of mercury as muſt be conſidered to be adequate to the cure of almoſt any diſeaſe of that nature. By undertaking this taſk I ſhall perhaps comply with the wiſhes of my other friend in ſtating more explicitly the circumſtances which ſhould induce a ſurgeon immediately to uſe or abſtain from the adminiſtration of mercury, and, at the ſame time, contribute my mite of obſervation to thoſe already offered on this ſtill obſcure ſubject of venereal diſeaſes.

Primary ſores or chancres are extremely various in their appearance, and perhaps in their nature. The moſt clearly marked venereal chancre has been excellently deſcribed by Mr. Hunter. The ſtriking characters of the diſeaſe are, an ulcerating inflammation without

without any reparation, attended with induration of the ſurrounding parts. The deſcription is, a ſore of a ſomewhat circular form, excavated, without granulations, with matter adhering to the ſurface, and with a thickened baſe and edge.

There is another ſpecies of chancre in which the diſpoſition to ulcerate is leſs than uſual, and the diſpoſition to indurate is greater; ſo that the ulcerated ſurface may heal, and leave an indurated knob or tubercle in the affected part.

There are beſides ſome chancres in which the diſeaſed action ſeems to be very inert; in theſe the ulcer is ſuperficial, the thickening of the ſurrounding parts ſlight, and, after ſome time, the ulcerated ſurface acquires a ſtate of health, and cicatrizes, without producing any perceptible granulations.

But it is impoſſible to depict by words the various ſores, ſome of which are of a very irritable nature, that are produced by vene-

real virus, and through the medium of which the conſtitution is contaminated by that poiſon. Mr. Hunter, apparently influenced by this belief, ſpeaks briefly on the ſubject of chancres, and obſerves that the ſore induced by venereal virus will partake of the prevalent diſpoſitions to diſeaſe exiſting in the conſtitution or the part. If, then, many venereal chancres are ſo anomalous in their appearance, it is by their hiſtory that we muſt chiefly be guided in forming our opinion of their nature, as will be preſently more fully inſiſted on*. Reſpecting theſe irritable and uncharacteriſtic

* When mercury is adminiſtered in theſe anomalous venereal chancres it ſometimes amends them, ſometimes it appears to have little or no effect on them, and ſometimes, by increaſing the febrile indiſpoſition which they occaſion, its operation appears to be prejudicial. Sometimes, likewiſe, the irritation which theſe ſores keep up in the general ſyſtem prevents the ſpecific operation of mercury on the conſtitution, and therefore, in many caſes, we are obliged, for different reaſons, to poſtpone the uſe of mercury when it ſeems to be either unavailing or injurious, and to reſume it when future circumſtances indicate. The local treatment of anomalous irritable ſores is, under theſe circumſtances, of the higheſt importance. The removal of the diſcharges from ſuch ſores ſeems eſſential, yet every mechanical irritation

racteriſtic chancres I wiſh to mention ſome obſervations, which have induced me to believe that the venereal poiſon can be conveyed into the conſtitution, and contaminate it through the medium of a ſore, the general actions of which are probably not venereal.

CASE.

A healthy young man had a chancre behind the corona glandis, which was very

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tion ſhould be avoided; and when, therefore, the retraction of the prepuce cannot be effected without injury to the ſores, the diſcharges ſhould be waſhed away by frequent injections of tepid opiate waſhes. The heat and irritation ſhould be alleviated by keeping up evaporation from the ſurface by linen folded and applied round the part, and moiſtened with opiate lotions. The penis ſhould be ſupported in an horizontal poſition, and kept free from that excitement which preſſure or friction may occaſion. As ſoon as it is probable the ſores will bear ſtimulants of any kind, weak ſolutions of metallic ſalts, and ſimilar applications, may be uſed to correct their morbid ſtate; and the ſtrength of theſe applications may be gradually and cautiouſly increaſed, ſo as to leſſen the morbid irritability of theſe ſores. But it is foreign to my deſign to diſcuſs the treatment of theſe caſes; and the relation which has been given of ſome of them will ſerve as ſpecimens of that plan of conduct which I ſhould adopt and recommend.

irritable, threw off ſucceſſive ſloughs, which came away in ſmall portions, and diſcharged a bloody ſanies. It cauſed ſo much ſwelling of the prepuce as, after a ſhort time, to prevent the retraction of that part, ſo that he could only cleanſe it by frequently injecting the decoctum capitum papaveris. This ſore diſordered his conſtitution. As he was healthy he took the pil. hydrarg., and rubbed in the mercurial ointment in conſiderable quantities for more than a month; but it neither checked the progreſs of the ſore, nor affected his habit. It may be remarked that the irritable ſtate of the conſtitution, which theſe ſores occaſion, often counteracts the operation of mercury. This unavailing mercurial courſe was now deſiſted from, when the ulcer had deſtroyed about one half of the glans; it ſtill continued to ſpread, though ſlowly, and afterwards healed. In about two months this patient had eruptions and ſore-throat, which had the characteriſtic marks of ſyphilis, and yielded regularly, like the ſymptoms of that diſeaſe, to the effects of mercury. Again, after the lapſe of ſome months,

nodes

nodes appeared on the tibia and ulna, with nocturnal pains in thoſe parts, and in the head. Theſe complaints were equally characteriſtic, and gave way to the operation of mercury, after which the patient had no return of diſeaſe.—Can we ſay that the actions of a ſore, which were not amended by mercury, and afterwards got well without that medicine, were venereal? or did the mercury adminiſtered, as ſometimes happens, cure the venereal actions of the ſore, and ſo diſpoſe it to heal afterwards, yet without preventing the abſorbed venereal poiſon from producing conſtitutional ſyphilis?

CASE.

Another healthy young man had three irritable ſores behind the corona glandis; one in the middle, one by the ſide of the frænum, and one in the intermediate ſpace. Theſe ſores diſcharged a viſcid ſanies, were of a livid colour, did not eat into the part, but rather roſe above the ſurface, and threw off no ſloughs. We tried, unavailingly, to quiet

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their irritability by opiate applications, and to correct their diſeaſed ſtate by a great variety of other local means. This patient took mercury; and, in conſultation, it was determined that he ſhould perſevere in it till his conſtitution was affected. This happened in about ſix weeks, but the medicine did not operate in the way that was deſired. It made the patient weak and ill, but did not affect his gums; and at laſt brought on ſo violent an affection of his bowels as obliged him to deſiſt, although the ſores were not amended. Knowing that irritable ſores, which in the firſt inſtance reſiſt the effects of local applications, do afterwards yield to them when the powers of the diſeaſe are, as it were, in ſome degree exhauſted, or its nature in ſome way altered. I one morning, by way of experiment, touched one of the ſores with the argentum nitratum, and was the next day ſurpriſed to ſee the amendment it had produced. I repeated the application to this ſore, and employed it to the other two, and in a few days all the ſores were well. As ſoon as this gentleman was a little recovered from

the debility occaſioned by the diſeaſe and the medicine he went into the country, from whence he returned after ſix weeks, with three ſmall indurations in the ſituation of the three ſores. Theſe indurations regularly increaſed, and one of them began to ulcerate on the ſurface. They were ſhewn to ſurgeons of the greateſt experience and eminence, and no doubt was entertained but that they were three indurated venereal chancres. This opinion was confirmed by their giving way regularly to the uſe of mercury, which was perſiſted in till they were completely diſperſed, ſince which time there has been no return of diſeaſe.

It appears to me from ſuch caſes that the irritation of the venereal virus may excite extenſive ſurrounding diſeaſe which is not venereal. In the firſt caſe it ſeems to have got admiſſion into the conſtitution, and as the mercury employed had not its ſpecific operation, the poiſon produced its cuſtomary effects. In the latter it ſeems to have been controuled but not cured by mercury, and

afterwards

afterwards to have excited true venereal action without producing irritation in the ſurrounding parts. I need not ſay that theſe caſes which ſuggeſted the idea which has been mentioned, are far from proving its truth. I could relate a great number of ſimilar caſes; and in ſome inſtances, when the irritable action of the ſore has ceaſed, I have known it become indurated throughout its whole extent. Theſe kind of caſes appear to me to deſerve particular attention, as it muſt be by ſuch means that we may be enabled to draw up a hiſtory of the irregularities of the venereal diſeaſe. Nor is this opinion, which has been mentioned, unſupported by analogy; for the ſame thing happens when conſtitutional ſymptoms of ſyphilis occur. The firſt irritation of venereal diſeaſe in the throat frequently produces extenſive eryſipelatous inflammation in irritable conſtitutions. Of this the patient complains, and to this the practitioner attends; and when it is mitigated or cured a local venereal ulcer appears, which muſt be regarded as the cauſe of this more general diſeaſe. In

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like manner the appearance of a local venereal node is uſhered in by general rheumatic pains in the limb and contiguous joints, which engage the firſt attention, till at length the cauſe which produced them becomes manifeſt. I mean here only to advert to thoſe rheumatic affections which, as it were, uſher in venereal diſeaſes, and then terminate, and not to thoſe which occur and accompany the venereal diſeaſes of the bones in ſome conſtitutions. If this opinion be correct, it will indeed only tend to perplex farther this already intricate ſubject; yet it is only by a recital and proper attention to every fact, that it can ultimately be made clear and ſimple.

If then, as ſeems to be the opinion of Mr. Hunter, the venereal actions in a chancre may be ſometimes ſo modified by the diſeaſed propenſities of the conſtitution, or part, as to form an ulcer ſcarcely cognizable as a venereal one; and if in ſome rare caſes the poiſon may infect the conſtitution, and produce a ſore, the general actions of which are not ſyphilitic, it follows, as a general rule of conduct

duct in practice, that ſurgeons are not to confide in their powers of diſcrimination, but in all caſes of ulcers ariſing from impure intercourſe to act as if the ſore was venereal, to give ſufficient mercury ſlightly to affect the conſtitution, to guard againſt the conſequences of abſorption, and, by local and other general means, to cure as quickly as poſſible the local diſeaſe, and thus remove the ſource of contamination, and the neceſſity for the continuance of medicine. This is, I believe, the general rule of practice adopted by the beſt ſurgeons, and it appears to me, in the preſent ſtate of our knowledge of theſe diſeaſes, to be judicious. One advantage reſults from this plan of conduct, which is, that if conſtitutional ſymptoms follow from a ſore treated in a manner that ought to have prevented contamination of the habit had the ſore been venereal, our ſuſpicions are excited, and by attentive obſervation we may perhaps diſcover that they are well founded.

In caſes of anomalous ſores it may be enquired, if in thoſe, which the event proves to be of a venereal nature, the diſeaſe deviates materially

terially from its common characters, that of an ulcerative proceſs without reparation, and extending in every direction. Do theſe ſores enlarge by ſloughing, or produce granulation or fungus? do they ſpread otherwiſe than nearly equally in their whole circumference? does the ulceration extend in them only in particular directions? do they heal in one part and ſpread in another? or do they amend and become worſe ſuddenly? Thoſe infected ſores which are not venereal have ſuch peculiarities, as has been ſhewn in the firſt part of this paper, and as they are ſo very various, it becomes neceſſary to diſtinguiſh them from thoſe which are ſyphilitic by accurately noting the progreſs of anomalous caſes of the latter diſeaſe. It is extremely difficult to form any correct opinions on this ſubject on account of its intricacy, and the almoſt impoſſibility of abſtaining from the uſe of mercury; but it is a ſubject highly deſerving enquiry, and which never can be fairly inveſtigated till it be known that the ſecondary ſymptoms ariſing from ſores may not be venereal, though their appearances cannot be

diſtinguiſhed

diſtinguiſhed from ſuch diſeaſes by ſight alone.

With reſpect to ſores that are not venereal the difficulties of inveſtigation are greatly multiplied. If a deſcription cannot be given of venereal ſores, it ſeems almoſt abſurd to ſay any thing of thoſe multiform ſores produced by infectious matter, the qualities of which may be probably variouſly modified, and the effects of which appear equally liable to modification from peculiarities of conſtitution. Yet in this intricate ſubject there are certain facts which can be diſtinctly obſerved, and deſerve attention. Some of theſe ſores ſpread by ulceration, and ſome by ſloughing, of which inſtances are related in the firſt ſection of this paper. Even Celſus has deſcribed ſeveral ſpecies of ſores which, as Dr. Adams has obſerved, we are acquainted with in the preſent day. I have never ſeen that phagedænic ulcer, which ſuddenly ſloughs, affect the conſtitution; neither do I believe that ſurgeons in general have remarked it; thoſe who regard all theſe ſores as venereal attribute the

the abſence of ſecondary ſymptoms to the chancre having been removed by the ſloughing of the ſurrounding parts. Yet in the caſe related by Mr. French in Mr. Hunter's Treatiſe on the Venereal Diſeaſe, ſecondary ſymptoms did occur from a ſore of this kind, and got well without mercury. It may therefore, perhaps, be doubted whether this diſeaſe be not an aggravated form of the ſore which ſloughs more ſlowly, and from which the conſtitution is much more frequently affected. As I conſider any obſervations that I have made on theſe ſores to be incomplete, and therefore not to be depended upon, and Dr. Adams having reſtricted the term Phagedæna to one kind of deſtructive ſore, I feel more inclined to leave it as a generic term for all theſe ſores, and to divide them into ſpecies according to their peculiar characters. Then we may deſcribe them as ulcerating phagedænic ſores, and ſores which ſpread by ſloughing. Again, the ulcerating or ſloughing proceſs may extend not in all but in particular directions, and the ſloughs may take place from the edges or from the whole

ſurface. As Dr. Adams has treated theſe ſubjects at large, I refer the reader to his book; but I will take upon me to deſcribe one ſpecies of ſore which frequently occurs, and is generally treated as venereal, but which I am convinced is not ſo.

The ſores alluded to generally break out in ſucceſſion, and ſometimes after a conſiderable interval of time; which circumſtance, if remarked, would render it improbable that they aroſe from infection of the ulcerated part, ſince ſuch ſores would probably be contemporary. The ulcer is at firſt inflamed, and ſpreads ordinarily to the ſize of the finger nail: its circumference is thickened; it throws out new fleſh, which riſes above the ſurrounding ſkin; ſometimes there is an appearance of ſeveral little cells or ſpaces in the interſtices of the granulations, if they may be called ſo, owing to the whole ulcer not producing new fleſh in an equal degree. Theſe ſores are ſlow in healing under any mode of treatment, and they generally get well in the ſame ſucceſſion as they broke out.

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They ſometimes form in a circle round the orifice of the prepuce, and cauſe a contraction in that part after they have healed. I do not mean to ſay that all ſores occupying this ſituation are not venereal, but merely to ſtate that ſometimes after a gonorrhæa of the prepuce, either originally occurring there, or having happened by a metaſtaſis of diſeaſe from the urethra, ſores do break out in this ſituation at a remote period from the receipt of the infection, which are not venereal. They ſeem to be the conſequence of an irritated ſtate of the prepuce, from which there is ſometimes a ſlight general diſcharge, like that which takes place when the gonorrhæa ſhifts its ſituation from the mouth of the urethra, and becomes the gonorrhæa of the prepuce. The glands in the groin ſometimes ſwell from irritation in theſe caſes, and generally ſubſide again, though I have known them ſuppurate; but I never ſaw any ſecondary ſymptoms ſucceed to this ſpecies of ulcer.

In the earlier part of my practice, in conformity to general rules, I uſed to give mer-

cury in theſe ulcers to ſecure the conſtitution againſt infection, whilſt I tried to heal the ſores as ſpeedily as I could by topical applications. Slightly deſtroying the ſurface with the argentum nitratum every ſecond day, and dreſſing with the ſolution of zincum vitriolatum, were the local means which ſeemed to be moſt ſucceſsful. An attention to the hiſtory of the diſeaſe, and frequent applications for advice from perſons who had been ſeverely and unavailingly ſalivated for the cure of this ſpecies of ſore, ſoon emboldened me to abſtain from the uſe of mercury, and I have never found, though I have met with a conſiderable number of inſtances, that I have in this reſpect acted wrong.

As I believe that the relation of caſes conveys information reſpecting diſeaſes more correctly and ſtrikingly than any other mode of deſcription, I ſhall mention the circumſtances of a caſe which occurred to me no long time ago. A gentleman had a ſlight irritation in the urethra, and, after a few days, found the prepuce a little ſwollen, with a ſmall

a ſmall diſcharge from beneath it. This was checked by a weak ſolution of zincum vitriolatum; and afterwards three ſores, ſuch as I have deſcribed, broke out in ſucceſſion, for which he uſed mercury ſo as to affect his mouth. The ſores ſlowly healed, but two new ones made their appearance, and the mercurial courſe was perſevered in. Theſe ſores alſo healed ſlowly, and a running came on from the urethra, no new ſores having appeared. The mercury was left off, the gentleman came to town, and was much diſtreſſed to find that three other ſores, exactly like the former ones, now broke out, but the diſcharge from the urethra had ceaſed. At this period he applied to me, and gave me the foregoing narrative of his diſorder, with an aſſurance that he had expoſed himſelf to no new riſk of infection. I employed only local means for their cure, being ſatisfied by the hiſtory as well as the appearance of the ſores that they were not ſyphilitic. Near a month elapſed before any conſiderable amendment took place, when a ſwelling appeared in the groin, and the ſores healed ſuddenly

in a few days. Leeches and Goulard's waſh were employed to diſperſe the bubo, but in vain: it ſuppurated, and formed a very unhealthy abſceſs. There was a great deal of ſurrounding eryſipelatous inflammation, the cuticle ſeparated from the ſurface of the bubo, the ſkin became livid, and gave diſcharge to the matter by a partly ſloughing and partly ulcerating proceſs. This, however, proved the criſis of the complaint: the abſceſs having thus broken filled up, and healed in the courſe of about three weeks, ſince which the patient has had no return of diſeaſe. This gentleman was liable to have ſores break out ſpontaneouſly on the prepuce: they got well readily by bathing them with a weak ſolution of zincum vitriolatum; and I believe that perſons who have naturally an irritable ſtate of the prepuce are moſt obnoxious to ſuch affections. We muſt not, however, impute the occurrence of theſe peculiar ſores to mere irritability, but to ſome ſpecific contagion.

The diſcharge from the urethra in ſuch caſes is not conſiderable, nor attended with much

much inflammation or chordee, nor does it increaſe in violence; it may therefore be eaſily diſtinguiſhed from common gonorrhæa and its varieties.

Sometimes, in a common gonorrhæa, the diſeaſe ſhifts its ground and attacks the foreſkin, and ſores from about the orifice of this part. Theſe are of a different nature from the ſores which I have been deſcribing: their ſurface is generally gloſſy, not producing exuberant new fleſh, and their colour is unhealthy. They generally get well as the diſeaſe returns to its original ſituation in the urethra. I merely mention theſe circumſtances to induce attention, and to prevent ſurgeons from confounding the ſores which I have been deſcribing with any others ſimilarly ſituated, but different in their nature.

I am deſirous of briefly relating an anecdote, communicated to me by an eminent ſurgeon in this town, on the ſubject of ſores that occur from a diſorder firſt affecting the urethra. This caſe deſerves attention, not

only as being curious in itſelf but becauſe it corroborates the foregoing obſervation by the teſtimony of another. A gentleman lately married complained to his ſurgeon of a running from the urethra, which ſo ſtrikingly reſembled a venereal gonorrhæa that the latter could not but aſcribe it to infection. He had afterwards a ſwelling of the prepuce, and ſores on that part, which confirmed the ſurgeon in his opinion, and produced a kind of diſſenſion between his patient and him, the one affirming that the diſeaſe was venereal, the other that it could not poſſibly be ſo, as his wife had no diſeaſe, and he had had connexion with no other woman. The effect of this litigation was, that the ſurgeon could not urge the taking mercury, nor would the patient require the adminiſtration of that medicine, though a bubo, ſorethroat, and eruptions ſucceeded, which could not be diſtinguiſhed from ſimilar complaints of a ſyphilitic nature, but all of which ſpontaneouſly got well.

Under this head of ſores which occur on the genitals, and which are not ſyphilitic, I may

may mention one ſpecies that I have ſeveral times ſeen on the ſide of the penis, which is herpetic, affecting new parts whilſt thoſe firſt affected get well; ſo that the ſore may exiſt a long time, and be very troubleſome, though its ſituation may have varied conſiderably.

I have alſo ſeen a circle of ſmall ſores, like what takes place in tinea, occur on the outſide of the prepuce in conſequence of ſome acrimonious ſecretions being applied to it in ſexual intercourſe. Some diſeaſes, whatever may be their primary nature, do, after a time, extend themſelves between the integuments and the ſubjacent parts. I have known many diſeaſes which burrow in this manner treated as ſyphilitic, and, as the event of the caſes has proved, improperly. Indeed the progreſs of ſuch diſeaſes is ſo different from that of ſyphilis, that it is natural to diſcredit its being ſo. Diſeaſes which proceed in this manner ſeem to be of an irritable nature, and to affect moſt thoſe parts which have leaſt powers of life, which appears to be the cauſe of their peculiar mode of extending themſelves.

I have

I have in the foregoing pages endeavoured to repreſent briefly the circumſtances of the primary ulcers of diſeaſes which are, and of thoſe which are not, ſyphilitic, and to ſtate the general rules for the adminiſtration of mercury; and, at the ſame time, I have deſcribed ſome ſores which have not, as far as I know, been diſtinguiſhed, and which, in my opinion, are not venereal, though they are generally treated as ſuch. To take a ſimilar comparative view of conſtitutional diſeaſes ariſing from theſe various ſores would render this paper too prolix. I hope it will be ſeen that I do not preſume, nor do I ſee cauſe, to deviate from thoſe eſtabliſhed rules of practice founded on the general experience of ſurgeons. It would indeed, in my opinion, be preſumptuous in an individual to form general rules drawn from his ſcanty expe-rience; I may be allowed, however, to remark that individuals of the profeſſion are likely to err by inferences drawn from their own practice; and it appears to me that ſome profeſſional men at preſent are inclined to believe all ſores ariſing from impure connexion to be ſyphilitic, whilſt others may be

too

too ſcrupulous in expecting all ſyphilitic ſores to poſſeſs their common characters. The truth probably in this, as in other inſtances, lies between theſe extremes. Much however, it muſt be acknowledged, remains to be aſcertained, and I think that thoſe ſurgeons would do eſſential ſervice to ſcience, who would give an accurate account of the irregularities of the venereal diſeaſe. But ſuch an account never can be given by one, who eſteems all diſeaſes venereal, which reſemble venereal diſeaſes in appearance. The foregoing caſes will, I think, at leaſt prove this to be fact; and it was a principal incitement to their publication, that if this fact were generally admitted, it might lead to that ſcrupulous attention and impartial obſervation of ſyphilitic diſeaſes, as would probably lead to accurate diſtinctions, and the removal of that obſcurity with which they have hitherto been ſurrounded. I have ſuppreſſed many obſervations of my own on this ſubject, from a belief that it is better to ſay nothing than to offer opinions not fully confirmed by facts. The idea that ſyphilis is a moſt variable and

proteus-

proteus-like diſeaſe has probably ariſen from thoſe irregular diſeaſes which I have deſcribed in the firſt ſection of this paper being confounded with it. The opinion is however prejudicial, as it checks attentive obſervation by declaring its inutility. If it ſhould be in our power, as I ſhould hope it may, by directing our attention to the hiſtory rather than to the appearances of theſe diſeaſes, to diſtinguiſh ſyphilis from other complaints, then we may alſo be able to deſcribe the irregularities of this diſeaſe, and to inform others when it aſſumes deceptive characters, and purſues an unuſual track, what diſguiſe it puts on, and what courſes it follows.

On Injuries of the Head.

IN the eſſays which I formerly publiſhed, as well as in the preſent work, I have endeavoured to excite the attention of ſurgeons to particular points of practice, and to eſtabliſh them by caſes, without entering into a full diſcuſſion of any ſurgical ſubject. This plan, though uſeful from its brevity, is not without its inconvenience. In the account of injury done to the head I ſtated, that, in my opinion, the older ſurgeons had recommended the operation of the trephine to be performed in ſome caſes unneceſſarily; whilſt others, who had witneſſed the frequent ill ſucceſs attending that operation, ſeemed inclined to reprobate it too generally. In order to ſhew what were the kind of caſes in which it might be abſtained from, I related ſeveral inſtances of fractures with ſlight depreſſion, which did perfectly well without the operation of the trephine: I alſo mentioned other

caſes to prove that ſlight preſſure on the brain is not productive of thoſe dreadful conſequences which had been formerly apprehended. Theſe facts were intended to point out the impropriety of the former practice, which was founded on the belief that the brain was an organ of ſuch delicate ſtructure that the leaſt degree of preſſure would be highly injurious: which opinions would induce us to trephine in caſes of ſlight depreſſion, or even where a little blood was ſuppoſed to be effuſed upon the dura mater. Yet I know that ſeveral ſurgeons, whoſe judgment I reſpect, thought that the repreſentation which I gave of this ſubject might induce others to abſtain from the operation of the trephine, when it was neceſſary, in a prejudicial degree. I muſt however ſay, that many caſes which have occurred ſince my laſt publication have tended to confirm the opinions which I have delivered on this ſubject. One of theſe I ſhall briefly relate.

A lad, eighteen years of age, had the ſquamous part of the temporal bone beaten in; the

the fracture ran horizontally, about a quarter of an inch above the zygoma, and could be distinctly traced with the finger, introduced through the torn scalp and temporal muscle, for two inches. The upper part of the bone was depressed about one-eighth of an inch; and it was impossible to trephine below the fracture in order to elevate the depressed portion. The lad had recovered from the immediate stunning occasioned by the injury, nor was there any symptom that indicated material derangement of the functions of the brain from the pressure which it sustained. He was bled largely, and took purging medicine, and was moderately well on the following day. On the second morning he was again purged; and when I saw him at noon nothing materially wrong appeared; but when I came to the hospital at eight in the evening I found he had gradually become delirious, and that he then could scarcely be kept in bed. His skin was hot, and his pulse frequent and strong. These symptoms could be attributed to nothing but inflammation of the brain; he was therefore immediately and

largely bled. He now became quiet and manageable; but the next morning his replies to all queſtions were incoherent, his pulſe frequent, his ſkin hot, and his tongue dry. The bleeding and purging were repeated, and at night a bliſter was applied to his neck. On the following morning he was ſleeping and feeble, but his anſwers were rational; as the frequency and fulneſs of his pulſe increaſed in the evening, he was again bled. The inflammation of the brain was now ſubdued, and the patient gradually recovered. The wound healed without any exfoliation of bone, and when he was diſcharged from the hoſpital there was not the moſt trivial circumſtance which could induce us to ſuſpect that the brain had ſuſtained any injury from the accident. His ſleep was ſound and undiſturbed, and the ſudden motion of his head in any direction occaſioned no giddineſs or inconvenience.

This caſe, with the others that I have related, ſhews that the inflammation of the brain is to be expected as a conſequence of any

any ſerious injury of the head, and can ſcarcely be conſidered as the effect of ſlight preſſure, as it frequently does not occur till ſome time after the preſſure has exiſted, and is removed though the preſſure ſtill remains.

I have ſaid, that the caſes which I have met with ſince my former publication on this ſubject, have confirmed the opinions that were then delivered. Candour however obliges me to relate the circumſtances of the only caſe, which I have ſeen ſince that time, of fracture with ſlight depreſſion of the ſkull which terminated fatally.

June 3, 1802. A coachman, twenty-three years of age was thrown from his box. The middle of the anterior edge of the right parietal bone was fractured, and a piece about the ſize of a ſixpence was ſlightly depreſſed. He ſoon recovered from the ſtunning occaſioned by the fall, and did not come to the hoſpital till the ſucceeding day. As he was perfectly well he was but ſlightly bled, and no bad conſequences of this injury appeared

for two months. At this time he came again to the hoſpital, complaining of ſpaſms in his left arm. The wound, which was not yet healed being examined, the depreſſed bone was found to be looſe, and was removed, which alleviated the ſpaſms. Soon afterwards a portion of the external table of the ſkull alſo came away. In the middle of September his health ſeemed much deranged, and he continued to get weaker till the middle of October. The dura mater had gradually become protuberant, and covered with a fungus; it at laſt gave way, and coagulated blood was diſcharged mixed with detached pieces of the ſubſtance of the brain. The left arm had now loſt its ſenſation, though the patient could feebly direct its motions. On the 17th of October the patient became very ill, and much bloody ſerum was diſcharged from the wound. He was delirious during the night, but on the next day underſtood all queſtions propoſed to him; blood and brain were diſcharged through the wound. On the evening of the 19th he died. There was found a vacancy in the membranes of the brain, oppoſite

to

to the deficiency in the bone, through which the effuſed blood and cruſhed brain had been diſcharged. In other reſpects theſe membranes were perfectly ſound. The whole right hemiſphere of the brain ſeemed to be reduced into a pulpy and fetid maſs, compoſed of a mixture of blood and brain; the cortical ſubſtance, to the depth of about half an inch, remaining ſound, and containing the other. This large cavity communicated with the left ventricle under the fornix.

The want of any urgent ſymptoms in the beginning of this caſe prevented the patient from ſubmitting to thoſe ſtrict attentions, which might have produced his ultimate welfare. The reader muſt form his own opinion whether the continuance of the preſſure of the bone was the cauſe of the diſeaſe in the ſubſtance of the brain. In order to form a correct opinion it ſhould be conſidered that ſometimes the immediate bruiſe of the brain will occaſion ſuch a diſeaſe, although the depreſſed bone be ſpeedily elevated, of which inſtances are related in my former

publication: and that ſometimes diſeaſe and abſceſſes of the brain enſue from mere concuſſion, as was the caſe in Le Sieur de Gallois, related by Mr. Louis in the Memoires de l'Academie de Chirurgie, tom. 5. They may occur alſo without any fracture of the bone, perhaps from the irritation which dead bone occaſions in the ſubjacent parts; of which I ſhall relate the following inſtance.

A man had the ſcalp bruiſed and torn down by the wheel of a cart from off the frontal bone. He was not ſtunned at all by the accident. The bruiſed ſcalp mortified and the bone was left bare. He remained in the hoſpital waiting for exfoliation, and as he had no illneſs, but little attention was paid to him. After about two months, however, he became weak, and ultimately delirious, and died, and on examination an abſceſs containing about one ounce and a half of pus was found in the front lobe of the cerebrum, beneath the dead bone, and full half an inch from the ſurface.

It was my object in the former publication, ſimply to ſtate the circumſtances of caſes of fractures of the cranium with ſlight depreſſion, which would do well without elevation. Had I been ſpeaking at large on the ſubject of trephining, I ſhould have ſtated it as my opinion, that the inflammatory ſymptoms would probably be more ſevere after that operation has been performed, than they would have been, had it been omitted. This opinion has been formed from obſerving, that in many caſes, where the trephine has been employed in caſes of ſlight depreſſion, the ſubſequent inflammatory ſymptoms have been ſo violent that they could not be controuled by the moſt copious evacuations, and that the patients have in conſequence died. Indeed the opinion is ſufficiently probable to make it admitted, were it not ſupported by numerous facts: for in trephining an additional injury muſt be done to the ſcalp and cranium, which would increaſe the ſympathetic irritation of the internal parts; and the ſuſceptibility of the brain would probably be increaſed, when that ſlight preſſure, which it had endured was

ſuddenly taken away. Probably the vehemence and frequent fatality of the inflammation, which follows the operation of the trephine, is the circumſtance which has led ſome practitioners to be unwarrantably averſe to its performance. It cannot be ſuppoſed that I mean to deſcribe the ſubſequent ſymptoms as in every inſtance uncontroulable and fatal; on the contrary I know it to be a neceſſary and ſucceſsful operation. I only mean to remark that inflammation will come on with or without its performance in caſes of violent injury, and that it would probably be more violent under the former than under the latter circumſtance. Had I been in the former publication writing expreſsly on the operation of the trephine, I ſhould have ſtated it as my opinion, that no conſiderable depreſſion of the cranium ought to be ſuffered to remain; and that every hazard ſhould be encountered rather than ſuch a degree of preſſure ſhould be ſuffered to remain, as might be productive of future inflammation and diſeaſe, or diſturb the functions of ſo important an organ as the brain. The object of my laſt publication

tion was to ſhew, as far as my opportunities of obſervation enabled me, what appeared to be the kind of caſes, in which it would be injurious to apply the trephine, and what caſes would do well without that operation.

If I had been writing expreſsly on the circumſtances requiring the operation of the trephine, I ſhould alſo have ſaid, that where the bone was broken into many pieces, ſo as to render it probable that they would not unite, but on the contrary that ſome would periſh, and that ſuppuration would take place, it would be right to make a ſmall perforation, and take away the ſplintered portions of bone. They might otherwiſe become looſened by ſuppuration, and keep up for a length of time an irritation on the ſubjacent membranes and brain, in conſequence of that ſympathy which exiſts between external and internal parts.

It will be acknowledged, that it is very difficult to decide in ſome caſes, whether it is preferable to trephine or not. All that I have ſaid, either in the former paper, or in this, is

deſigned more to excite obſervation and inveſtigation in others, than from a belief that I have eſtabliſhed any certain rules for deciſion. The caſes on which the opinions are founded muſt, however, I think, be worthy of attention.

Since my laſt publication on this ſubject I have met with a caſe of concuſſion of the brain, ſo remarkable on account of the violence of the ſucceeding inflammatory ſymptoms and their conſequences, and on account of the recovery of the patient under ſuch violent and complicated diſeaſe, that I deem it worthy of publication. The caſe was attended by Mr. Sheppard of Chew Magna, who was, at the time it happened, dreſſing pupil to Sir Charles Blicke at St. Bartholomew's hoſpital. To his judicious and unremitting attention I cannot but attribute in a great degree the ultimate welfare of the patient. The account which I have drawn up, is taken from Mr. Sheppard's notes.

David Davis, a robuſt man, thirty-five years of age, was admitted into St. Bartholomew's

hoſpital

hoſpital on the 21ſt of November 1799. He had fallen from a conſiderable height on his head, and had bruiſed and wounded the ſcalp, but without fracturing the bone. He was, when brought to the hoſpital, ſo far inſenſible, as not to be affected by ſlight impreſſions, and his extremities were cold. His feet were put into hot water, and, after ſome time, he became warm and more ſenſible, and the pupils of his eyes contracted as in common. Twelve ounces of blood were taken from the temporal artery, and a purging medicine given. On the following day, the pulſe being full and hard, ſixteen ounces more of blood were taken away, and the purging medicine repeated, which procured ſeveral ſtools, and a bliſter was alſo applied to the nape of the neck. Notwithſtanding theſe meaſures, however, he became delirious, and his ſkin felt hot, and he complained of pain in his head. Twelve ounces more of blood were therefore taken, and three grains of pulvis antimonialis given every fourth hour.

November 24. The delirium ſtill continued, but the patient lay more quiet: his pulſe

pulſe was 120 and full, therefore twelve ounces of blood were taken, and as the delirium and ſtrength of the pulſe ſtill continued, in the evening the bleeding was repeated to the extent of twelve ounces. His bowels were alſo emptied by magneſia vitriolata and ſenna. Afterwards he had thirty drops of Tra. opii given him at night. He ſlept ſome hours in the night, and next morning his pulſe was leſs hard, and only 96 in a minute; his anſwers to queſtions were alſo much more rational, and delivered in a leſs loud and quick tone of voice than before. For during the greater part of the delirium he had been very unmanageable, rolling about in bed and endeavouring to get up, and ſpeaking in a loud and fierce manner. Toward the evening the ſymptoms again increaſed; his pulſe was 120, and harder and fuller than in the morning; his ſkin was hot, and he complained of thirſt. He had taken purging medicine in the morning, which had operated. Three grains of antimonial powder were now given every fourth hour, and his feet put into warm water in hopes of procuring perſpiration: ten ounces of blood were

were taken from the temporal artery, and the opiate repeated at night.

25th. The patient had ſlept during great part of the night; his pulſe 100; he complained of cold though his ſkin was hot, and of great pain in his head. More ſtools were procured, and twelve ounces of blood were taken from the temporal artery. He now took ſix grains of pulv. ipecac. comp. every four hours.

26th. He had been delirious during the former part of the night, but had ſlept toward the morning; in other reſpects he was much as before. In the evening, as his pulſe would bear it, twelve ounces of blood were again taken away.

27th. Pulſe ſofter and frequent. He had three ſtools from medicine in the evening. The delirium ſeemed to have a little ſubſided, and he was much inclined to ſleep, ſo that it was difficult to obtain an anſwer from him.

28th. A bliſter was applied to his head, and in the evening his pulſe becoming full,

ten ounces of blood were taken from him. Two grains of opium were given him at night.

29th. He had ſlept well but complained of his head, and of difficulty in ſwallowing, and in the evening had hemiplegia of the right ſide of his body.

30th. He had ſlept but little, the bowels lax, the pulſe ſmall and frequent, the hemiplegia continues.

We had thus far been endeavouring, by the moſt powerful means, to ſubdue a violent inflammation of the brain, and could ſcarcely be ſaid to have accompliſhed our deſign, when a new affection called for attention. I think it can ſcarcely be doubted that the hemiplegia was the effect of preſſure made by an effuſion of fluids in conſequence of inflammation, operating probably chiefly on the left hemiſphere of the brain, ſo as to paralize the oppoſite ſide of the body. Under this perſuaſion, and without expectation of ſucceſs, I directed that two drachms, by meaſure, of ſtrong mercurial

curial ointment ſhould be rubbed in on his arms and legs night and morning, and that five grains of the pil. hydrarg. with one grain of opium, ſhould be given three times a day. Theſe means were continued for three days without any ſtriking amendment being perceived, but on the fourth (Dec. 4.) he ſtretched out his right arm when required, and he was able to ſwallow without difficulty. As he was getting better, the ſame plan was perſevered in till the 9th, when the mercury had affected his mouth, and produced a diarrhœa. He now knew all thoſe perſons who had attended him, and his ſtate was ſurpriſingly altered. During the inflammation of the brain he had been very unmanageable, and his replies and expreſſions were fierce and loud. Now he was extremely tractable, and wept whenever he was ſpoken to. His pulſe was very feeble, and beat but 90 in a minute. It ſeems right to mention that a few days afterwards, when he was ſlowly recovering, one of the wounds of the temporal artery gave way, and he loſt perhaps fourteen ounces of blood before it was perceived.

ceived. This circumſtance of courſe made him weaker, and increaſed the frequency of his pulſe, but it did not much impede his recovery, which, though very ſlow, was very perfect. Extenſive ſloughing of the integuments of the nates had taken place, which it does not ſeem requiſite to mention, but inaſmuch as it tends to ſhew the reduced ſtate to which he was brought. Indeed if this patient had not poſſeſſed a vigorous conſtitution, it could not be expected that he would have ſurvived the debility which this diſeaſe and the treatment conjointly produced.

The extent of the evacuations, that ſurgeons are obliged to make, in inflammations of vital organs is ſuch, as would deter the unexperienced from purſuing them, and muſt aſtoniſh thoſe who have employed them with ſucceſs, that they could be borne with ſo little apparent injury. It can only be accounted for by conſidering the diſeaſe as the ſtimulus which keeps up the actions of the conſtitution under ſuch exhauſting meaſures, as would occaſion them to ſink but for this excitement.

I have

I have ſeen ſo many additional caſes of concuſſion, ſo exactly correſponding to thoſe formerly related, that I am more fully ſatiſfied of the truth of the repreſentation which has been given of them. I have in conſequence been led more and more to wonder, that a contrary plan of treatment to that which has been ſo uniformly ſucceſsful, could ever have been recommended, and to conjecture what caſes could have occurred, in which ſuch oppoſite practice muſt not have been ſtrikingly prejudicial. Probably I may point out ſuch caſes; and as I do not find them deſcribed in books of ſurgery, becauſe they have not been deemed ſufficiently important, it may not be improper briefly to mention them.

A young lady was ſtooping in a cloſet, and riſing up ſuddenly and forcibly ſhe ſtruck her head againſt a ſhelf. The blow occaſioned extreme pain, but did not ſtun her. She went down ſtairs without mentioning the accident, and after ſitting with her friends for a ſhort time ſhe fainted. As it was in the evening

evening ſhe went to bed, but could not ſleep for pain in her head, and the next day her pulſe was very languid, and her extremities cold, ſhe complained of great pain when the ſcalp was ſlightly touched, and ſaid there was a ſenſation as if cold water was dropping on it. She took ſome gentle opening medicine, which relieved theſe ſymptoms, but ſhe could not ſit up for many days, and it was a conſiderable time before ſhe recovered the languor, which the blow had occaſioned: but neither fever, nor failure of ſenſation, or of intellect took place in the ſlighteſt degree. I have ſeen many ſimilar caſes, and in one the patient ſaid his ſenſations were ſuch as would induce him to believe that his brain was looſe, and moving on the inſide of the ſkull. All theſe caſes were relieved by ſlight evacuations, as gently opening medicines, leeches, or cupping, though I am inclined to believe that a contrary plan of treatment, which has been recommended in concuſſion, might have been purſued without material detriment.

I ſhall

I ſhall next relate a caſe, in which though the brain was not the immediate ſubject of the injury, yet it became affected in conſequence of it, and I think the caſe deſerves to be recorded, not only on account of ſeveral uſeful facts and hints relative to practice which it affords, but alſo becauſe it may eventually tend to throw light on the economy and diſeaſes of the brain.

CASE.

A man was gored in the neck by a cow. The horn entered by the left ſide of the cricoid cartilage, and penetrated as far as the vertebræ; it then paſſed upwards on the bodies of thoſe bones, nearly as high as the bottom of the ſkull, afterwards it came out behind the angle of the jaw, expoſing and in ſome degree injuring the parotid gland in its paſſage, and lacerating the ſkin of the face as high as the middle of the ear. In its courſe it had paſſed beneath, and torn the internal carotid artery, and all the primary branches in front of the external carotid artery. The former veſſel

was not however entirely rent aſunder, ſo that the general courſe of the artery and its connection with the cranium remained in the uſual ſtate. Notwithſtanding the ſize of the veſſels which had been torn, they did not immediately bleed; the wound was therefore cloſed and bound up. The blood was ſoon obſerved to flow in ſtreams down the neck, nor could any general preſſure upon the wound prevent hemorrhage. In this ſtate the man was conveyed to St. Bartholomew's hoſpital, but he loſt a large quantity of blood before his arrival.

The patient was laid upon a bed, and before the wound was opened, one of the ſtudents firmly compreſſed the trunk of the carotid artery, againſt the lower cervical vertebræ. We found upon the firſt inſpection of the wound, that this preſſure prevented any hemorrhage; yet upon the occaſional motions of the patient, and upon accidental variations in the preſſure made on the veſſel, the blood guſhed from the bottom of the wound ſo ſuddenly and in ſuch quantities as

to

to prevent any accurate examination. The man was very unquiet; he complained much of the preſſure, and was greatly diſtreſſed by a ſenſation of ſuffocation, which compelled him conſtantly to attempt to expectorate. Under theſe circumſtances our firſt endeavours were to tie the more ſuperficial arteries, but the edges of the wound being lacerated, the firſt ligatures which we endeavoured to make tore away portions of the fleſh, and did not ſecure the veſſels.

The ſituation of the patient became every moment more deſperate, he really ſeemed choking, his extremities became cold and his pulſe was ſcarcely to be felt: his ſtruggles alſo which could not be controlled, made the preſſure on the trunk of the artery very precarious. It was deemed neceſſary to enlarge the wound to get at the trunk of the carotid artery, and an inciſion was made between that veſſel and the trachea, in a direction parallel to each of theſe parts. I had now the power of paſſing my finger beneath the trunk of the carotid artery; and of effectually compreſſing

it between that finger, and my thumb which was placed oppoſite to it, upon the integuments of the neck.

I had now leiſure to examine the wound with my other hand, and felt that the pharynx had been ſeparated from the vertebræ of the neck, and had fallen againſt the larynx: its irritation on that organ was probably the cauſe of the ſenſation of ſuffocation which the patient ſuffered. There did not appear any reaſon to believe that the pharynx was wounded; for though the patient was conſtantly ſpitting, the mucus was not mixed with blood. Finding that the moment I remitted the preſſure on the carotid, the blood guſhed out from ſo many orifices and in ſuch a torrent from the bottom of the wound, I reſolved to paſs a ligature round the trunk of the carotid at the part where I had been compreſſing it, and which was about an inch below its diviſion. This ligature I thought might be made to ſerve as the tourniquet in amputation, for I could with it compreſs the artery ſo as to prevent the wounded parts

becoming obſcured by blood, and by ſlackening it I might gain information with regard to the ſituation of the ruptured veſſels.

Should it become neceſſary at any time to tie the carotid artery, I am convinced that it may be done without much difficulty or danger, even without an accurate diſſection of the part. If the inciſion be made on that ſide of the artery which is next the trachea, where no important parts can be injured, as was done in the preſent inſtance, the finger can then be paſſed behind the artery ſo as to compreſs it. The veſſel being ſufficiently bulky and firm, to make its form and outline diſtinctly perceptible, a needle may then be paſſed behind the artery, as near as poſſible to that edge of it which is next to the internal jugular vein, there can be little riſk of wounding that veſſel, or of including in the ligature the 8th pair of nerves which lies between them. In attempting to ſecure the carotid artery, I paſſed behind it in the manner deſcribed, a blunt hook with an eye in the point, and having previouſly introduced

a ligature into it, I drew back the inſtrument and thus encloſed the artery.

When I compreſſed the veſſel by tightening the knot of the ligature, I did it ſlowly, and with a watchful attention to the ſufferings of the patient; for I cannot but ſuppoſe that had the nerve of the 8th pair been included, his complaints would have ſufficiently denoted that circumſtance. But the compreſſion of the ligature did not ſeem to make the leaſt difference in the general ſtate of the patient, whilſt it completely prevented the further effuſion of blood. With a knife and diſſecting forceps I then expoſed the lacerated veſſels, and found that the primary branches of the external carotid artery had been torn off from the trunk. By drawing upwards the ligature which encircled the trunk of the artery, I made the internal carotid tenſe, ſo that its courſe and ruptured ſtate could be diſtinctly felt. The ligature on the trunk was ſlackened, and the guſh of blood further confirmed the laceration of the internal carotid artery. I had now the alternative of

ſecuring

ſecuring the ligature, which I had already made on the trunk of the veſſel, or of tying the branches ſeparately. I preferred the former, and it ſhould be obſerved that the man had now lain ten minutes or more, without any blood being carried to the brain by the left carotid; and during that period he had recovered from his extreme faintneſs, appeared perfectly ſenſible, and as well as could be expected in a perſon, conſidering that he had loſt ſo large a quantity of blood. The ligature being now made ſecure, the wound was brought together by ſtripes of plaiſter; and in this ſtate warm milk was given to the patient to drink, in order to learn what would be the effect of his efforts to ſwallow, and to aſcertain as far as poſſible, whether there was any wound in the pharynx or œſophagus. The patient ſwallowed about a quarter of a pint of this fluid with difficulty, and with the frequent excitement of coughing. No milk however came through the wound, and I concluded that all the difficulty of deglutition aroſe from the unnatural ſtate in which the muſcles of the pharynx were placed, in con-

ſequence of their detachment from the vertebræ. Theſe circumſtances happened betwen 4 and 5 o'clock in the afternoon, and when I ſaw the patient again between 9 and 10, his ſtate ſeemed greatly amended. He had ſeveral times taken warm milk, and the difficulty of deglutition had abated. His pulſe was now moderately full and ſtrong, and not very frequent. It therefore appeared that the apparently dying ſtate of the man, which at one time had alarmed us, proceeded rather from the ſudden diſcharge of blood, than from the quantity, however conſiderable, which had been loſt. The patient alſo appeared tranquil, and perfectly rational, and though prevented from ſpeaking much, he expreſſed himſelf ſatisfied in his ſituation.

On the whole I was led to form a favourable expectation of the progreſs of the caſe, as far as related to the effects which a ligature on one carotid would have on the economy of the brain. I was next morning mortified to learn that the patient had been unquiet, and feveriſh during the night, that he

he had become delirious, that he had been ſeveral times affected by ſlight convulſions, which had increaſed; and that when liquids were now given to him, they paſſed through the wound, and he could ſcarcely ſwallow any thing. The pulſe of the patient was now about 130 in a minute, and hard, and his ſkin was hot. He lay inattentive to external objects, but probably not inſenſible, for the pupils of his eyes were contracted, and when the lids were opened in order to examine them, he ſhut them quickly, and as it were, impatiently. It had been remarked, that the left ſide of the body was more convulſed than the right.

As we had it not in our power eaſily to give medicine, I introduced a ſmall hollow bougie through the right noſtril into the œſophagus, and immediately injected half a pint of milk and water, and 60 drops of tincture of opium; that I might learn the effects of that medicine under the preſent circumſtances. The patient ſhortly after broke out into a moſt profuſe ſweat, and the convulſions

convulſions were quieted by the opium. The convulſions when thus mitigated by opium, might be deſcribed as violent tremors of the left ſide of his body, but the right ſide remained motionleſs; to which curious fact I particularly attended. I placed his right arm acroſs his breaſt, from which ſituation it did not afterwards ſtir. I could not however, perceive any diſtortion of the face to the oppoſite ſide, and the pupils of both eyes were equally contracted. When I ſaw the ſweat break out on the taking of opium, and the nervous irritation diminiſhed by its operation, I was then more forcibly ſtruck than I had been before with the ſimilarity of this patients ſituation, to that of a perſon ſuffering from the effects of concuſſion of the brain, ſome time after the accident, when the inflammation often ſucceeding to it, had begun to take place.

I even queſtioned if it might not be right to take blood from the temporal artery, which was ſeen beating violently. I thought however

ever the general opinion would be againſt ſuch practice, and I only applied a bliſter to the head. Twenty drops of tincture of opium were directed to be given to the patient every third or fourth hour, with a view to mitigate the convulſions, which it appeared to do. Milk and water was alſo occaſionally given, in proportion to the degree of perſpiration. No remarkable change of ſymptoms took place, but the ſtrength of the pulſe gradually declined, and at 10 o'clock at night he had a ſevere convulſion fit, and immediately after died. His death happened about thirty hours after the ligature was made on the carotid artery.

The body was examined on the following day. The brain appeared to have ſuffered a conſiderable degree of inflammation. The veſſels of the pia mater appeared as if they were injected, and in many places upon the ſurface of the convolutions of the cerebrum, there even ſeemed an effuſion of blood producing that appearance uſually termed blood-

ſhot. There was a very conſiderable depoſition of gelatinous ſubſtance between the tunica arachnoidea, and the pia mater. The veſſels paſſing through the ſubſtance of the brain, though fuller than common, were not particularly turgid. A conſiderable quantity of water of a light brown colour, and ſlightly turbid appearance was found in the ventricles, whilſt the firmneſs of the ſides of thoſe cavities ſufficiently indicated that the collection had not preceded the accident. On examining the neck, the carotid artery was found to be the only part included in the ligature. The ſuperior thyroideal, lingual and facial branches of the external carotid, were torn off from the trunk, and the internal carotid was rent acroſs, as has been already mentioned.

Neither the trunk of the 8th pair of nerves, nor the great ſympathetic, nor thoſe of the tongue, appeared to have ſuffered injury. The ſuperior laryngeal, and the deſcending branch of the 9th pair were the chief nerves injured by the accident. Theſe circumſtances

are

are mentioned to enable the reader to form his own judgment on the probability of the ſymptoms which occurred being produced by nervous injury or irritation.

That the diſorder and death of this man is not to be attributed to the quantity of blood which he had loſt, appears clearly to me, not only from the degree of plenitude and power of the vaſcular ſyſtem which remained, but becauſe I had ſeen many patients in the hoſpital, who had divided moſt of the primary branches of the external carotid artery in the attempt at ſuicide; and who after ſurviving a few days, periſhed in conſequence of the loſs of blood which they had ſuſtained, but with a train of ſymptoms very different from thoſe which occurred in the preſent inſtance.

Some perſons may perhaps be inclined to attribute inflammations of the brain to nervous injury or irritation. I have taken notice of all the injury diſcoverable by diſſection, and have further to obſerve that we frequently

frequently ſee larger nerves lacerated in wounds without the production of ſuch ſymptoms, and the tranquil ſtate of the patient till the inflammation of the brain came on, oppoſes ſuch an idea. Upon reflection I can form no other opinion of the caſe than that which firſt ſtruck me, which is, that though the ſtopping the ſupply of blood to the brain did not for ſeveral hours produce any apparent derangement in the functions of that organ, yet ſuch a ſtate was gradually occaſioned by it, and which was attended like the effects of concuſſion of the brain, with inflammation. It further appeared, that when the combined effects reſulting from the derangment, and the inflammation were manifeſted together, the ſtate of the patient much reſembled that of a perſon who had ſuffered concuſſion.

The different ſtates of the two ſides of the body ought not I think to paſs without further notice. Although the right ſide could not be poſitively ſaid to be paralytic, yet in my opinion it approached to that ſtate.

It has been already obſerved, that a double conſtruction might be put upon the ſymptoms, yet as the inflammation of the brain was equal on both ſides, we might naturally expect the whole body to ſuffer equally. Should the ſtate of the right ſide have been, as appears moſt probable, an approach to a ſtate of paralyſis, it would ſurely be conſidered as peculiarly curious. An effuſion of blood in the left hemiſphere of the brain would affect the oppoſite ſide of the body in the ſame manner, that cutting off the ſupply of blood to the left ſide appears in this inſtance to have done. I forbear to ſpeculate on this ſubject, the fact which I have mentioned ſeems to deſerve notice, and though at preſent it muſt ſtand alone, it may in future receive addition, and, when thus ſupported, be applied to ſome uſeful purpoſe in phyſiology.

I have thought it right to record this caſe, not merely becauſe it is curious, but becauſe it affords ſome uſeful practical hints, as to the conduct to be purſued when a perſon has divided the large primary branches of the carotid

carotid artery in an attempt at ſuicide. It may be allowable alſo to mention in relation to this latter ſubject, the great advantages which appear to me to ariſe from the immediate introduction of a ſmall elaſtic catheter, paſſed through the right noſtril, down the œſophagus, nearly as far as the ſtomach, in the manner practiſed by Deſſault, in the cure of a perſon wounded by a piſtol ball.

A patient in ſuch a ſtate is not under the neceſſity of frequently ſwallowing nouriſhment, which act tears open the wounded parts, and cauſes inflammations in them, and produces ſuch a ſecretion of mucus as excites almoſt conſtant cough, increaſing the diſturbance of the wounded parts.

The introduction of a ſmall elaſtic catheter may be eaſily accompliſhed in the firſt inſtance, though not without difficulty, after the ſenſibility of the parts have been increaſed by inflammation, and from the benefit I have ſeen derived from it I ſhould not heſitate to do it in all caſes of extenſive wounds of the throat,

throat, where the larynx or trachea is divided, even though the pharynx and œſophagus may be uninjured. It ſeems to me alſo that a ſimilar plan of conduct is very ſuitable to ſtrictures of the œſophagus.

On Aneuriſm.

Since my laſt publication, I have a ſecond time performed the operation of tying the external iliac artery. In this caſe the artery was tied with two ligatures and divided in the interval; it afterwards firmly united at each extremity, and the ligatures came away at the uſual time: neither did there appear any deficiency in the nutrition of the limb. Theſe circumſtances afford reaſonable expectations of ſucceſs in future operations of this kind, yet in the preſent inſtance the operation appears to have been too long delayed, and the patient to have died from an event which was not foreſeen, but which might perhaps have been prevented. I therefore think it right to ſtate the circumſtances of this caſe in the preſent publication.

CASE.

——Wrungel, a German, by trade a ſugar-baker, of a ſickly aſpect and ſlender make, about 5 feet 7 inches high, and near 40 years of age, was admitted into St. Bartholomew's hoſpital, on account of an aneuriſm in the femoral artery, cloſe to Poupart's ligament. This he imputed to a ſtrain about three weeks before. The tumor at the time of admiſſion was of the ſize of a ſmall orange, and the blood contained in it was fluid; for it could be entirely expreſſed from the aneuriſmal ſac. At a conſultation on the treatment of the caſe, I ſaid that I did not think a ſurgeon warranted in tying the external iliac artery, till he was in ſome meaſure compelled to it by the progreſs of the diſeaſe, for the following reaſons. 1ſt. An aneuriſm, in proportion to its increaſe and duration, obſtructs the paſſage of the blood through the natural and principal channels, and obliges it to circulate by other courſes, which are enlarged according to the exigency

of

of the caſe. It ſeems highly probable, that in proportion to the ſize of the artery which is tied, and the magnitude of the part to be nouriſhed after that operation, ſo will be the degree of previous enlargement in theſe collateral channels, which is neceſſary to enſure its ſucceſs. On this account the operation ſhould be delayed longer in an inguinal aneuriſm than in any other.

2dly. The operation of tying the external iliac artery muſt, in the preſent ſtate of our knowledge, be conſidered as very ſerious in its nature, and uncertain in its event. I once tied this veſſel when a man would otherwiſe have bled to death from the femoral artery; and though the limb was nouriſhed, the artery ulcerated. The operation was done a ſecond time in London, and the limb mortified; but no fair practical inference can, I am told, be drawn from the latter caſe, as the operation was poſtponed till mortification was as it were impending.

3dly. There is ſome chance in aneuriſms of a cure ſpontaneouſly occurring from the

cloſure of the artery above by the coagulation of the blood. To cite thoſe inſtances only which have come within my own knowledge, and which it ſeems right to mention, as it increaſes the ſtock of facts before the public; I have known ſuch a ſpontaneous cure take place twice in the popliteal artery, once in the arteria profunda femoris, and once in the axillary artery. For theſe reaſons it was agreed to poſtpone the operation in the caſe of the preſent patient till circumſtances ſhould appear to demand its perfomance.

Our poor patient therefore lay in the hoſpital during two months, in which time his diſeaſe gradually increaſed, and his health declined. Towards the latter part of the time he ſuffered a great deal of pain in the front of his thigh, which deprived him of reſt, and the whole limb was largely œdematous. Theſe ſymptoms would naturally ariſe from the preſſure which the aneuriſm muſt make on the anterior nerves and abſorbents of the thigh. The tumor had advanced towards the ſurface, and the ſkin had become ſlightly inflamed, yet the protruding part of the

the tumour was not of greater extent than when he was firſt admitted into the hoſpital, and no judgment could be formed of that part which was more deeply ſituated, on account of the general ſwelling of the thigh. The blood could even now be expreſſed from the prominent part of the tumour, and I felt anxious, leſt the obſtruction to the circulation in the main artery ſhould not have been ſufficient to have obliged the blood to circulate by other channels. It deſerves to be remarked, that the aneuriſm may extend conſiderably beneath the faſcia of the thigh, cauſing pain and œdema by its preſſure, and yet that part which advances towards the ſurface may be of no great magnitude.

The patient's ſufferings increaſed conſiderably during the week preceding the operation, ſo that he declared his preſent ſtate was almoſt inſupportable, and ſolicited that ſomething might be done to change it either for the better or the worſe. He never, however, was able to explain the cauſe of this uncommon degree of anxiety and inquietude.

The operation was undertaken on Saturday the 24th of October. An inciſion of three inches in length was made through the integuments of the abdomen, beginning a little above Poupart's ligament, and being continued upwards; it was more than half an inch on the outſide of the upper part of the abdominal ring, to avoid the epigaſtric artery. The aponeuroſis of the external oblique muſcle being thus expoſed, was next divided in the direction of the external wound. The lower part of the internal oblique muſcle was thus uncovered, and the finger being introduced below the inferior margin of it and of the tranſverſalis muſcle, they were divided by the crooked biſtoury for about one inch and a half. I now introduced my finger beneath the bag of the peritoneum, and carried it upwards by the ſide of the pſoas muſcle, ſo as to touch the artery about two inches above Poupart's ligament. I took care to diſturb the peritoneum as little as poſſible, detaching it to no greater extent than would ſerve to admit my two fingers to touch the veſſel. The pulſations of the artery

tery made it clearly diſtinguiſhable from the contiguous parts, but I could not get my finger round it with the facility which I expected. This was the only circumſtance which cauſed any delay in the performance of the operation. After ineffectual trials to paſs my finger beneath the artery, I was obliged to make a ſlight inciſion on either ſide of it, in the ſame manner as is neceſſary when it is taken up in the thigh, where the faſcia which binds it down in its ſituation is ſtrong. After this I found no difficulty in paſſing my forefinger beneath the artery, which I drew gently down, ſo as to ſee it behind the bag of the peritoneum. By means of an eyed probe two ligatures were conveyed round the veſſel; one of theſe was carried upwards as far as the artery had been detached, and the other downwards: they were firmly tied, and the veſſel was divided in the interſpace between them. Nothing further remained than to cloſe the external wound, which was done by one ſuture, and ſome ſtrips of ſticking-plaiſter. The threads of the upper ligature were left out of the wound

above the ſuture which cloſed its edges, and thoſe of the lower beneath.

A few remarks on this operation may be permitted. To divide the parietes of the abdomen, puſh aſide the peritoneum, and tie the external iliac artery by the ſide of the pſoas muſcle, is an operation more formidable in ſound, and on its firſt propoſition, than it is in reality. It is performed almoſt without ſhedding blood, ſo that the principal circumſtances of it are very evident. When I formerly performed this operation, I was urged to it by immediate neceſſity: I tied the artery much higher than in the preſent caſe, diſturbed the peritoneum in a greater degree, and, contrary to my own principles, I did not divide the artery. In the preſent caſe, having time to deliberate upon the ſteps of the operation, I detached merely ſo much of the peritoneum, as enabled me to reach the artery, as far as I conveniently could above Poupart's ligament; but not ſo far as to make it difficult to aſcertain that I ſurrounded the artery only with my finger, without injuring

any

any of the adjacent parts, nor ſo far but that I could draw down and diſtinguiſh the artery which I included in the ligature. The remembrance of the ſwelling in the external iliac glands, and of the ulceration of the artery in the former caſe, led to this difference of conduct.

The poor man was greatly exhauſted by the operation, and his leg which had been chilled by expoſure during the operation, continued very cold for a long time afterwards. It was wrapped up in flannels, to prevent the diſſipation of its own heat; but I would not apply any artificial warmth to reſtore its temperature, leſt it ſhould act as a ſtimulant.

He could not compoſe himſelf after the operation, nor did he ſleep during the night, ſo that on the following day his ſtate was very unpromiſing. His pulſe beat 160 in a minute, his tongue was covered by a dark brown fur; he looked agitated, and a purging took place, which was not reſtrained till the following night by a cordial and opiate mixture.

mixture. Reſpecting his pulſe, it is proper to mention that it beat 120 moſt days in the week preceding the operation.

His thigh was as warm as that of the ſound ſide, his leg cooler than the oppoſite one, and his foot many degrees colder. He had however perfect ſenſation in his toes, and power of moving them. The leg and foot were rubbed with oil three or four times a day, in order to prevent any ſtagnation in the veins, and to diminiſh perſpiration. It was well covered as before by flannels.

On Monday, the 2d day (Oct. 26) the pulſe was leſs frequent: he had ſlept a good deal during the night, and ſeemed ſtupified by opium; but on the whole ſo little better, that I concluded he would gradually ſink in conſequence of the ſhock of the operation. The temperature of the limb was a little increaſed. The man however took bread and milk and other food in moderate quantities, whenever it was offered to him: the purging having ceaſed, the quantity of the opiate was diminiſhed.

miniſhed. He rather improved in the evening, and reſted well during the night; ſo that on (Oct. 27) the third day after that of the operation every circumſtance wore a favourable aſpect. His pulſe did not exceed 100, and was moderately firm and full; his appetite had increaſed: the temperature of the limb was a good deal augmented, ſo that his foot was ſcarcely colder than that of the ſound ſide; and the œdema of the limb was conſiderably diminiſhed. I now dreſſed his wound, in which he had not complained of pain, nor of any tenderneſs, when the ſurrounding parts were compreſſed. The inciſion appeared but as a line, except at the neighbourhood of the ligatures, where it was a little open, and from whence there iſſued a moderate quantity of as healthy pus as I had ever ſeen. The ſurrounding parts were perfectly natural both in appearance and ſenſation. On the fourth day (Oct. 28) he was ſtill better: his pulſe 90; his appetite good; his ſleep ſound; and his limb leſſening in ſize, and increaſing in warmth. The ſtudents at the hoſpital had dreſſed the wound

before

before my arrival, and reported that the diſcharge was tinged with blood.

On the fifth day (Oct. 29), he was ſtill better, his pulſe being but 80 when I counted it. The wound and contiguous parts looked remarkably well, but a bloody ſanies was diſcharged, which I felt unable to account for.

On the ſixth day (Oct. 30) the ſtate of his health and limb continued as well, if not improving. The bloody diſcharge however had increaſed in quantity, inſomuch that it ran through the coverings of the wound and ſoiled the bed; it had alſo become fœtid. From the firſt occurrence of this bloody diſcharge I felt conſiderable uneaſineſs reſpecting it. I could not believe that an healthy wound would ſecrete ſuch a ſanies, and I felt apprehenſive leſt the wound ſhould ſpread from diſeaſe. Nothing however took place to confirm this idea. It ſeemed probable alſo that if the aneuriſmal ſac were not entire, ſome of the blood being expoſed to the air might tinge the diſcharge from the wound,

and grow putrid. I frequently preſſed on the tumour, but could preſs no blood from the wound. In this ſtate of uncertainty it was, however, pleaſing to obſerve, that the patient's health continued in every reſpect better than could reaſonably have been expected.

The circumſtances of the caſe remained very much the ſame during the ſeventh and eighth days after the operation. On the morning of the ninth, (Nov. 2,) when I came to the hoſpital, I met Sir Charles Blicke, who told me that the poor German was dying; intelligence which equally ſurpriſed and ſhocked me.

He was indeed in a dreadful ſtate, appearing like a man far advanced in typhus fever. His pulſe was 150; his tongue covered with a brown fur; his intellect wavering, and the action of his muſcles tremulous. On examining the wound, with a view to diſcover the cauſe of this great and ſudden alteration, and preſſing on the tumour beneath Poupart's ligament,

ligament, I forced out a great quantity of blood, rendered fluid and highly fœtid by putrefaction, inſomuch that it inſtantly blackened the probe with which it accidentally came in contact.

The cauſe and circumſtances of the bloody diſcharge were now made clear; the ſurface of the expoſed coagulated blood of the aneuriſm had at firſt tinted the diſcharge from the wound, then had, by gradual diſſolution, been more plentifully commixed with it, and given it a degree of putridity. Till, however, the whole maſs had become putrid, and had been converted in conſequence into fluid, it could not be forced out from beneath Poupart's ligament when preſſure was made on the tumour; nor did it till that period excite inflammation in the ſurrounding parts by its acrimony, or derange the conſtitution by its abſorption.

After entirely expreſſing the putrid blood I waſhed out the cyſt with warm water, till it returned untinged. The relief which was by

by theſe means afforded to the poor man was very ſtriking and conſiderable. His pulſe became moderate, his intellect clear; he had ſome refreſhing ſleep, and again took food in moderate quantities. On the following day, when the integuments beneath Poupart's ligament were compreſſed, a conſiderable quantity of fœtid diſcharge and air were forced out. It was not however at all tinged with blood, and appeared to me to be merely the ſecretion from the cyſt which had contained the blood. I directed that this diſcharge ſhould be preſſed out, the cavity ſyringed, and a poultice applied three times a day; but finding it ſtill ſecreted in conſiderable quantity, I thought it right to make an opening into the cyſt beneath Poupart's ligament, to afford it a more ready exit. No abatement in the quantity, or alteration in the quality, was however remarked; it ſeemed to be ſuch as a ſloughing ſore commonly furniſhes.

This fever came on on the evening of the eighth day (Nov. 1,) after that of the operation;

tion; and I am convinced it would have ſpeedily deſtroyed him had not the cauſe been detected and removed. The powers of his conſtitution rallied again; his pulſe was firm, and often not more than 100; he took ſufficient food, and ſlept moderately well. But the part, as has been ſaid, did not go on well, and ſeemed to prevent any increaſe of ſtrength. For a week I was not without hopes that ſome favourable change might happen, but afterwards I loſt all expectations, as his already much reduced powers were ſtill further declining; nevertheleſs, he held out more than another week, when he died on November 16, the twenty-third day after the operation. A few days before his death both ligatures came away with the dreſſings.

Diſſection.

A very ſlight adheſion had taken place between the ſigmoid flexure of the colon and that part of the peritoneum which was oppoſite to the wound, but there was no other appearance of that membrane, or of the bowels,

bowels, having ſuffered any inflammation in conſequence of the operation. The peritoneum was ſeparated from the loins, and from the poſterior half of the left ſide of the diaphragm, by a conſiderable collection of blood, which extended below to Poupart's ligament, and communicated under that ligament by a ſmall aperture with the aneuriſmal ſac. This opening was ſituated in the direction of that crevice which is found between the internal iliac and pſoas muſcles. The only rational explanation that can be given of the formation of this collection is, that the blood had burſt its way from the aneuriſmal ſac in the vacancy between the muſcles juſt mentioned; after which it would readily and extenſively ſeparate the peritoneum in the manner deſcribed. I am inclined to attribute to this circumſtance the undefinable diſturbance of health which the poor patient ſuffered during the week preceding the operation. It may, perhaps, excite ſurpriſe that this collection did not become putrid.

No particular account can be given of the aneuriſmal ſac beneath Poupart's ligament,

ſince it and the contiguous parts had ſloughed in conſequence of the irritation of the putrid blood. A ſmall aperture had been made by this ſloughing in the front of the orbicular ligament of the hip joint, and a ſmall extent of the thigh bone was, by the ſame cauſe, deprived of its periofteum.

A bougie was paſſed from the lower end of the femoral artery into the ſac.

The extremities of the external iliac artery, which had been divided in the operation, were united together by a fine new-formed ſubſtance; the ſides of each extremity were perfectly cloſed, and a ſmall plug of coagulated blood was found in each.

Having thus given as brief an account as I am able of the circumſtances of this caſe, as they appeared to me, I cannot conclude without mentioning the obſervations of others, particularly as they may aſſiſt in ſuggeſting rules of conduct for future operations on ſimilar caſes. It has been ſaid that the irritation of the aneuriſmal bag was probably

probably a ſpontaneous occurrence, and not the effect of the acrimony of the putrid blood. But the ſuddenneſs of this attack, the manifeſt exiſtence of a cauſe ſufficient to produce it, and the total abſence of ſuch an occurrence in all other caſes of aneuriſm, render this ſuppoſition highly improbable.

It has alſo been imagined that part of the diſcharged blood might have returned from the lower end of the artery. This latter opinion is very improbable, ſince, after the complete removal of the blood, none returned by that channel: and in a ſimilar caſe which I formerly publiſhed, none returned by the inferior part of the artery, though the area of it was ſtill of its natural dimenſions, and unobſtructed. This latter obſervation had tended to diminiſh my confidence in the powers of the communicating channels, and made me wiſh to defer the performance of the operation as long as poſſible. It ſeems evident that in the preſent inſtance it was too long delayed.

It would be deſirable in future to perform the operation before an extenſive diffuſion of blood has taken place; indeed, could the adequateneſs of the collateral arteries for the ſupply of the limb be eſtabliſhed, it would be proper to operate before the artery has burſt.

It deſerves to be conſidered whether it might not be right at the time of the operation to open the aneuriſmal bag, and remove the blood. I ſhould, however, be inclined to poſtpone this operation; for, perhaps, no neceſſity might exiſt, as putrefaction might take place. A few days will determine the degree of life of the limb, and would make a wound leſs likely to ulcerate or ſlough. Should ſigns of the putrefaction of the blood enſue, or the probability of ſuch an occurrence become evident, I ſhould think it neceſſary to make a ſmall opening into the aneuriſmal bag for the removal of the contained blood. This being done, if no blood came from the lower orifice of the artery, there would be no neceſſity for tying it. Such are the obſervations that have occurred to me on this ſubject;

ject; I have laid both thoſe and the facts before the public as early as poſſible, that medical men may judge of the circumſtances of the caſe themſelves, and form their opinions accordingly.

Although I have ſeen the method of tying the artery in the operation for the aneuriſm, which was recommended in my laſt publication, uniformly ſucceſsful in a very conſiderable number of caſes, yet I lately met with an unfortunate inſtance of hæmorrhage after that operation, which I deem it a duty to relate.

A lady had a femoral aneuriſm, which was ſo ſituated as to leave about three inches of the femoral artery between the part where the arteria profunda femoris is given off, and the diſeaſe. On cutting down on the inner edge of the ſartorius muſcle to the veſſels in this ſituation, the pulſation of the artery was not felt, perhaps on account of the large quantity of fat in which it lay imbedded, and the want of any firm reſiſtance behind. This circumſtance made me doubt if the parts im-

mediately beneath my finger were the veſſels, and induced me to ſeparate and diſturb the contiguous parts more than I wiſhed to have done. Having aſcertained by ſuch examination that the veſſels could lie in no other place than immediately beneath the inciſion, and having divided the faſcia which binds them down, one finger was put beneath the veſſels, and the thumb upon them; the beating of the artery was then diſtinctly felt. A moderately thick double ligature was now introduced beneath the veſſels, one part of which was carried up as high, and the other as low, as theſe veſſels had been detached, and tied as firmly as it well could be. The veſſels were divided in the interſpace, at about two-thirds of the diſtance from the upper ligature, and one-third from the lower. Though the operation had been more tedious than any I had hitherto performed, and attended with more diſturbance of the parts in the vicinity of the veſſels, I entertained no doubt at the time but that the ligatures would remain on the veſſels during the uſual time, and that no

ulceration

ulceration of them would take place. The wound was cloſed with ſticking-plaſter, and the patient put to bed. She complained of great pain in the wounded parts, and of extreme ſickneſs, which produced frequent efforts to vomit. Fever came on and reſtleſſneſs, which cauſed a conſtant variation of poſture, ſo that the wounded parts were never ſuffered to remain at reſt. Theſe ſymptoms continued in a very violent degree for nearly twenty-four hours, and though they were then mitigated, they ſtill continued in a conſiderable degree. On the third day the plaſters were removed from the wound, the ſides of which were in contact, but the ſurrounding parts were ſwollen, and had a duſky hue. On the evening of this day a violent hæmorrhage ſuddenly took place, and ſo much blood was loſt that the patient did not long ſurvive this occurrence. On opening the wound to diſcover the place from which the blood had flowed, and taking hold of the upper ligature, which I thought would direct me to the open artery, it was torn away, and brought with it ſome ſloughy

ſubſtance. There was no hæmorrhage at this time, and the ſtate of the patient rendered it unneceſſary to ſearch for the artery: we therefore waited to ſee if the powers of the conſtitution would recover, but the faintneſs continued, and in about an hour ſhe died. On the following day, the wound being examined, the whole ſurface of it was found in a ſloughy and putrid ſtate. The artery being ſlit downwards from the groin, was highly inflamed on its internal ſurface, and terminated by an orifice, which was of a pulpy feel, and had a ſloughy appearance like the ſurface of the wound. I concluded from theſe circumſtances that the artery had burſt immediately above the ligature, in conſequence of its becoming ſloughy at that part; but I cannot take upon me to ſay that this was actually the caſe, as the ligature had been removed when the wound was opened to examine from whence the hæmorrhage had proceeded. The only rational explanation which I can form of this caſe is, that from a peculiar irritability of conſtitution the patient was unuſually affected by an

operation which would ordinarily have been borne without any prejudicial derangement of health, and that the conſtitution and the parts were diſturbed in ſuch a manner as terminated in the ſloughing of the wound, and in that of the artery immediately above the place where it was tied.

On the Operation of puncturing the urinary Bladder.

Mr. Home, to whom the profeſſion is much indebted for many important improvements in practice, has of late publiſhed ſome caſes of the puncture of the bladder from the rectum, which, in my opinion, are of the greateſt importance. They not only exhibit that operation as more ſimple and ſucceſsful than perhaps was generally believed, but if the operation be as ſucceſsful in the hands of other ſurgeons, it preſents an eaſy mode of relief to a great number of unfortunate patients who have generally been left to die in miſery. I mean thoſe who have ſtrictures impaſſable by bougies, and who are ſo irritable that they cannot bear their deſtruction by cauſtic, on account of the retention of urine

urine which it occaſions. In ſuch caſes the puncture from the rectum appears moſt eligible where the bladder is contracted, as it perhaps will then ſcarcely aſcend high enough to admit of being punctured above the pubes.

But there are caſes in which the operation by the rectum cannot be performed, and by frequently meeting with theſe I have been compelled to puncture the bladder above the os pubis, and the event of the operation has been ſuch as would have led me to prefer it to any other that I had ſeen practiſed. The chief caſes to which I allude are thoſe of enlarged proſtates, where the catheter has been forced into the ſubſtance of the gland, and has torn it conſiderably; conſequently that inſtrument enters ſo eaſily into the falſe paſſage as to render it almoſt impoſſible to make it take the right one. Indeed in caſes of ſtricture, where falſe paſſages have been made, and the proſtate has been found, the perception of the bladder from the rectum has been ſo indiſtinct that I have been deterred from puncturing it, and in one caſe I made a diviſion in the perinæum, and having

having paſſed my finger beneath the arch of the os pubis a conſiderable way, I could obtain no ſuch diſtinct perception of the bladder as would authoriſe me to puſh in a trochar. But I punctured it above the os pubis, and drew off a conſiderable quantity of urine. I have therefore been led to conclude that, in ſome diſtended bladders, there is a kind of receſſion of them from the perinæum, and that when they become diſtended they aſcend proportionally higher into the abdomen.

In the greater number of caſes in which I have punctured the bladder above the os pubis, it has been on a ſudden call to the hoſpital, or ſome poor houſe; and I have had little further concern with the patient than what related to the performance of the operation.

Sometimes I have been in doubt if there was much urine in the bladder, and this circumſtance has deterred me from puncturing, except in that ſituation in which I could poſſeſs an aſſurance that I felt the bladder, and could

could puncture that viſcus: and theſe doubts cauſed me in ſome inſtances to puncture the bladder with a lancet; and in ſome caſes I have not left any canula in the bladder, in conſequence of the eſcape of the urine preventing me from readily finding the opening, which I had made. Several of the patients died, but in every inſtance the operation relieved their ſufferings; and I have never ſeen any effuſion of urine into the cellular ſubſtance, or any other bad conſequence reſult from the operation; nor do I think that ſuch events are likely to happen, if it be rightly performed. The death of the patients was fairly to be imputed to the delay of the operation, or to the degree of diſeaſe which previouſly exiſted in the urinary organs. In ſeveral patients who recovered, the progreſs of their amendment was ſimilar to that which took place in the caſe, which I am about to relate. I did not however preſerve any detailed account of them, for as I have mentioned, the patients could ſcarcely be ſaid to be under my care. I have requeſted the laſt gentleman, with whom I attended a patient under

under theſe circumſtances, to give me a particular account of his caſe, and on the accuracy of his narrative I can place perfect reliance. This caſe I ſhall relate, in order to have an opportunity of commenting on the mode of puncturing the bladder above the os pubis.

A gentleman between ſixty and ſeventy years of age had a retention of urine from an enlarged proſtate gland, which obliged his ſurgeon to draw off the urine night and morning. This was done during ten days, when the difficulty of introducing the catheter, which had gradually increaſed, became inſurmountable. I was therefore obliged to puncture the bladder, and the only place in which this operation could in the preſent inſtance be performed, was above the pubes. I therefore made an inciſion about two inches in length through the integuments, and between the muſculi pyramidales abdominis, ſo that the lower part of the wound laid bare the top of the ſymphiſis pubis. On introducing my finger into this vacancy I felt the diſtended bladder. The ſenſation produced

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by preſſing againſt the diſtended bladder is I think ſo peculiar, and ſo different from any thing elſe which could occur in this ſituation, that if an operator has once felt it, he will not heſitate in deciding that it is the bladder againſt which he preſſes. The thickneſs and tenſion of its coats, and its fluid contents are the chief circumſtances from which this peculiar feel ſeems to ariſe. When I firſt began to perform this operation, I was deterred from uſing a trochar by a fear of being miſled by my ſenſations. I cautiouſly punctured the bladder with a lancet, deſigning to introduce a catheter through the wound; but the urine guſhed out ſo violently, and the bladder became contracted ſo ſuddenly, that I could not diſcover the wound which I had made; yet under theſe circumſtances, the urine paſſed from the aperture in the bladder, through the external wound, and was not effuſed into the cellular ſubſtance. Indeed neither obſervation nor reaſoning would induce me to ſuppoſe that ſuch an occurrence is probable, whilſt there is a free external opening. The apprehen-

ſion

ſion ſeems to have ariſen from the extenſive diffuſion of urine, in caſes where the urethra has given way. But in ſuch caſes, the urine is actually injected into the cellular ſubſtance, and with great force by the bladder, in conſequence of the channel out of the body being cloſed up. If the external wound in this operation were to be cloſed, and the exit of urine prevented by this means, then it is probable that the urine would be forced to pervade the cellular ſubſtance. It may be aſked, according to the common phraſe, if urine is likely to inſinuate itſelf into the ſurrounding cellular ſubſtance? I ſhould think not. The operator ſhould be cautious not to make any ſeparation of the bladder from the back part of the ſymphiſis pubis, that there ſhould not be even a cavity, into which the urine might gravitate. He ſhould alſo leave the external wound free and open. The firſt effect of the operation will be an inflammation, which will conſolidate the ſurrounding cellular ſubſtance, and prevent the ready impulſion of urine into it. The ſtimulating qualities of the urine will augment this inflammation,

flammation, and thereby increaſe the effect. Indeed the ſtimulus of the urine often occaſions a ſloughing of the ſurface of the wound, which however makes no alteration in the general circumſtances of the caſe. In later operations I acquired more confidence, and a belief that I could diſtinguiſh the bladder from any thing elſe by its feel; and one caſe which occurred tended further to embolden me in this operation. Being called on a ſudden to relieve a patient, who had had his urethra lacerated, and being urged to puncture the bladder by ſeveral gentlemen who were preſent, and who were certain that a conſiderable quantity of urine was detained: though I could not feel the bladder diſtended above the pubes, I conſented, as the patient was in imminent danger, to perform the operation, and having punctured the bladder with a trochar, four or five ounces only of urine were diſcharged. However a large quantity of urine gradually flowed through a canula which was introduced. The patient died, and was examined, when the cauſe of this occurrence became apparent. A large

cyſt

cyſt made by the protruſion of the internal coat of the bladder, had been formed between the bladder and the rectum, which contained the greateſt quantity of the retained urine. The orifice, by which this cyſt communicated with the bladder, did not exceed in dimenſions the barrel of a common quill. It alſo appeared that, though the bladder itſelf could not in this caſe be ſaid to have been diſtended, yet the front of it only was wounded by the trochar, and the back part was uninjured.

To return from this digreſſion to the operation in the caſe which I was relating: after I had, by an inciſion between the pyramidales muſcles, enabled myſelf to paſs my finger along the upper part of the ſymphyſis pubis, ſo as to preſs againſt the diſtended bladder, I introduced a common trochar of the middle ſize, in a direction obliquely downwards. There is an advantage, as Sabatier, in his Medicine Operatoire obſerves, in introducing an inſtrument in this direction, for it accords with the axis of the bladder, and is therefore not

likely to injure the oppoſite ſide of that organ. When I found that the inſtrument had penetrated the cavity, I withdrew the ſtilet within the canula, and then puſhed the canula obliquely downwards, ſo that about two inches of it were introduced into the bladder. On withdrawing the ſtilet of the trochar, the urine guſhed out with great force, but I prevented its eſcape, by placing the thumb of my left hand againſt the mouth of the canula, and then introduced through it in the ſame oblique direction, a middle ſized hollow elaſtic catheter, till it met with reſiſtance by touching the bottom of the bladder. After the urine was diſcharged, the canula of the trochar was withdrawn over the elaſtic catheter, which was left in its ſituation, and the end which came out of the wound was bent downwards towards the pubes, and attached, ſo as to be kept motionleſs, to a circular bandage put round the body of the patient. The wound, which was funnel-ſhaped, being wide externally, and gradually contracting to the bladder, was covered with linen, ſpread over with ſpermaceti ſalve. The urine

flowed not only through the catheter, but by the ſides of it. A ſlight inflammation occurred round the wound, ſuch as would doubtleſs tend to conſolidate the ſurrounding cellular ſubſtance. The ſurface of the wound in this caſe did not even ſlough, at leaſt in any evident degree. Four days after the operation the patient got up, and walked about his chamber, and feeling himſelf comfortable and well, he did not go to bed again till night. At the end of a week ſome few drops of urine came through the urethra, and the quantity thus diſcharged daily increaſed. At this time as the catheter ſeemed to be clogged up with mucus, it was withdrawn, and another was introduced with perfect facility. In about three weeks, as the urine came pretty freely through the urethra, the catheter was withdrawn, and the patient voided his urine by the natural channel. In ſix weeks the external wound was perfectly healed, and the patient was as well as before the retention of urine took place.

On the Tic Douloureux.

As the public attention has been of late excited to that painful affection of the nerves, called Tic douloureux, I ſhall in the next place relate a caſe of that diſeaſe, which lately came under my care, becauſe it ſeems to me, to elucidate the nature of the diſorder, to demonſtrate the degree and kind of advantage which is likely to reſult from the diviſion of the trunk of the nerve, and alſo to explain ſome circumſtances in the anatomy and phyſiology of the nervous ſyſtem, of which I have not as yet met with any ſatisfactory explanation.

CASE.

A lady became gradually affected with a painful ſtate of the integuments under and adjoining to the inner edge of the nail of the ring finger of the left hand. No injury to the part was remembered which could have brought on this diſeaſe. The pain occurred at irregular intervals, and was extremely ſevere during the time of its continuance, which was for a day or two, when it uſually

abated.

abated. Accidental ſlight injuries always occaſioned great pain, and frequently brought on thoſe paroxyſms, which however occaſionally occurred ſpontaneouſly, or without any evident exciting cauſe. In all theſe particulars the diſeaſe correctly reſembled the tic douloureux of the nerves of the face. As the pain increaſed the diſorder ſeemed to extend up the nerves of the arm. After the patient had endured this painful affection for ſeven years, ſhe ſubmitted to have the ſkin, which was the original ſeat of the diſorder, burned with cauſtic. This application gave her intenſe pain, and on the healing of the wound ſhe found her ſufferings rather augmented than diminiſhed by this experiment. After four more years of ſuffering ſhe conſulted me, when the circumſtances of the caſe were ſuch as to render an operation indiſpenſably neceſſary. The pain of the part was intolerable, and it extended all up the nerves of the arm; and this general pain was ſo conſtant during the night, as to deprive the patient of reſt. The muſcles of the back of the neck were occa-

ſionally affected with ſpaſms. The integuments of the affected arm were much hotter than thoſe of the oppoſite ſide, and ſometimes the temperature was ſo increaſed as to cauſe a burning ſenſation in them. Under theſe circumſtances I did not heſitate to divide the nerve of the finger, from which all this diſorder ſeemed to originate. I laid it bare by a longitudinal inciſion of about three quarters of an inch in length, from the ſecond joint of the finger, and divided it oppoſite to that joint, by a curved ſharp pointed biſtoury which was conveyed under it. I then took hold of the nerve with a pair of forceps, and reflecting it downwards, I removed a portion of it half an inch in length, that the poſſibility of a quick reunion might be prevented. The wound was brought together by ſticking plaſter, and it united by adheſion: but the upper part of the wound, oppoſite to the upper end of the nerve, became ſlightly inflamed, and was very painful; however the appearance of inflammation gradually went off in the courſe of three weeks. After the operation I pinched the

originally

originally affected integuments ſharply with my nails, without cauſing any ſenſation; but if in ſo doing I moved the finger, then pain was felt. I found it difficult to convince the patient that the ſkin at that part was actually devoid of ſenſation, for ſhe ſtill continued to feel ſimilar ſenſations to thoſe which formerly occurred, though in a much diminiſhed degree: but ſhe became gradually as perfectly convinced as any medical man could be, that theſe ſenſations aroſe from the irritated ſtate of the end of the nerve, above the place where it was divided. The painful affection of the nerves of the arm ſtill continued, though conſiderably leſſened in violence; however it was ſufficiently ſevere to make the patient apprehend that little permanent benefit would ariſe from the operation. This pain continued occaſionally about four months, with varying degrees of ſeverity, but the temperature of the ſkin was not hotter than that of the oppoſite ſide, as it had been before the operation. At the expiration of three months, the patient aſcertained that the integuments at the end of the finger actually felt when any thing was applied to them, and this proved

a new ſource of alarm. More than nine months have now elapſed ſince the performance of the operation, and the general pains in the nerves have become very trivial; but the ſenſation of the integuments at the end of the finger, has during that time gradually increaſed, and the ſkin has now its natural ſenſibility, ſo as accurately to diſtinguiſh the tangible properties of any body applied to it. If alſo the originally affected part be compreſſed ſlightly, painful ſenſations reſembling thoſe which formerly occurred, take place.

The obſervations of Dr. Darwin relative to ocular Spectra, and the experiments of Mr. Home on the contraction of divided nerves (contained in the Croonian Lecture, inſerted in the Philoſophical Tranſactions for the year 1801) have given a kind of demonſtration that there is a ſubtile and mobile matter ſuperadded to the viſible fabric of nerves, and ſanction the uſe of the yet novel terms of the irritability and irritable actions of nerves, and I ſhall therefore employ them the few ſubſequent remarks which I have to offer.

The

The caſe above related, appeared to me to merit publication, becauſe I believe it is a rare occurrence for the tic douloureux to happen any where but in the face. In the inſtances related by Mr. Home in his Croonian lecture, the diſeaſe was the effect of an injury done to the thumb, and it is reaſonable to ſuppoſe that it would not have taken place without a prediſpoſition to it in the conſtitution of the patients. It is alſo not unfair to conclude that the diſeaſe thus occaſioned, was of a more general nature, and leſs confined to the extreme branches of the nerves, and therefore leſs ſuſceptible of cure by an operation. The caſe, which I have related ſhews, as indeed might have been concluded à priori, that though the ſource of the irritable ſtate of the nerves in the tic douloureux, may be cut off by an operation, yet that the general irritable actions of thoſe organs, which had been excited, and had continued for a long time, would not immediately ceaſe, though they might, as happened in this inſtance, gradually ſubſide.

The

The ſpeedy return of ſenſation, which is both accurate and acute in the preſent caſe, muſt ſurely be deemed a curious circumſtance. It cannot be attributed to a reunion of the divided nerve, ſince ſo large a portion of it was removed; for I believe in ſimple diviſions of the nerves by accident, ſenſation is ſlow in returning. It muſt I think be admitted that ſenſation in the preſent inſtance takes place through the medium of the communicating branches of thoſe organs, and probably its ſpeedy renovation was the effect of their unuſually active or irritable ſtate.

Nerves ſtrikingly reſemble arteries in their modes of communication, ſometimes they conjoin even by conſiderable branches, ſuch as muſt be manifeſt, in common diſſections; but they communicate in ſurprizing numbers by their minute ramifications. This circumſtance is not perhaps ſo familiarly known to profeſſional men, ſince it cannot be perceived unleſs in the courſe of a very minute diſſection, and to underſtand how numerous theſe communications are, the repreſentations given by

by the German authors, of their delicate and laborious diſſections, may be advantageouſly conſulted *.

The communications of nerves ſeem alſo not to have excited much attention amongſt phyſiologiſts; at leaſt I have not met with any probable conjecture concerning their uſe. I ſhall therefore take the liberty of mentioning as briefly as poſſible, what has occurred to me on that ſubject.

The opinions of Mr. Hunter reſpecting a ſubtile matter inhering in the brain and nerves, and diffuſed throughout the body, are I believe generally admitted, though variouſly expreſſed. Now if the brain and nerves be ſuppoſed in thoſe animals who poſſeſs them, to be the chief if not the ſole organs for the preparation of this ſubtile matter, then it appears as neceſſary that the nerves ſhould communicate, as that the arteries ſhould do

* See Meckel's Repreſentation of the Nerves of the Face, or Frotſcher's of the Cervical Nerves, in Ludwig's Opera Minora, or Walther's Plates.

ſo.

ſo. For if the continuity of the trunk of either of theſe organs were deſtroyed, the parts which its branches ſupply, would periſh were it not for their communication with the minute branches of other adjacent trunks. It is probable that one of the advantages derived from important organs being ſupplied from plexuſes of nerves is, as has been ſuggeſted by Soemmerring, that ſuch eſſential organs ſhould never want that animation and influence, which they derive from the nerves, even ſhould caſual obſtruction take place in ſome of the trunks leading to ſuch a plexus. But parts leſs eſſential to life, equally require that ſuch interruption of the nervous energy ſhould be guarded againſt. Have we not a plexus formed in the axilla, prior to the diſtribution of nerves, to the upper extremities? do not the ſacral nerves form a plexus, in order to form the ifchiadic or poſterior crural nerve? and may not the ſame circumſtance be affirmed with reſpect to the anterior crural, and obturator nerves, ſince they ariſe from the complicated union of the lumbar nerves, with a branch of the firſt ſacral nerve?

Theſe

Theſe communications of the nerves may not only ſerve the purpoſe which has been ſuggeſted, but, as appears from the preſent caſe, the actions which take place in the extremities of the nerves may, by them, be propagated to the ſenſorium, and thus produce ſenſation. Whether, in the preſent inſtance, the original painful actions of the extremities of the nerves may again recur, and be continued throughout the communicating branches to the ſenſorium, the future progreſs of the caſe will determine.

On the Removal of looſe Subſtances from the Knee Joint.

I ſhall next relate a caſe in which ſome of thoſe looſe ſubſtances that are frequently found in the knee-joint were removed by an operation; becauſe I think the caſe contains many intereſting particulars, and becauſe it will afford me an opportunity of offering a few obſervations on the neceſſity and mode of performing ſuch an operation. Mr. Cruikſhank

ſhank has given an account of Mr. Hunter's practice in theſe caſes, but without a detail of particulars, and there is not, I believe, any detailed account of ſuch an operation before the public, except that which is related by Mr. Ford, in the ſixth volume of the London Medical Obſervations and Inquiries. Mr. Hey has of late recommended a bandage to keep theſe bodies ſtationary, and has related ſeveral inſtances of its efficacy, and of courſe of its preventing the neceſſity of undertaking a ſerious and uncertain operation. When looſe ſubſtances exiſt in the knee-joint, and are lodged on either ſide of the patella, they produce but little inconvenience; but when they ſlip under the ligament of the patella, and become interpoſed between the condyles of the os femoris and the tibia, they impede progreſſion, and cauſe pain, and ſo much injury as to bring on inflammation in the joint. If the extenſor tendons, the patella and its ligament, can, by Mr. Hey's bandage, be kept ſteadily preſſed againſt the correſponding parts of the joint, then theſe bodies

bodies muſt remain ſtationary on one or other ſide of the patella, and the patient will be exempted from the inconvenience and injury which their motion in the joint occaſions. Under theſe circumſtances the neceſſity for an operation is obviated; but in the caſe which I am about to relate the bandage was of no avail, for reaſons which will appear in the relation. It is not improbable alſo that though theſe bodies may occaſion much irritation at firſt, yet that the joint becoming accuſtomed to their ſtimulus may afterwards be leſs affected by their preſence, which circumſtance ought to be adverted to and aſcertained before an operation be undertaken.

CASE.

A man, about forty years of age, having fallen from a ladder, and injured his knee, ſuffered afterwards a good deal from inflammation in the joint. The joint became much better, but never perfectly recovered; and after a year had elapſed he ſlipped in walking, and again injured his knee. From this time he became ſenſible of the preſence of

two

two moveable bodies in the joint, which incommoded him conſiderably. They frequently, in walking, got between the condyles of the os femoris, and the crucial ligaments, giving him great pain at the time, and produced heat and inflammation of the knee afterwards. He bore this inconvenience for ſeveral years, till at length, coming to London, he reſolved to ſubmit to the operation for their removal if it were recommended. When I ſaw him there was a conſiderable quantity of ſynovia in the joint, the knee was hotter than that of the oppoſite limb, and in this ſtate he ſaid it uſually was. There was no difficulty in bringing the two looſe ſubſtances to the inner ſide of the joint; it required only to put that part in a depending poſition, and thoſe bodies deſcended by their gravity through the fluid, and were eaſily fixed in the ſituation to which they had fallen. I could bring them on the inner ſurface of the internal condyle of the os femoris, which is of conſiderable extent, and by placing the points of my fingers ſo as to deſcribe a portion of a circle, I could prevent them from paſſing again into the cavity of

the joint, although the limb might be moved, and the patient preſs firmly againſt them with his finger, as if he meant to puſh them into the joint. Yet when my fingers, which thus confined them were removed, the ſlighteſt touch cauſed them to diſappear, and to glide with velocity into the general cavity of the joint.

This is the ſituation, and the manner in which I think theſe bodies can be moſt conveniently and certainly fixed. The inner ſurface of the internal condyle of the os femoris preſents an extenſive and nearly plain ſurface, which terminates in front and at its upper part by an edge which forms a portion of a circle. If the points of the finger be firmly preſſed upon this edge ſo as to form a kind of line of circumvallation round theſe bodies, they cannot paſs into the joint in this direction, nor can they recede in any other, on account of the tenſe ſtate of the internal lateral ligament. Here theſe ſubſtances are near the ſurface, and may be diſtinctly felt; and there is nothing to be divided in order to expoſe them, but the integuments, faſcia, and the capſule of the joint.

Mr. Cruikſhank ſays, that Mr. Hunter preferred removing theſe looſe bodies at the upper part of the joint, as there, the bag which contains the ſynovia has leſs of the nature of a capſule. Mr. Ford, in a caſe which required the operation (and which is related in the Medical Obſervations and Inquiries), extracted the ſubſtance on the outer edge of the patella; and if the ſubſtance is large, it may undoubtedly be extracted in this ſituation. In the caſe, which I am going to relate, it would have been impoſſible to fix the looſe ſubſtances in any other ſituation than that, which I have deſcribed, and in my opinion that ſituation muſt in every caſe be preferable to any other, for the reaſons which I have mentioned.

I did not heſitate to undertake the removal of the bodies in the preſent caſe, as they could be ſo ſecurely fixed. For the patient had tried bandages without any advantage, which perhaps was owing to the quantity of fluid in the joint preventing them from acting in the manner mentioned above. His ſufferings were very conſiderable, and the neceſſary

neceſſary reſtriction in exerciſe extremely inconvenient. I thought it right to reduce the inflammation of the joint as much as poſſible, prior to the operation, and with this view directed the application of leeches, and of linen kept conſtantly damp with Goulard's waſh: ſome aperient medicine was alſo given. By theſe means, in the courſe of three days, all the fluid was removed from the joint, and it was as cool, and free from pain and inflammation as the other knee; but when I endeavoured to get theſe bodies into the ſituations in which I had formerly fixed them, I found all my efforts were in vain. There was no fluid for them to deſcend through, and though one of them could be got into the ſituation which we wiſhed, we could not, after trying nearly an hour and an half, ſucceed in getting both of them upon the condyle of the os femoris. I was therefore obliged to let the patient walk about a little, that ſome more fluid might be effuſed into the joint, and then I could bring them both into the ſame ſituation, and fix them as readily as before.

The operation was done in the following manner. Sir Charles Blicke, who aſſiſted me, preſſed the integuments of the knee, gently towards the internal condyle, and then applied his fingers in the manner I have deſcribed, round the circular edge of the bone. I alſo drew the integuments gently towards the inner ham-ſtring, and divided them longitudinally, immediately over the looſe ſubſtance, to the extent of an inch and an half. This withdrawing of the integuments from their natural ſituation was deſigned to prevent a direct correſpondence in the ſituation of the external wound, and that of the capſule of the joint; for when the integuments were ſuffered to regain their natural poſition, the wound in them was nearer to the patella, than the wound which was made in the capſule. The faſcia which covers the joint being expoſed by the diviſion of the integuments, it was divided in a ſimilar direction, and nearly to the ſame extent. The capſule was now laid bare, and I gently divided it to the extent of half an inch, where it covered one of the hard ſubſtances, which ſuddenly ſlipped through the

the opening, and by preſſing gently upon the other, it alſo came through at the ſame part. The bodies which were thus removed, were about three quarters of an inch in length, and half an inch in breadth. They had a highly poliſhed ſurface, and were hard like cartilage. The fluid contained in the joint was preſſed toward the wound, and about two ounces of ſynovia were diſcharged. I then drew the wound of the integuments gently towards the patella, preſſed the two ſides together, and cloſed it accurately with ſticking plaſter, enjoining the patient to keep the limb as free from motion as poſſible.

No inflammation took place in the knee, either on that day, or the following; but on the ſecond night after the operation the patient ſuffered a good deal of pain, and in the morning the joint felt hot, and was diſtended with fluid as it had been before the operation. I now removed the dreſſings, and found the wound was cloſed; but I felt very apprehenſive leſt the inflammation of the joint continuing, the collection of fluid ſhould alſo

increaſe,

increaſe, and by diſtending the capſule, cauſe the wound to open. Having already ſeen in this caſe the beneficial effects of evaporating waſhes, which by diminiſhing the heat of a part check its tendency to inflammation, I was deſirous of re-applying them. In order to prevent theſe applications from looſening the ſticking-plaſter, and cauſing the expoſure of the wound, I made uſe of an expedient, which I have frequently employed, and which from its utility I think deſerves to be mentioned. After having ſupported the ſides of the wound in their ſituation by adheſive plaſters as at firſt, I put over them a piece of linen which extended beyond them in every direction. This linen was made to adhere to the ſurrounding ſkin, by ſmearing over the edge with a ſolution of ſealing-wax in alcohol, and afterwards varniſhing the linen over with the ſame ſolution. The alcohol having evaporated, and the ſealing-wax remaining, no liquid could penetrate and detach the ſticking-plaſter. This is the ſame varniſh with which ſome parts of electrical machines are coated, and its power of re-

maining unaffected by moiſture and moderate warmth is well known.

Folded linen kept dampt with laudanum and water was now applied, in the proportion of an ounce of the former to a quart of the latter. This waſh I prefer, for the purpoſe above mentioned, to Goulard's waſh; for the precipitated powder contained in the latter is apt to fill the interſtices of the linen, and prevent its imbibing the waſh, ſo that the requiſite evaporation does not go on. Theſe applications quickly diminiſhed the heat of the knee, and the quantity of fluid contained in the joint ſpeedily decreaſed. The wound was daily dreſſed, and in a week was firmly healed; and in a fortnight the patient might be ſaid to be well. He has ſince the operation walked as much as he was accuſtomed to do, and has not found the leaſt inconvenience.

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PART THE SECOND:

CONTAINING,

AN ACCOUNT OF THE

DISORDERS OF THE HEALTH IN GENERAL,

AND OF THE

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OBSTRUCT THEIR CURE:—

OBSERVATIONS ON

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PARTICULARLY OF THAT PART WHICH IS SURROUNDED

BY THE PROSTATE GLAND:—

AND, OBSERVATIONS

RELATIVE TO THE TREATMENT OF

ONE SPECIES OF THE *NÆVI MATERNI.*

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"*Chirurgo neceſſariam eſſe cognitionem Phyſices, Chimiæ, Logices,*
"*omnis (fere) ambitus Medicinæ; neque ſolo manus exercitio veros*
"*chirurgos fieri.*" HERM. BOERHAAV. Method. Stud. Med. locupletata ab Alb. von Haller.

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PREFACE.

IT is now nearly ſeven years ſince Mr. BOODLE, of Ongar, in Eſſex, told me that, in his opinion, many nervous diſeaſes, and many pulmonary affections, originate in a diſorder of the Liver. He regretted his inability to inveſtigate the ſubject by diſſection, and urged me to endeavour to aſcertain, by that method, how far his ideas were well founded, or otherwiſe. The reſult of theſe enquiries is related at the concluſion of the firſt paper in this volume.

Having

Having thus been led to pay attention to diſorders of the digeſtive organs, and their connexion with other diſeaſes, in the relation of cauſe or effect; the importance of the inveſtigation in which I had engaged gradually increaſed in my eſtimation. I ſoon perceived that the ſubject was of the higheſt conſequence in the practice of ſurgery; for local diſeaſes diſturb the functions of the digeſtive organs; and, converſely, a deranged ſtate of thoſe organs, either occurring in conſequence of ſuch ſympathy, or exiſting primarily as an original diſeaſe, materially affects the progreſs of local complaints. The facts which I have collected, and the obſervations which I have made relative to theſe ſubjects, will be found in the ſubſequent paper. It ſeems to be the duty of every one to promulgate any uſeful facts which he may poſſeſs, relating to an important ſubject, in order to excite general attention to it; by which the knowledge of that ſubject is likely to obtain the greateſt and moſt rapid

increaſe.

increaſe. Influenced by this conſideration, and believing that the facts which I have collected merit attention, I ſubmit them to the judgment of the publick.

It is no more than juſtice to ſtate, that opinions of a ſimilar kind, with reſpect to the influence of the hepatic function on various forms of diſeaſe, have, for ſome years paſt, been delivered by Dr. Curry, Phyſician to Guy's Hoſpital, in his lectures upon the Theory and Practice of Medicine; and that our ſurpriſe was mutual, at finding ſuch coincidence of ſentiment upon a ſubject hitherto ſo little adverted to. Until Dr. Curry, however, ſhall lay the reſult of his labours before the publick, which he is now preparing to do, it is impoſſible to ſay how far our ideas may correſpond in the detail; but when two perſons begin an inveſtigation with principles nearly ſimilar, it is not, perhaps, unreaſonable

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to expect, that the facts which they collect, and the obſervations which they make, though in different lines of the profeſſion, will be found mutually to ſupport and illuſtrate each other.

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On thoſe Diſorders of the Syſtem in general, and of the digeſtive Organs in particular, which accompany local Diſeaſes, and which, whether they be ſympathetic or idiopathic, conſiderably obſtruct the Cure of theſe Diſeaſes.

AN evil ſeems to me to have ariſen from the artificial diviſion of the healing art into the medical and ſurgical departments. This diviſion has cauſed the attention of the phyſician and ſurgeon to be too excluſively directed to thoſe diſeaſes, which cuſtom has arbitrarily allotted to their care. The effects of local diſorders upon the conſtitution have, in conſequence, been too little attended to; and indeed I know of no book, to which I can refer a ſurgical ſtudent for a ſatisfactory account of thoſe febrile and nervous affections, which local diſeaſe produces, except that of

Mr. Hunter*. The reciprocal operation of conſtitutional diſorders upon local diſeaſes has obtained ſtill leſs attention. To inveſtigate more particularly ſome parts of theſe ſubjects, and to bring them forwards to public notice, are the propoſed objects of the preſent paper.

No part of the animal body can be very conſiderably diſordered, without occaſioning a correſpondent derangement of the whole conſtitution. Such diſorder has been conſidered by Mr. Hunter as the reſult of univerſal ſympathy. This conſent of the whole conſtitution with its parts, manifeſts itſelf, in particular inſtances, by a greater diſturbance of the functions of ſome organs than of others; and from this circumſtance theſe diſeaſes have derived the appellations, by which they are commonly diſtinguiſhed. If the actions of the ſanguiferous ſyſtem be principally diſturbed, and the temperature of the body ſubject to unnatural variations, the diſeaſe is termed fever: if the nervous ſyſtem be chiefly

* Treatiſe on the Blood, Inflammation, &c.

affected,

affected, a ſtate of vigilance or of delirium may be produced: convulſions and tetanus take place when the muſcular ſyſtem is more particularly diſordered. Though the eſpecial diſorder of particular organs thus gives a character and denomination to the diſeaſe, it is ſufficiently evident, in every inſtance, that the whole conſtitution is diſturbed, and that parts of it are chiefly affected, perhaps from unknown circumſtances relative to the nervous ſyſtem, or it may be from a prediſpoſition to diſorder exiſting in the parts, which are chiefly affected. It ſeems to be aſcertained, that perſons of particular conſtitutions are prediſpoſed to thoſe febrile actions of the ſanguiferous ſyſtem, which conſtitute the inflammatory fever; that there is a propenſity to convulſions in children, and to tetanus in the inhabitants of warm climates.

It may be a fit ſubject for enquiry, whether it be poſſible for particular organs to become affected otherwiſe, than through the medium of the nervous ſyſtem in general. Though ſome inſtances of ſympathy are ſtrange, and

perhaps inexplicable, it muſt, I think, be admitted, that the inflammatory fever, the ſtate of vigilance and delirium, convulſions and tetanus, which ariſe in conſequence of injuries of the limbs, are produced by irritation imparted to the brain, which, by a kind of reflected operation, occaſions a greater diſorder of ſome organs than of others, and thus gives a character and denomination to the diſeaſe.

That the ſtomach and bowels are diſordered by injuries and diſeaſes of parts of the body, has been remarked by various perſons; but the ſubject has never been extenſively ſurveyed, nor viewed with that accuracy of obſervation, which its high importance merits. It has been obſerved that ſprains of tendinous or ligamentous parts produce ſudden ſickneſs; and Mr. Hunter has attributed that ſhivering which is conſequent to accidents, and attendant on ſome diſeaſes, to the ſtate of the ſtomach. It is alſo known that, in ſome local injuries from accident or operations, the ſtomach has appeared to be the part principally affected. But theſe remarks have been made only in a curſory

curſory manner; and it is my intention to examine the ſubject more particularly. The connexion of local diſeaſes with the ſtate of the conſtitution in general alſo appears to me either not ſufficiently underſtood or not duly regarded by the generality of practitioners; and to this ſubject I alſo mean to claim their particular attention. I ſhall in the firſt place ſelect two caſes to ſhew how the ſtomach and bowels, or, to ſpeak yet more extenſively, the digeſtive organs may be affected from local diſorder.

CASE.

A healthy gentleman, about twenty-five years of age, was induced to ſubmit to an operation for the return of an adherent omental hernia, rather in order to remove the inconvenience and apprehenſion which the diſorder occaſioned, than from any urgent neceſſity; for any increaſed exertion in walking or riding produced the deſcent of a portion of inteſtine behind the thickened omentum, and obliged him to ſtop, and replace it: and

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he frequently could not accompliſh the reduction without conſiderable difficulty. The application of truſſes had been quite ineffectual in obviating theſe alarming inconveniencies.

The patient's diet on the day preceding the operation was ſcanty, and conſiſted of fluid ſubſtances. He took on the morning of the operation ſome Epſom ſalts and manna, which operated twice, and ſeemed to have emptied his bowels. A portion of the omentum was cut off, and the remainder was returned after two veſſels had been tied. The operation was followed by general diſorder of the conſtitution, manifeſted by a full and ſtrong pulſe, furred tongue, great anxiety, reſtleſſneſs, and total want of ſleep. The ſtomach was particularly affected, being diſtended, uneaſy on compreſſion, and rejecting every thing that was ſwallowed. He was bled largely in the evening, and took ſaline medicines, but could not be prevailed on to ſwallow any thing elſe, except ſome toaſt and water. The ſickneſs had in ſome degree abated on the next day. A ſolution of magneſia vitriolata in mint water

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was preſcribed in ſmall occaſional doſes, in order to relieve the diſtenſion of the ſtomach, and the unpleaſant ſtate of the tongue, by procuring ſome diſcharge from the bowels *. In the courſe of the day he took an ounce of the ſalts, which was not rejected by the ſtomach, yet he could ſcarcely be prevailed

* Patients not unfrequently ſuffer much after operations from diſorder of the ſtomach, and ſometimes die apparently in conſequence of this affection, and not from local miſchief. In theſe caſes opium ſometimes fails to quiet the irritability of the ſtomach; and I have always conſidered it as a primary object to produce ſecretions into the bowels, as I have obſerved that, if diſcharges can be procured per anum, the ſtomach becomes tranquil. The magneſia vitriolata diſſolved in common mint water or peppermint water, in ſmall and repeated doſes, and clyſters, are, I believe, generally directed to produce this effect. It muſt be acknowledged that it is diſorder of the brain that affects the ſtomach; but the re-action of the latter affection increaſes and maintains the former, by which it was produced. Theſe caſes are exceedingly various with regard to the degree and kind of the diſorder; ſometimes the brain ſeems the part chiefly affected, and the nervous energy appears to be greatly impaired. In ſuch caſes cordials ſeem to be the only medicine that can be preſcribed with probable benefit. Sometimes a low kind of delirium takes place, with but a ſlight degree of febrile action. Sometimes the delirium is more violent, and the febrile actions are proportionably increaſed, attended with ſubſultus of the muſcles and occaſional convulſions.

upon

upon to take any thing elſe. The tongue was ſtill covered by a thick yellow fur; the ſkin was hot and dry, and the pulſe frequent. As there was no particular tenderneſs about the hypogaſtric region, he was not again bled. The ſecond night paſſed without the leaſt ſleep. As the ſalts had produced no effect, the ſame medicine was ordered in an infuſion of ſenna, with the addition of ſome of the tincture, which, by being given in very ſmall doſes, was retained. As, however, no effect ſeemed likely to reſult from this medicine, a grain of calomel was given at night, and repeated on the following morning. Still the loathing of food continued. The third night paſſed, like the former ones, without the leaſt ſleep, and with great anxiety. On the next morning, two pills, containing five grains of the pil. colocynth. and the ſame quantity of the pil. aloet. cum myrrhâ, were given every fourth hour. Theſe procured no ſtool, nor produced any ſenſation which inclined the patient to believe that they would operate. Again he paſſed a night without ſleep; but, towards the morning, he felt his bowels

apparently

apparently filling, to uſe his own expreſſion, and a profuſe diſcharge enſued. A dozen copious, fetid, and black evacuations took place between five and ten o'clock, and he had ſeveral others in the courſe of the day; after this, his appetite returned, his tongue became clean, and ſound and continued ſleep ſucceeded.

That the chylopoietic organs were in this caſe the parts chiefly affected, can ſcarcely be queſtioned. The ſickneſs, the tenderneſs of the parts in the epigaſtric region, the diſlike to receive any thing into the ſtomach, and the ſtate of the tongue, all ſhew that the ſtomach was much diſordered. The inſuſceptibility of the bowels to be operated on by thoſe medicines, which would ordinarily have produced diſcharges from them, and the profuſe evacuation which afterwards enſued, and relieved the patient, ſhew that theſe viſcera participated in the affection. The black colour of the diſcharges ſhews, I think, that the ſecretion of the bile was not healthy. It is probable that ſome portion of the evacuated matter

matter proceeded from the liver, in which caſe it might be juſtly inferred that this organ was affected in common with the reſt of the chylopoietic viſcera.

It may be ſuppoſed, that the injury done to the omentum might contribute to produce the diſorder of theſe organs, rather than of others. We do not, however, find that ſuch effects commonly ſucceed to ſimilar operations. The ill conſequences in the preſent caſe were greater than might perhaps have been expected, if it were not known, that an operation performed on a healthy patient is more apt to produce conſiderable diſorder, than where the conſtitution has previouſly ſuſtained the irritation of a diſeaſe, for which the operation becomes neceſſary.

It is probable alſo that the reſtleſſneſs and anxiety of the patient were aggravated, if not principally cauſed by the ſtate of the chylopoietic viſcera; ſince the relief which took place in thoſe parts on the renewal of ſecretions into them, certainly removed the nervous

ſymptoms.

ſymptoms. That the diſcharges were the effect of ſecretion is proved by the abſence of alimentary matter in the bowels, in conſequence of the action of the purgative adminiſtered on the morning of the operation, and the abſtinence both before and after that period*.

I could relate numerous caſes in ſupport of the inferences, which I have drawn from the preceding hiſtory; that local irritation affecting the nervous ſyſtem may occaſion a ſubſequent affection of the digeſtive organs of a

* Two inſtances are recorded in Mr. Pott's Works of the operation for the reduction of an hernia being performed where no ſtrangulation exiſted. See Pott's Works, vol. III. pp. 295, 299, edition of 1783.

The operation in the caſe juſt related was undertaken upon the authority of theſe caſes, which were both ſucceſsful. I performed a ſimilar operation on a patient, whoſe life had been twice in imminent hazard from ſtrangulation, in a caſe of adherent epiplocele, in which a truſs did not keep up the hernia. This operation was followed by violent peritonitis, which could only be ſubdued by ſuch copious and repeated venæſection, as endangered the patient's life. Theſe caſes have made ſuch an impreſſion on my mind, that I ſhould be very averſe in future to undertake ſimilar experiments.

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moſt momentous nature, and which appears to be the ſource of great general diſorder of the ſyſtem, becauſe an amendment taking place in the ſtate of thoſe viſcera, a correſponding alleviation of the general ſymptoms enſues. Such caſes ſucceeding to great local irritation muſt frequently occur to every one; it is therefore unneceſſary to adduce more inſtances.

I ſhall however relate another caſe to confirm the opinions which I have delivered, becauſe it appears to me to elucidate ſtill more my preſent ſubject.

CASE.

A gentleman fell with his leg between the bars of an iron grating, which ſerved as a window to a cellar. The part was much bruiſed, the ſkin grazed, and the tibia broken into three or four pieces at its upper extremity. The limb was put up in ſplints by a neighbouring ſurgeon, and the next day the patient requeſted to ſee me in conſultation. I attended

tended for a few days, but every thing went on ſo well, that I diſcontinued my regular viſits, and only called occaſionally, without ſeeing the limb. There was no inflammation; the ſwelling which had been occaſioned by the bruiſe had ſubſided, and where the ſkin had been grazed, two or three trivial ulcers had taken place, which obliged the ſurgeon to open the bandages and dreſs them daily. The patient's health had been ſo good, that about three or four weeks after the accident, he had ſome friends to dine with him in his room, and afterwards played at cards with them, and parted with them, in the evening, in high ſpirits. In the middle of the ſame night, the patient ſuddenly became delirious, and I was ſent for to meet the other ſurgeon in conſultation. The delirium was then ſo great, that the patient knew not the perſons in the room. On looking at the leg, with a view to inquire into the cauſe of this unexpected occurrence, it was found, that one of the ulcers of the skin on the outſide of the limb, on which his poſition had produced ſome preſſure, had become deep, and apparently penetrated the

faſcia,

faſcia, ſo as to communicate with the fractured bone, and thus had converted a ſimple into a compound fracture. To this event we could not but attribute the ſudden irritation of the conſtitution, and the delirium. Opium was immediately given, which quieted this diſturbance in a conſiderable degree, ſo that on the next day the pulſe was more tranquil, and there was no delirium. On the following day his ſtomach became affected; he was ſick, could take nothing by the mouth, had the hiccough, and his abdomen was diſtended like that of a perſon in tympanitis; whilſt the ſenſes and intellect were not diſordered as they had been. In this ſtate he continued about twenty-four hours, when his ſufferings were terminated by death. As ſome ſuſpicions had ariſen that the head or abdomen might have been hurt at the time of the accident, the body was inſpected; but no injury of theſe parts was diſcovered. Upon examining the leg, it was found that the external wound communicated with the fractured tibia, which was broken into ſeveral pieces; ſome of the fractures, aſcending in a perpendicular direction,

tion, communicated with the joint of the knee.

In this caſe the diſeaſe was of too ſhort duration for obſervations to be made reſpecting the ſecretions of the chylopoietic organs; but it was evident that there was a complete atony of the ſtomach and inteſtines. The conſideration of ſuch caſes as thoſe which have been related, have convinced me that local irritation may produce a great diſorder of the digeſtive organs. It muſt, I think, be granted, that it produces ſuch effects through the medium of the nervous ſyſtem, and that, by a kind of reflected operation, the digeſtive organs become affected ſo that the moſt manifeſt and greateſt diſorder ſeems to exiſt in them.

Now, if vehement local irritation can produce ſo violent a diſturbance of the chylopoietic organs, it may be expected that a leſs degree of a ſimilar cauſe will produce ſlighter effects of the ſame nature. Indeed, the foregoing caſes were related not merely becauſe they

they ſeemed worthy of record by themſelves (for ſuch hiſtories are but rarely met with in medical books), but chiefly to prepare the reader for the obſervations which are to follow.

This ſlighter kind of derangement occurs in cancerous complaints, which rarely fail to be accompanied with diſorder of the abdominal viſcera; to which affection I am induced in general to attribute * that difficulty of breathing which has been ſo generally remarked in the laſt ſtages of the diſeaſe. We find the ſame ſtate of the chylopoietic organs in the advanced ſtages of lumbar abſceſs, compound fractures, and all kinds of local diſeaſe, which impart conſiderable and continued irritation to the whole conſtitution. We alſo find a leſs important diſeaſe, as for inſtance, a fretful ulcer, keep up a diſorder of the ſyſtem in general and of the digeſtive organs in particular, which ſubſides as the irritable ſtate of the ulcer diminiſhes. But as practitioners in general may not perhaps have ſo attentively remarked

* See Surgical Obſervations, Vol. I.

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theſe circumſtances as to be familiarly acquainted with them, it may be uſeful to mention a very common occurrence, which cannot have eſcaped obſervation. I allude to the effects of the irritation of teething upon the health of children. The Brain is ſometimes ſo affected as to cauſe convulſions; the digeſtive organs are almoſt conſtantly diſordered. The appetite fails; the tongue is furred; the ſecretions of the liver are either ſuſpended, deficient, or vitiated. The bowels are either purged or coſtive, and the fæces fetid. The fæcal matter is often mixed with mucous and other ſecretions. There is alſo frequently a very troubleſome cough. Such ſymptoms generally ſubſide when the local irritation ceaſes, but ſometimes the diſorder of the digeſtive organs, thus excited, continues and diſturbs the general health of the patient.

If local irritation be capable of diſordering the bowels, we naturally conclude that it acts upon them through the medium of the brain. If alſo the brain and nervous ſyſtem ſhould be diſordered, without any apparent

local diſeaſe, we might expect ſimilar derangements in the functions of the digeſtive organs. In caſes, where ſome morbific poiſon is abſorbed, which produces effects ſimilar to thoſe of ſyphilis, we frequently find the general irritation of the conſtitution accompanied alſo with that diſorder of the bowels, which I now proceed more particularly to deſcribe.

This ſlighter diſorder of the chylopoietic organs is, in general, manifeſted by a diminution of the appetite and digeſtion, flatulence, and unnatural colour and fetor of the excretions, which are generally deficient in quantity. The tongue is dry, whitiſh, or furred, particularly at the back part; this ſymptom is moſt apparent in the morning. As the diſeaſe advances, a tenderneſs is felt when the epigaſtric region is compreſſed, and the patient breathes more by the ribs, and leſs by the diaphragm than in the healthy ſtate. The urine is frequently turbid. I am inclined to impute theſe ſymptoms (for reaſons which will be hereafter mentioned) to an irritable ſtate of the chylopoietic organs, which is accompanied by

by a deficiency or depravity of thoſe ſecretions, upon the healthy quality of which, the right performance of their functions depends. As all the ſecretions poured into the alimentary canal are colourleſs, except the bile, in that alone can any defect or depravity be diſcovered by inſpection.

Before I proceed, I may be allowed to enter more fully into a conſideration of the ſymptoms which denote diſorder of the digeſtive organs; in order to induce ſurgeons to pay that ſtrict attention to them, which the importance of the ſubject ſo well deſerves. It would indeed be impoſſible for the reader to underſtand, without ſuch prefatory obſervations, my object in the treatment of the caſes which will preſently be related, or the opinions which I have formed, relative to their mode of cure.

The changes which the food undergoes in the digeſtive organs of the more complicated animals are threefold; and diſtinct organs are allotted to each of the three proceſſes. Digeſ-

tion takes place in the ſtomach, chylification in the ſmall inteſtines; and a third proceſs, hitherto undenominated, is performed in the large inteſtines. It is probable that in ſome caſes, one ſet of organs may be more diſordered than the others, and of courſe one of theſe proceſſes may fail more than the reſt. For inſtance, the ſtomach may digeſt the food in a healthy manner, although the inteſtines do not perform their ſhare of the changes, which they ought to effect.

Diſorder of the ſtomach is generally manifeſted by the ſtate of the tongue. If there be no fever to diſturb the ſecretions in general, the change which is viſible in the tongue can be imputed to no other cauſe than local diſeaſe, or a participation in a diſorder of the ſtomach or lungs. Local irritation or mental anxiety will cauſe a white and dry tongue; but does not this effect ariſe through the medium of an affection of the ſtomach? For although the ſecretions of the tongue muſt partake of the general diſturbance which prevails in fever, their eſpecial diſorder may be, in that caſe alſo,

alſo, not improperly attributed to the ſtate of the ſtomach.

The ſtate of the tongue is, in general, an infallible criterion of a diſordered condition of the ſtomach; but it does not point out the kind and degree of that diſorder. In recent and conſiderable affections, where the appetite is loſt, and the digeſtive powers are greatly impaired, the appearances of the tongue are by no means ſo ſtrikingly unhealthy as in more confirmed caſes, where neither the appetite nor digeſtion appear materially deficient. It is probable that a continuance of irritation in the ſtomach may ſo affect the tongue, as to render unnatural ſecretions habitual to the part, and that theſe exiſt independently of the original cauſe, or may be reproduced by trivial degrees of diſorder. Nay, ſometimes the cuticle of the tongue ſeems to have loſt its tranſparency, and to become permanently white, in conſequence of continued irritation.

After making the allowances, which ſuch circumſtances require, we may in general be enabled

enabled to detect a diſordered ſtate of the ſtomach by obſervations made on the tongue: and, as it is of conſequence to aſcertain ſuch diſorder at an early period, when the ſymptoms are probably ſlight, this organ ſhould be obſerved in the morning, when it will be found much furred, particularly at the part next the throat. Its appearance may vary in different parts of the day from varieties in the ſtate of the ſtomach, depending on the excitement which is derived from food, or a ſtate of irritation ariſing from too long faſting. The tongues of many perſons with diſorder of the ſtomach look moderately healthy during the day, though they have been ſo much furred in the morning, that it has been deemed neceſſary to ſcrape them.

A diſordered ſtate of ſecretion, either as to quantity or quality, will be the natural effect of irritation of a ſecreting organ. This is evidently the caſe with the tongue; and we may, with great probability, conjecture that the ſame conſequence alſo takes place in the ſtomach. Since the juices of the ſtomach are the immediate agents

agents in digeſtion, that proceſs muſt be diſturbed in proportion as its ſecretions are deficient or vitiated.

If undigeſted matter paſs from the ſtomach into the inteſtines, it can ſcarcely be ſuppoſed that their powers are capable of converting it into chyle; and it may become irritating to thoſe organs in conſequence of the chemical changes, which it may then undergo. Animal and vegetable matters experience conſiderable chemical changes before they leave the ſtomach; and theſe changes are likely to increaſe in proportion to the time during which they are detained, unleſs counteracted by the powers of the digeſtive organs, powers which ſeem chiefly to reſide in the fluids which are ſecreted into them.

The extent of the power which the inteſtines poſſeſs of converting the ſubſtances contained in them into chyle, or of preventing chemical changes, is unknown. It is probable that much unaſſimilated matter is abſorbed by the lacteals, when the digeſtive powers fail in their

their functions. This is demonſtrably the caſe in diabetes, where the vegetable matter floats in the ſerum of the blood, rendering it turbid, and afterwards combines ſo as to form ſugar in its paſſage through the kidnies. The ſtrong odour, which various kinds of food impart to the urine, proves alſo the indiſcriminate manner, in which different ſubſtances are abſorbed from the inteſtines. May not a turbid and fetid ſtate of the urine very frequently ariſe from a ſimilar cauſe; *viz.* from the imperfect action of the digeſtive organs, in conſequence of which, unaſſimilated matter is taken up by the lacteals, and afterwards ſeparated from the blood, ſo as to impart theſe qualities to the urine? It may be reaſonably conjectured that the ſame powers, by which the kidney converts the old materials of our body into that peculiar modification of animal matter, which is diſſolved in the water of the urine, and which has been called by the French chemiſts urée, may alſo enable it, in a healthy and vigorous ſtate, to diſpoſe of much unaſſimilated ſubſtance in a ſimilar way. The further conſideration of this ſubject would, however, lead

to

to a diſcuſſion foreign to the purpoſe of the preſent paper: it will be ſufficient to remark at preſent, that the ſtate of the urine may afford aſſiſtance in aſcertaining the exiſtence of diſorder of the digeſtive organs, and in indicating its nature. It has been already mentioned, in the brief account of the ſymptoms, that the urine is frequently turbid. It ſhould, however, alſo be obſerved, that the quality of the urine much depends on the ſtate of the nervous ſyſtem. It is frequently, in the diſorders of which I am ſpeaking, pale-coloured and copious, which is probably owing to a ſtate of nervous irritation, ſuch as exiſts in hyſteria. It is not improbable that diſorders of the digeſtive organs, by cauſing the frequent ſecretion of unnatural urine, may produce irritation, and ſubſequent diſeaſe of the kidneys.

Modern phyſiologiſts ſeem to agree in the opinion that the ſuccus gaſtricus is the agent, by which digeſtion is effected; but they are not ſo unanimous as to the immediate cauſe of chylification. It is not improbable that the ſuccus inteſtinalis is a principal agent, although its

its qualities have not yet been enquired into; for, indeed, the inveſtigation would be attended with difficulties almoſt inſuperable.

Since the bile and pancreatic liquor are poured into the inteſtines at a ſmall diſtance from the ſtomach, it is natural to conſider theſe fluids as uſeful in effecting the change, which the alimentary matter undergoes in the ſmall inteſtines, namely, its converſion into chyle. The chyme, or aliment digeſted by the ſtomach, being viſcid, the pancreatic juice has been conſidered as an uſeful and neceſſary diluent.

The uſes of the bile have of late much engaged the attention of phyſiologiſts. Mr. Hunter obſerved that it did not ſeem to incorporate with the chyle; and it certainly cannot do ſo, and retain its own nature, ſince its colour and taſte are ſo intenſe, that it would impart theſe properties to the chyle, if mixed with it in the ſmalleſt quantity. The difficulty of conceiving that the two fluids can be agitated together by the periſtaltic motion of the inteſtines,

tines, without becoming incorporated, has led to an opinion that the bile may combine with the alimentary matter, and loſe its original properties; but nothing of this kind is aſcertained. Fourcroy thinks that the alkali and ſaline ingredients of the bile may combine with the chyle, and render it more fluid, while the albumen and reſin may combine with the excrementitious matter. It is, indeed, evident that the bile combines either totally or partially with ſomething ſeparated from the chyle, and exiſts formally in it, and in a ſtate of health uniformly dyes it of its peculiar colour; and therefore it has of late been ſuppoſed that the bile may ſerve to purify the chyle, by precipitating and combining with its feculent parts *.

It has been ſaid in the brief and general recital that has been given of the ſymptoms,

* In the enquiry into the probable uſes of the bile, it ought to be obſerved, that in many perſons, in whom that ſecretion is either for a conſiderable time wholly ſuppreſſed, very deficient, or much depraved, it does not appear that the nutrition of the body is defective.

which

which characterize diſorder in the chylopoietic organs, that the ſtools are of an unnatural colour and odour. Medical men entertain various opinions reſpecting the colour of the fæces: to me this property ſeems generally to depend on the kind and quantity of the bile. All the ſecretions, which are poured into the alimentary canal, except the bile, are colourleſs or white; if, therefore, this fluid were wanting, the reſidue of the aliment would be of the colour, which might be expected to reſult from ſome of its undigeſted parts combined together. When, for inſtance, the ſecretion of bile is ſtopped by the irritation of teething in children, whoſe diet is chiefly bread and milk, the fæces are white; when this ſecretion is obſtructed in adults, the ſtools are pale like whitiſh-brown paper.

In caſes of diſeaſe, however, coloured ſecretions may take place from the bowels. I have known inſtances, in which a fluid like coffee-grounds in colour and conſiſtence was vomited; and a ſimilar matter, of darker colour and of an offenſive ſmell, was diſcharged in

in great quantities per anum: and I have ſeen green bile mixed with theſe diſcharges. I have examined the bodies of perſons who died of ſuch attacks, and have found the lining of the alimentary canal highly inflamed, and apparently tending to mortification throughout its whole extent, without there being any diſeaſe of the liver. I am, therefore, fully aware that the fæces may be coloured by diſeaſed ſecretions from the bowels themſelves; but, in my opinion, they very rarely derive their colour from this cauſe. Further; an unhealthy colour of the fæces may be attributed to ſome degeneracy in the quality of the alimentary matter; ſuch as may be ſuppoſed to take place when the digeſtive organs fail in the performance of their offices, and different alimentary ſubſtances are in conſequence detained in the bowels, where they may paſs through chemical decompoſitions and re-combinations. But, though I am inclined to allow the full operation of theſe cauſes, the following reaſons lead me to believe that the colour of the fæces generally depends on the kind and quantity of the bile. In the natural

ſtate

ſtate of the digeſtive organs, when there is no peculiarity of diet, and no medicine is taken, the bile alone colours the reſidue of the food. The fæces voided during a ſtate of diſorder of the digeſtive organs are ſometimes partially coloured; which circumſtance cannot be well accounted for upon any other ſuppoſition than that of an irregular ſecretion of the bile. Fluids ſecreted from the inteſtines do not uſually enter into combination with the fæcal matter, but appear diſtinctly when excreted. Thus we find mucus and jelly diſcharged from the bowels, unmixed with the fæces. Medicines which affect the liver produce a very ſudden change in the colour of the fæces. Small doſes of mercury, without any alteration of diet, ſometimes change the ſtools immediately from a blackiſh to a light yellow colour, which indicates a healthy but deficient ſecretion of bile.

Healthy bile in the human ſubject is generally of a deep yellow brown colour; the brown ſeems to be the reſult of the yellow colour concentrated. It appears to me to be

be of the colour of wetted rhubarb; for, if a ſmall portion of either of theſe ſubſtances be put into a large quantity of water, they will dye it of a bright yellow colour, which is actually the colour of theſe ſubſtances, yet it is ſo concentrated in the maſs as to appear of a deep brown. Sometimes, indeed, we find green bile in the gall bladder, when the liver is not diſeaſed. I cannot, however, but think that the natural colour is a yellow, ſo intenſe as to appear brown. Green bile is uſually poured out in circumſtances, where there is evident diſorder of the digeſtive organs; and we cannot well ſuppoſe that there are two kinds of healthy bile. The quantity of this fluid ſhould be ſuch as completely to dye the excrement of its peculiar colour. By attending, therefore, to the colour of the fæces, the kind and quantity of bile, which the liver excretes, may in general be aſcertained.

The colour of the alvine excretions in theſe diſordered ſtates of the viſcera is various. Sometimes they appear to conſiſt of the reſidue of the food, untinged in the leaſt degree with bile.

bile. Sometimes they are of a light yellow colour, which denotes a very deficient quantity of healthy biliary ſecretion; they may alſo be of a deep olive, of a clay brown, and of a blackiſh brown; all which ſhew a vitiated ſtate of the biliary ſecretion.

Any kind of brown, which dilution will not convert into yellow, I ſhould conſider as unhealthy, ſince the colour of healthy bile is a bright yellow, which by concentration appears brown.

Such are the circumſtances which I have collected from my own obſervation, and the reports of others, relative to the alvine excretions, in the diſorders which have been deſcribed.

I have dwelt thus particularly upon the ſubject of the biliary ſecretion, from a belief that its quantity and quality can, in general, be aſcertained by inſpection, and will therefore ſerve to indicate the preſence of diſorder. Whether the foregoing opinions be correct or not

not, it will, I think, be generally granted that the ſtate of the excretions from the bowels commonly indicates the healthy or diſordered ſtate of thoſe organs.

The effects, which medicine or diet may have upon the colour of the fæces, ought, however, to be conſidered. When the food is coloured, and this colour is not altered by digeſtion, it will, of courſe, appear in the fæces; hence if it ſhould be thought deſirable to know accurately the ſtate of the biliary ſecretion, it would be right to reſtrict patients to a diet that is not likely to colour the fæces. The green colour of vegetables tinges the fæcal reſidue of the food. Steel alſo is known to influence the colour of the fæces. It ſhould alſo be remarked that the expoſure of the fæces to air after their expulſion, will, in ſome inſtances, cauſe a conſiderable alteration in their colour. In our endeavours, therefore, to aſcertain whether the liver is performing its office rightly, by obſerving the colour of the fæces, attention ſhould be paid to the circumſtances which have been mentioned,

leſt we ſhould be deceived, in conſequence of ſuch inattention.

I conclude this review of the opinions entertained reſpecting chylification, by obſerving that if the ſuccus inteſtinalis be an agent in this function, diſorder of the inteſtines is likely to affect its ſecretion, and thus impede this ſecond important part of the proceſs of aſſimilation.

The reſidue of the alimentary matter, mixed with the bile, paſſes from the ſmall into the large inteſtines, and there undergoes a ſudden change; it acquires a peculiar fetor, and becomes what we denominate fæces. This change is ſo ſudden, that it cannot be aſcribed to ſpontaneous chemical alterations, (which would be gradual) but to ſome new animal agency. If the contents of the ſmall inteſtines at their termination, and of the large at their commencement, be examined, they will be found totally different, even within a line of each other; the former being without fetor, and the latter being in all reſpects what

what is denominated fæces. Though chemiſts then might ſpeak of the fæculent matter of chyle as fæces, yet phyſiologiſts would rather apply that term to a change in the reſidue of the food, which takes place in the large inteſtines, and which ſeems to be effected by the animal powers of thoſe organs. The fæces quickly ſuffer chemical decompoſition out of the body, although they often remain in the bowels, without undergoing the ſame kind of change. Their chemical decompoſition is attended with the ſudden formation of ammonia; yet if they be examined when recent, they are found to contain acids which ammonia would neutralize. The inference, therefore, naturally ariſes, that this third proceſs, amongſt other purpoſes, may be deſigned ſo to modify the reſidue of the alimentary matter, as to prevent it from undergoing thoſe various chemical changes, which might be ſtimulating to the containing organs, as well as injurious to the general health.

In a perfectly healthy ſtate of the digeſtive organs, probably no chemical decompoſition,

even of the fæces, takes place; yet ſuch changes happen, in ſome degree, without apparently producing any injurious conſequences. To chemical changes we may probably attribute the extrication of inflammable air, and the various and unnatural odour of the fæcal matter, which is obſervable in diſordered ſtates of the digeſtive viſcera.

The means by which this modification of the reſidue of the food, which takes place in the large inteſtines, is effected, are but little known. Analogy leads us to refer it to the effects of a ſecretion from the lining of thoſe inteſtines in which it takes place. Now if this ſecretion deviates from the healthy ſtandard, in conſequence of an irritated or diſordered ſtate of thoſe organs, we may reaſonably expect a correſponding derangement of the proceſs, by which the reſidue of the food is converted into fæces.

Having taken this general view of the functions of the chylopoietic viſcera, in order to facilitate the forming a judgment relative to thoſe

thoſe circumſtances which indicate their derangement, I return to ſpeak more fully of that affection of them, which I have deſcribed, as ariſing in ſurgical caſes from the irritation, which local diſeaſe or morbific poiſons produce upon the ſenſorium. This ſubject, it muſt be acknowledged, is very important, if it can be ſhewn that diſorders of the digeſtive organs are the cauſe of a great number of other diſeaſes. The enquiry would then not only lead us to diſcover the ſource of many diſturbances of the general health, which originate in thoſe of the digeſtive organs (for patients have no ſuſpicion of any diſorder exiſting in them), but would alſo lead to the prevention of many ſecondary diſeaſes of a more vexatious and ſometimes of a more fatal nature, than thoſe from which they originated. If the tongue be furred at its back part in the morning, when there is no fever, and when the patient has taken no ſtimulating or indigeſtible food the preceding night, it is reaſonable to infer in general that the ſtate of the tongue is owing to its participating in the irritation of the ſtomach. Such participation produces an

alteration

alteration in the ſecretions of the tongue; they are either deficient in quantity, or vitiated in quality; and it is not unreaſonable to ſuppoſe that the ſecretions of the ſtomach deviate in like manner from their healthy ſtate. A ſtate of irritation in any ſecreting ſurface is, indeed, likely to be attended with the ſame conſequences. It is, therefore, fair to infer that, when a general diſorder of the digeſtive organs takes place, thoſe fluids, which produce the changes which the food undergoes in them, are deficient or depraved, and conſequently that digeſtion and the ſubſequent proceſſes muſt be but imperfectly performed. The liver is likely to participate in the diſorder, and the biliary ſecretion is either diminiſhed or vitiated. This circumſtance admits of ocular demonſtration; and I have, therefore, conſidered it as an evidence of a more or leſs general diſorder of the digeſtive organs. A very reaſonable objection may, however, be made to conſidering the diſorder of the functions of the liver as a criterion of thoſe of the ſtomach and inteſtines; ſince the liver is independent of the latter organs, and may be, as will preſently

ſently be mentioned, the ſubject of a diſorder confined to itſelf. In ſome caſes, alſo, diſorder of the alimentary canal may take place, without diſturbing the functions of the liver. Still, in general, diſorders of the ſtomach and bowels affect the functions of the liver; and the ſtate of the biliary ſecretion affords a very uſeful evidence of a more or leſs general diſorder of the chylopoietic viſcera, and ſhould excite our attention to inveſtigate its kind and degree. This diſorder, which has been deſcribed, muſt alſo, I think, be conſidered as connected with a ſtate of weakneſs of the affected organs.

It is ſaid, in the recital of the ſymptoms denoting diſorder in the digeſtive organs, that the fæces are generally deficient in quantity. This circumſtance may be accounted for in various ways. It may be ſuppoſed that the bile being deficient in quantity, or of an unhealthy quality, may not precipitate the uſual proportion of fæculent matter from the chyle. Perſons whoſe bowels are lax, and do not appear to be deficient in their action of carrying downwards the fæculent matter, void it daily

daily in deficient quantities. It may be ſuppoſed too that, either from the deficiency of bile, and conſequent want of excitement, or from the effects of diſorder, a torpid ſtate of the bowels may exiſt, which cauſes them to carry downwards the fæculent matter in ſmall quantities. The circumſtance may cauſe a greater abſorption of the fæces than what is natural, or an accumulation of them in the colon *.

That the digeſtive organs in general are affected, in the caſes alluded to, is moſt evident; but I am aware that many varieties of diſorder may be included in the general deſcription of the ſymptoms, which I have given. Future obſervations may lead to further diſtinctions; but I ſee no impropriety at preſent in ſpeaking of the diſordered ſtate as general; ſince no material diſorder can take place in one of the digeſtive organs, without diſturbing the functions of the others. When digeſtion is imperfectly executed, the functions of the inteſ-

* The caſes related by Doctor Hamilton appear to ſhew that ſuch accumulation ſometimes takes place. See his Treatiſe on the Effects of purgative Medicines.

tinal

tinal canal will ſoon participate in the diſorder of the ſtomach. Under theſe circumſtances, the ſecretion of bile will alſo probably become irregular. Should diſeaſe commence in the large inteſtines, as about the rectum, it diſturbs the functions of the ſtomach, and ſecretion of the liver, and becomes augmented in its turn by its ſympathy with theſe parts. Should the liver be diſordered in the firſt inſtance, the ſtomach and bowels may not immediately ſympathize, although they will probably ſoon become affected.

I feel further warranted in conſidering the ſymptoms, which have been recited in the former part of this paper, as ariſing from a general diſturbance of the functions of the digeſtive organs, from contemplating the effects of blows on different parts of the belly, which do not ſeem to have injured the ſtructure of any ſingle abdominal viſcus, but which yet produce effects denoting a general diſorder of the whole of theſe organs. The ſymptoms have varied in ſeverity in proportion to the violence of the blow which had been received. In the caſes

caſes which were the conſequence of the more forcible injuries the ſymptoms were, a furred tongue; great vomiting, ſo that the ſtomach could retain no food; difficulty of affecting the bowels by medicine; great fever; and even delirium. Indeed, all thoſe effects were produced, which I have repreſented as ariſing from vehement local irritation of remote parts of the body. The diſorder has generally terminated by a profuſe diſcharge of black and fetid ſtools, after which the patient has perfectly recovered. On the contrary, where the ſymptoms conſequent on the blow have been leſs violent, ſo as not to claim ſuch ſtrict attention, the diſorder has continued. Perſons who had been previouſly in perfect health, have become hypochondriacal, and have had all thoſe ſymptoms of diſorder of the digeſtive organs, which have been already enumerated as ariſing from a leſs degree of local irritation, with ſuch conſequent diſeaſes as originate from ſuch diſorder, and which will be mentioned in the ſubſequent part of this paper.

In order to enquire more particularly into the nature of this diſorder of the digeſtive organs,

organs, I have examined the bodies of a conſiderable number of perſons who have died of cancer, lumbar abſceſſes, and other great local diſeaſes. I knew that theſe patients had their digeſtive organs diſordered in the manner that I have deſcribed, and that in many of them the ſecretion of bile had been ſuppreſſed for a great length of time, and, when it was renewed, that it was very deficient in quantity, and faulty in quality: yet, on diſſection, no alteration was diſcovered in the ſtructure of the chylopoietic viſcera, which could be decidedly pronounced to be the effect of diſeaſe. It naturally excites ſurpriſe, that ſuch a ſtate of irritation, and imperfect performance of the natural functions of theſe parts ſhould exiſt for ſo long a time, as in many caſes it is known to do, without producing organic diſeaſe; ſtill I believe it may be ſet down as an axiom, and which has been verified by every obſervation which I have made, that a ſtate of irritation naturally leads to thoſe diſeaſed actions, which produce an alteration of ſtructure in the irritated parts.

However,

However, where the diſordered ſtate of the bowels had been of longer duration, I have found the villous coat of the inteſtines ſwoln, pulpy, turgid with blood, and apparently inflamed, and ſometimes ulcerated; and theſe appearances have been moſt manifeſt in the large inteſtines. Having obſerved repeatedly in diſſections of theſe caſes, that the large inteſtines were more diſeaſed than the ſmall ones, it occurred to me, that the fact might be accounted for in the following manner: If digeſtion is incomplete, the undigeſted food muſt be liable to chemical changes, and the products reſulting from this circumſtance, are likely to be moſt ſtimulating to the large inteſtines. Indeed, in advanced ſtages of this diſorder, mucus and jelly tinged with blood are diſcharged, and it ſeems probable that a kind of chronic dyſentery may be induced.

In ſome inſtances, where the diſorder had exiſted for many years, the bowels have been diſeaſed throughout their ſubſtance; the internal coat being ulcerated, and the peritoneal

covering inflamed, ſo that the convolutions of the inteſtines were agglutinated to each other. Here the liver alſo was much diſeaſed, being tuberculated in every part. Such is the reſult of the information which I have obtained by diſſection.

I have repreſented this diſturbed ſtate of the chylopoietic organs in ſurgical caſes, as excited frequently by diſorder of the ſenſorium, produced by great local diſeaſe, or from a ſimilar diſorder, occaſioned by the abſorption of morbific matter. The ſame affection, characterized by the ſame ſymptoms, occurs very frequently as an idiopathic complaint. The cauſes which have appeared to produce it, in the caſes which have fallen under my notice, are improprieties of diet, a ſedentary life, impure air, anxiety, and too great exertion of the mind or body. It is indeed no wonder, that the continual irritation of our unnatural diet, ſhould, by degrees, produce ſuch diſorder of the digeſtive organs as I have deſcribed.

Whatever

Whatever *may* be the origin of this diſeaſe; whether it occur as a conſequence of nervous diſorder, or aſſume an idiopathic form, it uniformly diſturbs the nervous ſyſtem, when once eſtabliſhed. When it is ſympathetic, the effect becomes a cauſe, and maintains that diſorder of the nerves, by which it was originally produced.

In the general enumeration of the ſymptoms, ſeveral circumſtances have been omitted which occur occaſionally, and which may, when the ſubject is better underſtood, denote peculiarities in the diſeaſe, and correſponding peculiarities in the medical treatment, which is required for its cure. I ſhall here notice a few of theſe. The appetite is ſometimes moderately good, when the digeſtion is imperfect; and the latter may not be deficient, although the diſeaſe may ſtill exiſt. In ſome inſtances indeed, the appetite is inordinate. Tenderneſs of the epigaſtric region on preſſure, is not always an attendant, even on advanced ſtages of the diſeaſe. The bowels are alternately

nately coſtive, or lax even to purging*. The urine is ſometimes pale-coloured and copious like that of hyſterical patients.

A diſorder in the functions of the ſtomach and bowels, ſimilar to that which has been here deſcribed, may exiſt without the functions of the liver being diſordered; and again, the ſecretion of bile may be interrupted, without the digeſtive proceſſes being materially impeded. Such circumſtances may happen occaſionally, but they are not ordinary occurrences, and ſhould be conſidered as exceptions to general rules, which do not militate againſt their common operation.

Accurate attention to the ſubject, eſpecially in medical caſes, may lead to important ſubdiviſions, which I have not yet been able to make. But when I find that irritation of the

* I have known perſons whoſe bowels were ordinarily coſtive, and whoſe general health was much deranged by diſorder of the digeſtive organs, though they were unconſcious of its exiſtence, feel pleaſed that their bowels were in a comfortably lax ſtate; yet on obſerving the ſtools, they reſembled pitch in colour and appearance.

nervous

nervous ſyſtem, however it may originate, deranges the chylopoietic organs, and affects the ſtomach, bowels, and liver, apparently at the ſame time, I think it fair to infer, that theſe organs are equally operated on by the ſame cauſe. Diſorder of the brain may affect the chylopoietic organs; and it is well known that this influence is reciprocal. The ſtomach is ſaid to be chiefly concerned in producing theſe effects; but the cauſes of the ſympathetic affection are probably more general. A fit of paſſion has produced jaundice; and the irritation of teething in children frequently ſuſpends the ſecretion of bile; ſo that the ſtools are not in the leaſt degree tinged with that fluid. If the head can thus affect the liver, it is reaſonable to infer, that the liver may reciprocally affect the head. It is very difficult to form an opinion relative to this ſubject; for, in the inſtances which have been mentioned, the affection of the liver may take place, only becauſe it forms a part of the digeſtive organs, and not from a direct ſympathy exiſting between it and the head. Still, however, I do not think it unreaſonable to conclude that irrita-

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tion of the other chylopoietic organs may, as well as that of the ſtomach, diſorder the ſource of ſenſation.

In the preceding pages, I have related facts which ſeem to warrant certain concluſions, that I ſhall preſently mention. As the narrative has been broken into many parts, I think it right to point out the inferences, which may be fairly drawn from the facts already ſtated, before I proceed to the further diſcuſſion of the ſubject.

1, Sudden and violent local irritation will produce an equally ſudden and vehement affection of the digeſtive organs.

2, A ſlighter degree of continued local irritation will produce a leſs violent affection; the ordinary ſymptoms of which are recited in page 18.

3, This affection is a diſorder in the actions, and not a diſeaſe in the ſtructure of the affected organs; although it may, when long

continued, induce evident diſeaſed appearances, both which circumſtances are proved by diſſections.

4, A ſimilar diſorder of the digeſtive organs occurs without local irritation, and exiſts as an idiopathic diſeaſe; in which caſe, it is characterized by the ſame ſymptoms.

5, There are ſome varieties in the ſymptoms of this diſorder, both when it is ſympathetic and idiopathic. Theſe are enumerated in page 46.

6, The diſorder probably conſiſts in an affection of all the digeſtive organs in general, though in particular caſes, it may be more manifeſt in ſome of thoſe organs, than in others.

7, That diſorder of the digeſtive organs frequently affects the nervous ſyſtem; producing irritability and various conſequent affections. This is proved by the effects of blows on the belly, in perſons previouſly healthy; and the

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ſame conſequences are often obſerved from whatever cauſe the diſorder originates. At the ſame time weakneſs muſt be produced from imperfect digeſtion; and from the combination of theſe cauſes, *viz.* weakneſs and irritation, I deduce the origin of many local diſeaſes, and the aggravation of all, as will be ſeen in the relation of the caſes.

Nothing in pathology is more generally admitted, than the reciprocal operation of diſorders of the head and of the digeſtive organs; yet the exceptions to this general rule deſerve to be remarked in a comprehenſive examination of the ſubject. Some perſons have great diſorder of the digeſtive organs, without any apparent affection of the nervous ſyſtem; and even diſeaſes of a fatal nature may take place in the former organs, without affecting the latter. Indeed, if we examine any of the moſt evidently ſympathetic affections, we ſhall find the ſame exceptions. An inguinal gland, or the teſtis, frequently inflames from irritation in the urethra; yet great diſeaſe occurs occaſionally in that canal, without

producing theſe apparently ſympathetic conſequences.

We can never be certain that the ſtomach and bowels are the only organs diſordered, nor even that they were primarily affected. General nervous irritation may have preceded the diſorder, or may have been cauſed by it. The hiſtory will generally ſhew, that the derangement of the digeſtive organs is ſecondary. It ariſes from local irritation, and can be produced only through the medium of the ſenſorium. When it is idiopathic, it frequently originates in cauſes which affect the nervous ſyſtem primarily; ſuch as anxiety, too great exertion of mind or body, and impure air. Sedentary habits and irregularities of diet are cauſes which probably act locally on the organs themſelves. Nervous irritability and weakneſs are not perhaps ſuſceptible of a direct cure by medicine; but the diſorders of the digeſtive organs are more corrigible by medical remedies. In practice, theſe require our chief attention; and if the diſorders be corrected, all nervous irritation

tion frequently ceaſes, and health is reſtored. In many inſtances the nervous irritation, which has induced the diſeaſe, is trivial, and would ſoon ceaſe, were it not kept up by the re-action of its ſecondary ſymptoms.

Whether this diſorder of the digeſtive organs be primary or ſecondary, it produces irritation in the brain; and thus may cauſe in many inſtances actual diſeaſe of that organ, as will be ſtated in the concluſion of this paper. But derangement of the digeſtive organs ariſes, in many caſes, from eſtabliſhed nervous diſorder; indeed there is often reaſon to ſuppoſe that it is dependent on, or connected with, actual diſeaſe of the brain. In ſuch caſes, the correction of the diſordered functions cannot be accompliſhed; and even if it were practicable, it would not cure the diſeaſe. It is however highly neceſſary and advantageous to attend to the diſorder of the digeſtive organs, where it is only a ſymptom of nervous diſeaſe. The relief of the former will often mitigate, though it cannot cure the latter.

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I ſhall, in the next place, repreſent the general circumſtances, relative to the health of thoſe perſons who have local diſeaſes, apparently cauſed or maintained by diſorder of the whole ſyſtem. They generally declare that they are in good health, except that they feel diſturbed by their local complaints; yet they are found, on enquiry, to have all thoſe ſymptoms, which characterize a diſordered ſtate of the digeſtive organs. The mind is alſo frequently irritable and deſpondent; anxiety and languor are expreſſed in the countenance. The pulſe is frequent or feeble, and ſlight exerciſe produces conſiderable perſpiration and fatigue. Theſe patients are ſometimes reſtleſs at night, but when they ſleep ſoundly they awaken unrefreſhed, with laſſitude, and ſometimes a ſenſation, as if they were incapable of moving. Slight noiſes generally cauſe them to ſtart, and they are, to uſe their own expreſſion, very nervous. Theſe circumſtances ſeem to me to indicate weakneſs and irritability of the nervous and muſcular ſyſtems; which, in addition to the diſorder of the

the digeſtive organs, that has been deſcribed, are the chief circumſtances obſervable relative to the general health of thoſe patients, whoſe caſes are related in the following part of this paper. By correcting the obvious errors in the ſtate of the digeſtive organs, the local diſeaſe, which had baffled all attempts at cure by local means, has ſpeedily got well, and the patient has acknowledged that ſuch an alteration has taken place in his general health, as excites his aſtoniſhment.

The connexion of local diſeaſe with general diſorder has been often remarked; it has been formerly attributed to impurity of the fluids; a theory which is not irrational. Imperfect digeſtion muſt influence the qualities of the blood, and all parts of the body may be affected from this ſource. But the modern explanation of theſe phænomena, by means of ſympathies, is probably preferable. Afflicting intelligence will deſtroy the appetite and produce a white tongue in a healthy perſon; and a blow on the ſtomach diſorders the head. Theſe phænomena

nomena take place independently of the blood, and can only be explained by admitting that diſturbance of one organ immediately affects another.

The writings of the ancients abound with paſſages, in which diſeaſes are attributed to affections of the abdominal viſcera, and the ſame fact has been noticed by ſeveral of the moderns. The French ſurgeons appear to be very ſolicitous to keep the bowels in a cool and tranquil ſtate; and Deſſault aſcribes the origin of eryſipelas to a bilious cauſe. The German ſurgeons, Richter and Schmucker, attribute many local diſeaſes to gaſtric affections; and in Italy, Scarpa views the ſubject in the ſame light. The Engliſh practitioners ſeem to have been leſs attentive to this claſs of diſorders; inſomuch that Fiſcher, a German, who publiſhed an account of the ſtate of medicine in this country, expreſſes his ſurpriſe that the Engliſh ſhould be ſo little acquainted with gaſtric diſeaſes. I know not exactly what ideas theſe gentlemen may annex to the terms gaſtric and bilious diſorders,

ders, ſince they do not particularly deſcribe them. I have repreſented the ſubject in the foregoing pages, as it has appeared to me on the moſt attentive examination. There are circumſtances which denote irritation of the digeſtive organs to exiſt, and deficiency or depravity of their ſecretions; and the diſorder exiſts in every gradation, between the ſlighteſt and moſt violent affection, without any evident difference in its nature.

The reſult of all the obſervations, which I have been able to make, relative to this ſubject, has induced me to believe that the diſorder of the digeſtive organs, cauſed by the various circumſtances, which have been recited, conſiſts in a weakneſs and irritability of the affected parts, accompanied by a deficiency or depravity of the fluids ſecreted by them, and upon the healthy qualities of which, the right performance of their functions ſeems to depend. The opinion that the diſordered ſtate of the digeſtive organs, which has been deſcribed, conſiſts in a weak and irritable ſtate of them, attended by

a deficiency or vitiated ſtate of their ſecretions, is deduced immediately from the conſideration of the ſymptoms, and confirmed by all the collateral evidence, which we can collect. The duration of the affection, without fatal conſequences, ſhews that it is a diſorder of functions, and not a diſeaſe of ſtructure. Diſſections confirm the opinion. Blows, which excite general irritation of the digeſtive organs, produce alſo the ſymptoms which characterize the like diſorder, when it ariſes from nervous irritation, or is excited by intemperance. I doubt not but every one will, on reflection, conſider the diſorders of the digeſtive organs to be of the firſt importance, and will perceive the propriety of diligently enquiring into their nature that we may know them when they exiſt, and that our attempts to remedy them may be conducted on rational principles. This conſideration will, I truſt, vindicate me in employing ſo much time in an inveſtigation which, perhaps, ſome may conſider as tedious and unprofitable.

It

It is generally admitted, that diſorders of the chylopoietic viſcera will affect the ſource of ſenſation, and conſequently the whole body; but the variety of diſeaſes which may reſult from this cauſe, has not been duly weighed and reflected on.

It may produce in the nervous ſyſtem an abolition of the functions of the brain; or a ſtate of excitation, cauſing delirium, partial nervous inactivity and inſenſibility, or the oppoſite ſtate of irritation and pain. It may produce in the muſcular ſyſtem, weakneſs, tremors, and palſy; or the contrary affections of ſpaſm and convulſions. It may excite fever by diſturbing the actions of the ſanguiferous ſyſtem, and cauſe various local diſeaſes by the nervous irritation, which it produces; and by the weakneſs, which is conſequent on nervous diſorder or imperfect chylification. Or if local diſeaſes occur in a conſtitution deranged in the manner which I have deſcribed, they will become peculiar in their nature and progreſs, and difficult of cure. Affections of all thoſe parts which have a continuity

tinuity of ſurface with the ſtomach; as the throat, mouth, lips, ſkin, eyes, noſe, and ears, may be originally cauſed or aggravated by this complaint. I muſt obſerve, before I proceed to the relation of caſes, that ſuch a diſorder of the digeſtive organs as I have deſcribed exiſted in every inſtance. I do not take upon myſelf to ſay that it was the primary cauſe of the general derangement of the conſtitution, with which the local diſeaſe appeared to be connected; it might have been the conſequence, as indeed has been ſtated in theſe preliminary obſervations.

I ſhall now proceed to mention the plan which I have purſued in the treatment of theſe diſorders, when they have been connected with ſurgical diſeaſes; and the following caſes will demonſtrate with what degree of ſucceſs. I do not feel altogether competent to give full directions, relative to this ſubject; becauſe I have never attended to medical caſes with that degree of obſervation which would lead me properly

to

to appreciate the efficacy of different medicines, when adminiſtered either in their ſimple or compounded forms. The ſubject is ſo important, that the public would be highly indebted to any practitioner, who would point out the varieties of theſe diſeaſes, and the appropriate modes of cure. The method of treatment which I have adopted is ſimple, and founded on the opinions I have formed, of the nature of the diſeaſe, and phyſiological views of the functions of the affected organs. Believing the diſordered parts to be in a ſtate of weakneſs and of irritability, my object has been, to diminiſh the former and allay the latter. Believing alſo that the ſecretions into the ſtomach and bowels, upon the healthy ſtate of which, the due performance of their functions depends, were, in conſequence of ſuch diſorder, either deficient in quantity or depraved in quality; I have endeavoured to excite, by means of medicine, a more copious and healthy ſecretion.

In conformity to theſe views of the ſubject, the patients have been recommended to be particularly

particularly attentive to their diet. The food ſhould be nutritious, and eaſy of digeſtion: ſtrong plain broths, animal food of looſe texture, milk, eggs, and farinaceous vegetables, are the articles which appear moſt adviſeable. But, as cuſtom and inclination have ſo great an effect in regulating the actions of the ſtomach, I have contented myſelf with recommending patients not to eat any thing, which it was probable that they could not digeſt. It ſeems reaſonable to ſuppoſe that, if the food be properly digeſted, it will not irritate the inteſtinal canal; but that, if digeſtion fails, the animal and vegetable matters will undergo chemical changes in their paſſage through the long tract of inteſtines, and thereby maintain a ſtate of irritation in thoſe organs. I have urged patients not to oppreſs the powers of the ſtomach by too great a quantity of food, nor to take a ſecond meal, until time has been allowed for the digeſtion of the firſt. I have alſo cautioned them not to let the ſtomach become irritable by too long abſtinence. I have ordered five grains of powdered rhubarb an hour before dinner, with a view of inviting

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ſecretions into the ſtomach, and of preparing it for the office of digeſtion. This gentle excitation perhaps induces it to expel any reſidue of alimentary matter, and creates a kind of artificial appetite; ſo that perſons habitually ſubject to indigeſtion experience very conſiderable benefit from the practice. Where rhubarb has diſagreed, columbo has been ſubſtituted.

The function of digeſtion will not, however, go on well, even where theſe circumſtances have been attended to, if the ſtomach be deprived of a ſtimulus to which it has been long accuſtomed. Uneaſy ſenſations will be experienced, denoting, if I may ſo expreſs it, a diſcontented ſtate of this organ, and a want of the expected ſtimulus. It is on this account injurious to reſtrain thoſe patients from the uſe of wine who have been in the habit of taking it. A moderate quantity may be allowed after dinner; but ſtrong fermented liquors muſt be injurious at any other period. It is wrong to ſtimulate the ſtomach when it has no taſk to perform.

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A regular diurnal evacuation of the bowels is particularly neceſſary, ſince the detention of the fæces muſt prove irritating to theſe organs. Purging medicines ſometimes relieve unpleaſant ſenſations; but they do not in general produce even this effect; and all active purges ſeem to me to increaſe the diſorder. It is natural to ſuppoſe that ſtrong ſtimuli will aggravate the unhealthy condition of weak and irritable parts.

It is difficult, in many caſes, to correct the diſeaſe by diet or medicine. The bowels are coſtive for a time, and then fits of purging come on. The former ſtate muſt be obviated, in order to prevent the latter. Medicines which excite a healthy action of the bowels in one perſon, are either inert or too active in another. Doſes which would have no effect in a ſtate of health, become purgative in this diſorder; a circumſtance which ſhews that the bowels are irritable. There are ſome rare inſtances of the contrary, in which it is exceedingly difficult to excite the actions and ſecretions of theſe viſcera. In ſome caſes a diet of

a more vegetable and leſs ſtimulating nature, with ſaline aperients, do good. In others, a more generous diet, and aperients of a warmer kind are beneficial. The object which I have had in view, in all caſes, is to excite the periſtaltic action of the bowels, without purging; ſo as to inſure the expulſion of whatever ought to be diſcharged.

In giving purgative medicines I have endeavoured to combine them, ſo as to excite and ſtrengthen at the ſame time. Rhubarb, columbo, and kali vitriolat. have been given together; or an infuſion of gentian with ſenna or tincture of rhubarb. When the infuſion of gentian with ſenna has been given, it has been preſcribed, in the ſubſequent caſes, according to the following formula:

℞. Infus. gentian. comp. ℥ j.
Infus. ſennæ, ℥ ij.
Tinct. cardamom. comp. ℥ j.

Fiat hauſtus, bis quotidiè, vel pro re natâ, ſumendus.

It is ſometimes neceſſary to increaſe the quantity of infuſion of ſenna. I have found in ſome caſes, that the purgative medicines and ſpices diſſolved in ſpirit and water, have anſwered better than any thing elſe, in producing a ſufficient, but not too copious diſcharge from the bowels. Equal parts of compound tincture of rhubarb and ſenna is the formula to which I allude. When irritation in the large inteſtines has been denoted by the mixture of mucus and jelly with the fæces, and ſudden and urgent calls to void them, I have adviſed oily and mucilaginous medicines as aperients; as caſtor oil, mixed with a large proportion of mucilage. My ſole object, however, has been to regulate the ſtate of the bowels; and when they have been regular without medicine, I have rarely recommended any.

At the ſame time, I have not been inattentive to the error in the biliary ſecretion, which exiſts in the greater number of theſe caſes. I have endeavoured to correct this error by the adminiſtration of ſuch ſmall doſes of

of mercury, as do not irritate the bowels, and are not likely to affect the conſtitution, even though perſevered in for a conſiderable time. In this ſtate of the digeſtive organs, calomel, in ſmall quantities, ſometimes proves irritating. I have combined it as in Plummer's pill, and have given one grain every other night. Where this doſe produced uneaſy ſenſations, or acted as an aperient, five grains of the pil. hydrarg. were ſubſtituted in its place; and even this quantity has been diminiſhed in ſome caſes. When it appeared neceſſary, on account of the biliary ſecretion, and when the calomel did not irritate the bowels, I have increaſed the doſe. The relief, which ariſes from the increaſe or correction of the biliary ſecretion, in the majority of theſe caſes, ſhews how much the liver is concerned in cauſing or aggravating the ſymptoms in theſe diſeaſes.

There are numerous and undoubted proofs of the utility of mercury, in correcting and augmenting the biliary ſecretion; but the mode of adminiſtering it has not, perhaps,

been ſufficiently attended to. I have known patients, who have voided nothing but blackiſh ſtools for ſome months, diſcharge fæces of a light yellow colour, denoting a healthy, but deficient ſecretion of bile upon taking ſuch ſmall doſes of mercury. The effect of this change on the conſtitution and ſpirits, has been ſurpriſingly great; though the ſtate of the ſtomach did not appear to be altered. The uſe of mercury by inunction, ſometimes acts beneficially, in correcting the biliary ſecretion; but, if the conſtitution be irritated, and weakened by that medicine, the actions of the liver are diſturbed; and the digeſtive organs in general, become deranged. Mercury in my opinion, acts moſt certainly, and efficaciouſly, when taken into the bowels; and a much ſmaller quantity will ſuffice, when its application is in this manner rendered chiefly local.

Although experience has made me think very highly of the efficacy of ſmall doſes of mercury, in exciting and correcting the biliary ſecretion; yet it ought to be mentioned, that

that in ſome few caſes, this medicine fails to produce its uſual effects, and that the biliary ſecretion becomes healthy without its adminiſtration.

Facts are wanting, to enable us to aſcertain, whether mercury ameliorates and augments the ſecretions of the other digeſtive organs, as it does that of the liver. The ſtomach frequently appears worſe during its employment, whilſt the ſtools are conſiderably better; I have, in ſuch caſes, diſcontinued the medicine, and returned to it again if the ſtate of the liver made it neceſſary. When benefit is obtained from a ſmall quantity of medicine, we naturally expect an increaſed advantage from an augmented doſe; this is ſo natural an error, that an admonition againſt it appears neceſſary. I have obſerved in ſome inſtances, where ſmall doſes of mercury have unexpectedly affected the mouth, that conſiderable benefit ſeemed to ariſe from this circumſtance. Yet it is wrong, in general, to augment the doſe of the medicine, ſo as to create even local irritation in the bowels

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by it. In the majority of caſes the diſorder has exiſted for a long time, and has become habitual; therefore it is not likely to get well ſuddenly. For this reaſon, we ſhould adapt our treatment to the more rational expectation of effecting a gradual recovery than a ſudden cure. The moſt judicious treatment will not remedy the diſeaſe, if the exciting cauſes continue to operate; ſuch as improprieties of diet, agitation of mind, ſedentary habits, or impure air.

The following caſes will afford ſufficient teſtimony of the efficacy of ſuch ſimple treatment, as I have recommended. In ſome inveterate caſes, apparently depending on eſtabliſhed nervous diſorder, it has been ineffectual. Under ſuch circumſtances, the nervous affection appears to require the principal attention.

When the ſtate of the health required it, or the diſeaſe did not yield to the treatment, which I have deſcribed, I have referred the caſe to the phyſician; under whoſe direction, benefit has been obtained by medicines of more

more activity than thoſe which I had ventured to recommend, conjoined with tonics, and thoſe medicines which are uſually termed nervous.

In inveſtigating the treatment of theſe diſorders, it is neceſſary to aſcertain, not only what medicine is beneficial, but alſo what change it produces in the circumſtances of the diſorder. The adminiſtration of a medicine may in one caſe be ſucceeded by a diſcharge of bile, and a ſtriking relief from long-continued and diſtreſsful feelings: yet the ſame medicine may be given in many other inſtances without the ſame conſequence. Was the change then in this inſtance accidental? or muſt it be attributed to ſome unnoticed peculiarity in the diſeaſe or conſtitution?

Bark and ſteel are not uncommonly given in theſe diſeaſes: they ought, I think, to be adminiſtered in ſmall doſes, and never when the tongue is dry; as they ſeem to ſuppreſs thoſe ſecretions, which in many caſes are already deficient; and the increaſe of which would

would tend to relieve irritation in the affected organs. I mention this opinion, however, rather to account to the reader for theſe medicines not having been preſcribed in the ſubſequent caſes, than from any other motive; as I do not feel perfectly competent to decide upon their degree or kind of utility.

Vegetable diet-drinks appear to me very uſeful in tranquillizing and correcting diſorders of the ſtomach and bowels, for this is the manner in which they ſeem to be efficacious in the cure of local diſeaſes. The vegetables preſcribed in the different formulæ are ſo diſſimilar, that we can ſcarcely ſuppoſe that they act ſpecifically upon the local diſeaſe. Even Sweet-wort has obtained conſiderable celebrity. When diet-drinks fail to correct the diſorders of the digeſtive organs, they alſo fail to produce any amendment on local diſeaſes. Such obſervations have induced me to believe that they have the utility, which I have aſcribed to them, of tranquillizing and correcting diſorders of the ſtomach and bowels. It is allowable to form an opinion from ſuch

obſervations,

obſervations, though I am ſenſible of their invalidity as arguments to prove its truth.

Whenever circumſtances would permit, I have recommended the patients to take as much exerciſe as they could, ſhort of producing fatigue; to live much in the open air; and, if poſſible, not to ſuffer their minds to be agitated by anxiety, or fatigued by exertion. When the diſorders, which have been the ſubject of this paper, have been long continued, they do not admit of a ſpeedy cure; hence attention to diet, air, exerciſe, and mental tranquillity, are more decidedly beneficial than medicines. Surgeons in London meet with frequent and convincing inſtances of the efficacy of pure air. Patients under the irritation of a local diſeaſe, who ſcarcely eat or ſleep in town, recover their appetite, digeſtion, and ſleep ſo ſuddenly on their removal into the country, as to leave no room for doubting, that the change of air has produced this beneficial alteration in their health. The whole of the plan of treatment which is here recommended is ſo ſimple, and apparently ſo inefficient,

inefficient, that its power might reaſonably be doubted, did not facts atteſt its utility. I ſhould not have thought it right to have thus related it in detail, but for the purpoſe of avoiding repetition in the recital of the caſes which are to follow; and alſo becauſe it ſeemed right to ſtate as explicitly as poſſible to the younger part of the profeſſion, what are the curative intentions in diſorders of this nature *.

* After I had written the above account of the treatment, which I had found the moſt ſucceſsful in the correction of diſordered ſtates of the digeſtive organs, I was much gratified by the peruſal of Doctor Hamilton's publication on the Effects of Purgative Medicines. I think there is a great coincidence in the mode of treatment which I have deſcribed, and that which is ſanctioned by his more extenſive experience. He preſcribes purgative medicines to act as eccoprotics, to excite but not to ſtimulate the bowels; and he combines with them generally unirritating doſes of mercury.

CASES.

CASES.

Section I.

Long before my attention was excited to diſorders of the digeſtive organs, I had remarked that there was a paralytic affection of the lower extremities, reſembling that which is produced by a diſorder of the medulla ſpinalis, in conſequence of diſeaſe of the bodies of the vertebræ. This paralytic affection alſo appeared to me to vary with the ſtate of the patient's health.

Theſe obſervations led me to propoſe a method of treatment, which proved ſucceſsful in the caſes of two young ladies, who were affected in this manner. The iſſues, which had been ineffectually kept open in the back, were healed; and the ſtate of the health

health in general was amended by attention to diet and medicine, by exercise, and country air. The use of the limbs returned in proportion as the health became established. Such were the observations which I had made relative to this subject, when I met with the following cases.

CASE.

A young lady, whose stomach and bowels were disordered in the manner already described, became gradually affected with weakness in the lower extremities, and pain in the loins. The pain became at length very severe, and was aggravated in a manner almost insupportable by the agitation of a carriage. This lady could scarcely walk, and gave a description of the state of her limbs, so exactly resembling that which is sometimes consequent to disease of the vertebræ, that I thought it right to examine the spine. I struck with my finger the spinous process of each lumbar vertebra, and upon touching one in particular, the patient complained of great pain; but

pressure

preſſure on the contiguous vertebræ alſo cauſed much uneaſineſs. Under theſe circumſtances I placed a bliſter on each ſide of the ſpine, and kept up a diſcharge from the ſurface by dreſſing it with ſavine cerate. Theſe means, with reſt, relieved her ſufferings; but, as her health declined, ſhe went into the country, where ſhe ſoon became much better. The bliſters were now ſuffered to heal, and ſhe ſhortly afterwards had recovered ſo much, as to take long rides on a rough-going horſe. She returned from the country in good health, and was both muſcular and fat. About a year afterwards ſhe was ſo ill, in the ſame way, that ſhe wiſhed to have iſſues made in the back: but I would not conſent to this, from knowing that the bone could not be diſeaſed. Of this return of pain in the back, and weakneſs in the lower extremities, ſhe again got well, upon amendment of her health in general. Since that period, now five years ago, ſhe has been, ſometimes, very well, at others, pale and emaciated; and theſe changes have correſponded with the natural or deranged ſtate of her bowels.

CASE.

CASE.

I was conſulted on the caſe of a young lady, who had been bliſtered ſeverely for a pain at the bottom of her back, which was chiefly felt at the junction of the ilium and ſacrum. It was ſuppoſed, that diſeaſe had taken place in the bone from ſome injury, and had affected the ſacral nerves: for ſhe could not ſtand without ſupport, ſo great was the weakneſs in the front of the thighs. There was no projection of the vertebræ. If the ſacral nerves had been affected, the leg ought to have ſuffered the greateſt ſhare of pain and weakneſs; but that was not the caſe. She had no appetite; her tongue was greatly furred; her bowels coſtive; and pulſe generally 110. I ſtrongly objected to making iſſues in this caſe; but as the patients' ſufferings increaſed, it was done. She went into the country, and died in four or five months. The bone was found, upon examination, to be perfectly healthy; but the meſenteric glands and lungs were diſeaſed, and it was concluded that ſhe died of con-

ſumption.

ſumption. I could not learn the ſtate of the liver, nor do I know whether its appearances were particularly attended to.

CASE.

A young lady had been confined about ſix months to her chamber, on account of pain in the loins, and weakneſs of the lower extremities, which prevented her from ſtanding or walking. The weakneſs of her limbs had been gradually increaſing for a year and a half, before it became ſo bad as to make her incapable of moving about. Iſſues had been kept open, during that time, on each ſide of the ſpine; but, as the patient got no better, my opinion was aſked, reſpecting the ſeat of the diſeaſe of the bone: for it was concluded, that the iſſues had only failed from not having been made in the right place. I found, upon inquiry, that the chief ſeat of her pain was in the poſterior edge of the liver. Indeed, that viſcus was enlarged, so as to be felt in the epigaſtric region, and ſo tender as to cauſe much

much pain on being compreſſed, at any part, along the cartilages of the ribs. Her tongue was furred; her appetite deficient; digeſtion bad; bowels coſtive; and ſtools black, or elſe untinged with bile. I had no heſitation in adviſing, that the iſſues ſhould be diſcontinued; and that attention ſhould be chiefly directed to rectify the diſorder of the chylopoietic viſcera. Mild mercurials and aperients were given, by which, with other means, ſhe got materially better in health, and was able to walk about as well as ever. The gentleman who attended this patient, met me accidentally, two months afterwards, and informed me that ſhe was quite well. I ſaid, that as her diſeaſe had been a long time in forming, it could hardly be expected that ſhe ſhould recover ſo ſuddenly. He conſidered this expreſſion as implying ſome doubt of his accuracy, and, therefore, ſent the patient to me in the morning. She came from Lambeth, in a hackney coach, and looked very well: ſhe obſerved, that long before her confinement, ſhe could not have borne the agitation of a carriage; but that now, ſhe did not feel it.

I have

I have been informed, by ſeveral intelligent ſtudents, that ſimilar caſes have occurred in the hoſpital: as I was not a witneſs of theſe, I ſhall not relate them. I ſhall, however, mention one, which I ſaw, and ſuperintended myſelf; although it is, in ſome meaſure, imperfect, as the patient quitted the hoſpital ſuddenly, without our knowing where he went to.

CASE.

Thomas Crighton, aged twenty-three, was admitted into St. Bartholomew's Hoſpital, on account of a palſy of his limbs. About a year before, while the uſe of his limbs was yet unimpaired, he was attacked repeatedly with violent pain in his bowels; uniformly preceded by coſtiveneſs, and, generally, terminated by a copious diſcharge of looſe, fetid, black ſtools. The relief afforded by the diarrhœa was ſpeedy and uniform. In the courſe of ſix months his lower extremities became affected with occaſional twitchings, and he found that he could not regulate their motions in walking: this increaſed to ſuch a

degree as to make him incapable of taking any exercise. He had, at the commencement of his illness, a confusion of vision; and a constant and violent pain in the head. The former symptom increased so much, that he could discern no object distinctly; a candle, for instance, although held near him, appeared as large as the moon. The sensation of his lower extremities continued perfect; but the actions of the bladder were no longer under the controul of the will; the urine sometimes flowing involuntarily; and, at others, being retained for some hours, with considerable pain. He, afterwards, began to lose the use of his upper extremities: the left hand and arm were more affected than the right; but there was no difference in the affection of the leg of the same side. His speech, also, became much impaired; he hesitated and faltered considerably, and the tones of his voice were irregular, so that, at length, he could scarcely make himself understood. At the time of his admission into the hospital, there was an entire loss of voluntary motion in the lower extremities, and a great diminution in

that

that of the upper. The bowels were deranged; there was conſtant head-ache; the ſpeech was very indiſtinct; and viſion ſo imperfect, that he could not read the largeſt print. An iſſue was made in the neck, and ſome medicines were preſcribed, under the direction of the phyſician. As the treatment did not prove beneficial, I was deſired to examine the ſpine, and found ſuch a curvature and projection of the ſpinous proceſſes of the upper lumbar and lower dorſal vertebræ, that, I thought, the bodies of thoſe bones muſt be diſeaſed. I was, therefore, inclined to attribute the paralyſis of the lower extremities to this diſeaſe of the ſpine; and, conſequently, directed, that iſſues ſhould be made on each ſide of the projecting vertebræ. As this ſuppoſition would not account for the paralytic affection of the parts above, and as the bowels were deranged, I ordered two grains of calomel with eight of rhubarb, to be taken twice a week, and ſome infuſion of gentian with ſenna, occaſionally. After uſing theſe medicines, for about three weeks, his bowels became regular, the biliary ſecretion

healthy, and his appetite good. He could move his hands and arms nearly as well as ever; and his eye-ſight was ſo much improved that he could read a news-paper; indeed, it was nearly well. The functions of the bladder were completely reſtored *; his ſpeech became articulate; and, his general health, in every reſpect, much improved. He remained in the hoſpital about two months, but with very little amendment in the ſtate of the lower extremities, when his friends ſuddenly removed him, on account of ſome diſagreement with the nurſes, and I was unable to learn whither they had conveyed him.

The hiſtory of the preceding caſe was taken by Mr. Cruttwell, who had been for ſeveral years a moſt induſtrious ſtudent at the hoſpital, and whoſe accurate obſervation and extenſive information induce me to place entire confidence in any ſtatement of a caſe which I

* I have ſeen ſeveral caſes which induce me to believe that the weakneſs of the ſphincter veſicæ, which occaſions young perſons to void their urine during ſleep, very frequently ariſes from the ſame cauſe.

receive

receive from him. To that gentleman I am, alſo, indebted for the following particulars relating to a patient, who died ſome little time ago in the hoſpital, and whoſe body was examined. The diſſection ſerves ſtill further to elucidate my preſent ſubject.

CASE.

Elizabeth Griffin, twenty years of age, was admitted into St. Bartholomew's hoſpital in Auguſt, 1805, on account of an inability to move her lower limbs; which was ſuppoſed to originate from a diſeaſe of the ſpine. On examination, however, there were no appearances, which indicated caries of the vertebræ. Her voice was, at times, conſiderably affected: and ſhe was ſubject to occaſional attacks reſembling, in ſome degree, epileptic paroxyſms. The affection of the limbs was liable to conſiderable variations. At times, as ſhe aſſured me, ſhe could walk acroſs the ward with very little difficulty; at others, ſhe could not even ſtand without aſſiſtance. Her tongue was extremely, and, I believe, conſtantly white;

her

her pulſe natural. Her bowels were, generally, coſtive, and it was neceſſary to employ active medicines in order to procure ſtools, which were always of a dark colour. A ſlight temporary diarrhœa ſometimes happened, and ſhe invariably remarked, that the eaſe or difficulty with which ſhe could walk, and the pain in her head with which ſhe was troubled, were in exact conformity to the ſtate of the bowels, all the ſymptoms being relieved by the diarrhœa, and returning as the bowels became again coſtive. There was an appearance of irritability and languor in the eye, which I have before obſerved in theſe caſes, and the pupils were generally much dilated. After the patient had continued in the hoſpital about ſeven weeks, ſhe was attacked with fever, and died. To this brief account of the ſymptoms, I now ſubjoin the diſſection.

No diſeaſed appearances were obſerved in the brain, though it was examined with the moſt particular attention: neither was there any diſeaſe of the vertebræ. No diſeaſe, in ſhort, was observed except in the abdominal viſcera.

The

The chief morbid appearance, in them, conſiſted in an ulcerated ſtate of the villous coat of the ilium near to its termination in the cæcum. The ulcers were numerous, and ſituated where the mucous glands are chiefly found. The internal coat of the large inteſtines, alſo, appeared inflamed.

The liver was healthy in its ſtructure. In the gall bladder about one ounce and a half of a light green ſerous fluid was found, which had not in the leaſt degree the ſoapy, or mucaginous feel of bile.

Caſes, like thoſe which have been related, are not, if I may judge from my own experience, at all uncommon. They ſufficiently prove, in my opinion, that local nervous diſorders and muſcular debility may ariſe from a general diſorder of the health, in which the digeſtive organs are generally much affected. This diſorder, as has been ſtated in the preliminary obſervations, may, ſometimes, be the cauſe, and ſometimes the effect, of the nervous affection. In either caſe, however, its correction

rection is of high importance in the medical treatment of the diſeaſe. In the caſe, beginning at page 79, as well as in that which immediately follows, diſorder of the digeſtive organs muſt, I think, be allowed to be the cauſe of the nervous affection, from the ſudden and complete ceſſation of the latter, when the cure of the former was accompliſhed. Deciſive inſtances like theſe are particularly valuable; they ſhew what great nervous diſorder may be produced by that of the digeſtive organs, and conſequently how much the latter diſorder is likely to aggravate the former, when it occurs even ſecondarily as its effect. I have ſeen a conſiderable number of ſuch caſes, which I cannot relate with preciſion, becauſe I had not ſufficient opportunities of obſerving the patients, to enable me to note the progreſs of the diſeaſe with accuracy.

Of theſe I can only obſerve, in general terms, that I have ſeen ſeveral inſtances of pain, imbecillity, and waſting of the muſcles in one of the lower extremities, which were conſidered as the effect of diſeaſe about the hip

hip joint; yet the event proved that there was no organic diſeaſe of that part. The diſeaſe was connected with that ſtate of conſtitution that I have deſcribed, and was amended as the health in general improved. I have alſo ſeen ſeveral inſtances of waſting of the muſcles of one of the upper extremities in children; ſo much indeed were the muſcles ſhrunk, that the bones and joints could be as diſtinctly examined as in a ſkeleton. The local affection in theſe caſes came on ſuddenly. I lately ſaw a little boy, who had had this kind of affection of his left arm ſeveral years ago, and on whoſe caſe I was at that time conſulted. The bowels had been violently diſordered prior to the paralytic affection, and were, at the time I ſaw him, in an extremely unhealthy ſtate. I recommended that the chief attention ſhould be paid to correct the errors of theſe organs, which was in ſome degree accompliſhed, and that the arm ſhould be ſupported by a ſling. The arm gradually recovered, and though it is not at preſent quite ſo large and ſtrong as the other, yet the difference is ſo ſlight,

that

that it would not attract the attention of a common obſerver. About ſix months ago I ſaw a little boy very ſimilarly circumſtanced, and in his caſe, the arm quickly recovered its powers of motion, as the ſtate of the digeſtive organs became healthy.

I have alſo ſeen caſes in children, in whom, after ſome general diſorder of the health, accompanied by derangement of the ſtomach and bowels, a muſcular affection of the extremities has taken place, like that which produces the varus and valgus; I mean a predominance of the actions of ſome muſcles over others, producing diſtortion of the limb. I have ſeen this happen ſometimes in one, ſometimes in both the lower extremities. I have alſo ſeen the arm ſimilarly affected.

That the local ſymptoms in thoſe caſes, as well as in thoſe which have been more fully detailed, ariſe from a nervous affection of the brain, and not from any cauſe acting locally on the nerves of the affected part, will, I believe, on due conſideration be granted.

I ſuſpect

I ſuſpect however that ſome perſons may heſitate to admit ſuch an opinion, from the belief that diſorder of the brain muſt operate generally, and not partially, on the nervous ſyſtem. Perhaps the contemplation of the conſequences of ſlight apoplectic effuſions in the brain, may aſſiſt us in forming juſt notions on this ſubject. Such slight effuſions of blood, occurring in various parts of the brain, have been known to paralyze one leg or one arm, or the muſcles of the tongue, or of one half of the face, without affecting the reſt of the nervous or muſcular ſyſtem.

Another opinion which I wiſh to be conſidered is, whether, when there is conſiderable and continued paralyſis, there muſt neceſſarily exiſt ſome preſſure or organic diſeaſe in the brain. That this exiſts in many inſtances is undoubted; but the number of caſes in which the paralytic affection is merely nervous, and independent of viſible diſeaſe, is in my opinion very conſiderable. The inſtances which have been related warrant this concluſion,

concluſion, and ſhew ſuch caſes to be more frequent than is, I believe, generally ſuppoſed. When there is organic diſeaſe of the brain, the caſe ſeems to be very hopeleſs; and probably no conſiderable alleviation of the ſymptoms will take place, by that attention to the ſtate of the digeſtive organs which I have recommended. In dubious caſes, and ſuch, on the firſt examinatian of them, the majority of theſe occurrences will probably be, it ſeems right to try the effect of correcting diſorder of the digeſtive organs, with a view to alleviate nervous irritation, before we proceed to thoſe ſeverer methods, which the belief of the exiſtence of organic or vaſcular diſeaſe in the brain would induce us to inſtitute. For if blood-letting and counter irritation be employed, in order to diminiſh vaſcular action; or if mercury be employed to ſome extent in order to induce the abſorption of depoſited ſubſtance; theſe meaſures muſt aggravate that diſorder of the general health, upon which, in many inſtances, the nervous affection depends.

My

My object, in the recital of the foregoing caſes, is to point out a cauſe of local paralyſis, which from its locality would, I ſuſpect, be generally attributed to ſome local diſorder of the nerves of the affected part. Such an opinion of the nature of the complaint would conſequently lead to an erroneous treatment. If my opinion of the nature of theſe caſes be correct, they can only be ſucceſsfully treated by means which operate upon the conſtitution in general. I have particularly recommended that our efforts ſhould be directed to correct any errors that may exiſt in the functions of the primæ viæ, for reaſons that have been ſtated in the preliminary obſervations. Of the efficacy of ſuch endeavours I have ſeen many more inſtances than I have brought forward; indeed the propriety of ſuch attempts ſeems ſo obvious, that I doubt not but they will be made, and the effect of them will, by that means, be generally demonſtrated. It is right however to mention, that in ſome caſes to which I have attended, I have been foiled in my endeavours to correct, by the ſimple meaſures which I have related

related in the introductory remarks, the diſorders of the digeſtive organs; and in theſe I thought that the diſorder of the digeſtive organs depended on ſome eſtabliſhed diſeaſe in the brain.

In other caſes, when the functions of the digeſtive organs had been partially corrected, the nervous and muſcular affections were mitigated, but not cured. Indeed ſufficient time has not yet elapſed to enable me to form a probable opinion, as to the event of ſome caſes, to which I allude. I have alſo met with one inſtance, in which the bowels became moderately correct in their functions, without any evident amendment in the ſtate of the limbs; and I have known two inſtances of perſons, who were ſuddenly ſeized with paralyſis of the lower extremities, apparently dependent on general nervous diſorder, in which the digeſtive organs ſcarcely ſeemed affected.

In ſeveral of the caſes which I have related, there were nervous pains in the affected limbs.

That

That local nervous pains may depend on general nervous diſorder ſeems to me very probable; at leaſt, I can take upon me to affirm, that I have known nervous pains cured by correcting the diſorders, which in theſe caſes exiſted in the digeſtive organs. In the caſes alſo of tic douloureux which have fallen under my obſervation, there has been great diſorder of the digeſtive organs; and I have known caſes reſembling thoſe of tic douloureux cured by correcting the unhealthy ſtate of thoſe organs.

I wiſh finally to excite the attention of Surgeons to the ſtate of the bowels in tetanus. The occurrence of this diſorder occaſionally, when the wound which produced it is healing, ſeems to indicate that the effects, which have been produced by its irritation, continue. It has been, I think, fully ſhewn, that local irritation may diſorder the digeſtive organs; which diſorder continuing, and aggravating the affection of the ſenſorium, may poſſibly lead to the production of tetanus, at a time when the wound is no longer irritable. In four

four caſes of tetanus, in which I had an opportunity of inquiring into the ſtate of the bowels, the evacuations from them were not like fæces. I wiſh to propoſe, in inveſtigating the cauſe of tetanus, as a queſtion, what is the ſtate of the bowels between the infliction of the injury and the occurrence of that dreadful malady * ?

* Such caſes as I have related, with others that it would be foreign to my preſent purpoſe to mention, have impreſſed the opinion on my mind, that diſorders of the digeſtive organs may originally cauſe, or may ſecondarily aggravate, a nervous diſorder; and produce, as has been "mentioned, in the nervous ſyſtem, an abolition of the functions of the brain; or a ſtate of excitation cauſing delirium, partial nervous inactivity, and inſenſibility; or the oppoſite ſtate of irritation and pain: in the muſcular ſyſtem, weakneſs, tremors, and palſy; or the contrary affections of ſpaſms and convulſions." Could theſe circumſtances be proved, it would be ſcarcely neceſſary to add, that thoſe painful affections of parts, to which perhaps ſome pre-diſpoſition exiſts, may be excited in a ſimilar manner; ſuch as gout and rheumatiſm. Indeed rheumatic pains are very uſually concomitant upon that ſtate of conſtitution, which exiſted in the patients, whoſe caſes I am relating.

CASES.

CASES.

Section II.

I ſhall next ſpeak of thoſe caſes, in which local diſorders of the head, produced by blows, are kept up and aggravated by affections of the digeſtive organs. After what has been obſerved reſpecting the reciprocal influence of diſeaſes of the brain, and of the chylopoietic viſcera, it will readily be admitted, that an injury of the former may diſturb the functions of the latter. Thus, concuſſion of the brain occaſions vomiting as one of its immediate conſequences, and will alſo be found to produce almoſt conſtantly, at a more remote period, that diſturbance of the digeſtive organs, which I have deſcribed in this paper. If the diſturbance be only moderate in degree, but continued, it will often re-act upon the head,

ſo as to occaſion an irritable ſtate of the injured parts, and impede their recovery.

In many caſes of blows upon the head, a ſlow inflammatory affection continues in the parts chiefly injured, and ultimately produces deſtructive diſeaſes. The bone ſometimes becomes diſeaſed, or an exoſtoſis grows from its internal table; the dura mater becomes thickened, or matter ſlowly collects on its ſurface. Such local diſorders produce others of a more general nature, and deſtroy the patient. Theſe occurrences are however, in my opinion, rare in compariſon with the caſes firſt deſcribed; in which a painful ſtate of the injured parts is kept up by means of diſorder exiſting in the digeſtive organs. The neceſſity for an accurate diſcrimination between theſe diſorders, muſt ſtrike us on the moſt ſuperficial view of the ſubject; for the lowering treatment which is neceſſary in the firſt and rarer caſe would be detrimental in the ſecond and more frequent. By attending to the ſtate of the digeſtive organs in theſe dubious caſes, we may be enabled to form a probable opi-

nion

nion of the nature of the local complaint; for if there is nothing wrong in the general health to excite or maintain it, we may reaſonably conclude that it is merely local; on the other hand, the inefficacy of evacuations in curing the local diſeaſe would naturally ſuggeſt the opinion, that it proceeds from irritation, and is dependent on a diſorder of the health in general. It ſhould be further obſerved, that when the local diſeaſe is of an inflammatory nature, and likely to induce morbid alterations in the ſtructure of the affected parts, ſtill it may be maintained and aggravated by diſorder of the digeſtive organs. I have very frequently ſeen patients ſuffer ſo ſeverely as to warrant a ſuſpicion, that local diſeaſe of the moſt formidable nature exiſted; in theſe the uſual methods of treatment were ineffectual; and they recovered ſuddenly or ſlowly, in proportion as the ſtate of the digeſtive organs was corrected. I ſhall relate ſome examples of the diſeaſe under conſideration, which will enable the reader to identify the caſe, when it occurs in practice.

CASE.

A young gentleman, about ten years of age, fell out of a window, ſix feet high, and ſtruck the back part of his head againſt ſome ſtones. He was ſtunned by the blow, but perfectly recovered from the effects of the accident by bleeding, purging, and a low diet. He caught the ſcarlet-fever about ſix weeks afterwards; and recovered from that alſo. But, whilſt he was convaleſcent, the pains returned in that part of the head which had been ſtruck, with ſo much violence as to induce the belief that ſome ſerious local miſchief would enſue. After they had continued without abatement for a few days, I was deſired to ſee him. He was lying in bed, and could ſcarcely be prevailed on to lift his head from the pillow. The integuments of the occiput were ſo tender, that he would hardly allow me to examine the part; I aſcertained, however, that there was no fluid under the ſcalp, nor any inequality in the bone. He dozed a good deal, and lay in a comatoſe

comatoſe ſtate, but was occaſionally reſtleſs. His pulſe was very frequent, his ſkin hot and dry, and his tongue covered with a thick yellow fur. He breathed almoſt without moving the diaphragm, and complained much if the epigaſtric region was compreſſed. He loathed food; his bowels were coſtive, and his ſtools of a blackiſh colour. He was ordered to take ſmall doſes of calomel at night, and draughts with rhubarb and kali vitriolatum in the morning. The tongue ſoon became clean, and the ſtools natural; his appetite and ſpirits returned, and he no longer complained of any uneaſineſs in the head.

This caſe preſents us with a ſtriking example of what I believe to be a common occurrence; I mean, a diſordered ſtate of the digeſtive organs taking place ſubſequent to a conſiderable febrile affection. Indeed, when we reflect in how weak and irritable a ſtate the brain muſt be left upon the ſubſidence of ſuch a diſorder, and how much the chylopoietic viſcera muſt ſuffer from the impaired and diſordered energy of the brain, we might naturally

naturally expect ſuch a derangement of the functions of the digeſtive organs to enſue. When ſuch diſorder happens in this manner, it frequently produces many local diſeaſes, to which the conſtitution may perhaps be predispoſed; a circumſtance I ſhall ſpeak of in a future part of this paper. In the preſent caſe, it brought on a painful ſtate of parts recently injured, with a conſiderable degree of fever. That the morbid ſtate of the ſtomach and bowels was the cauſe of both is fairly to be inferred from their ceaſing ſo immediately, when the diſorder of the digeſtive organs was corrected. A caſe of this kind, preſenting an example of ſudden recovery, is particularly valuable, becauſe it clearly demonſtrates the cauſe and the effect in ſuch diſeaſes. The cauſe can indeed be ſeldom ſo ſuddenly removed; and the gradual ceſſation of it under any plan of treatment leaves room for a variety of conjectures, as to the mode of cure or of recovery from thoſe diſorders, which I have conſidered as effects. I could relate many caſes of ſimilar but leſs ſevere ſymptoms produced by the ſame cauſe, which gradually got

got well, in proportion as the diſorders of the digeſtive organs were corrected. As it does not, however, appear to me neceſſary to accumulate inſtances to prove ſo obvious a fact, I ſhall content myſelf with adducing two more caſes, to exhibit ſuch effects in different points of view.

CASE.

A lady fell down in froſty weather, in conſequence of her feet ſlipping from under her, and the occiput ſtruck againſt a ſmooth ſtone pavement. She was ſtunned by the fall, but ſoon recovered; nor had ſhe for ſome weeks the ſevere ſymptoms, which appeared in the ſequel. This circumſtance ſhews that there was nothing produced by the blow that neceſſarily cauſed the ſubſequent ſymptoms; which muſt therefore be attributed to inflammation or irritation taking place afterwards. After ſome weeks had elapſed from the time of the accident, the parts which had been ſtruck became extremely painful; and the

the pain extended forwards over the ſcalp to the right eye, the ſight of which became imperfect. The integuments upon which the blow had been received were extremely tender, and the patient became faint when they were examined even ſlightly. Theſe circumſtances naturally induced a belief that ſome diſeaſe was taking place; and bleeding and purging were employed to prevent its progreſs. The ſymptoms were mitigated for a time by theſe means, but they quickly returned with as much ſeverity as before. After three months the patient came to London, fully perſuaded that nothing but an operation would be of permanent benefit. When I firſt ſaw her, ſhe tottered in moving from one chair to another, and replied to queſtions with heſitation and effort. Her eye-ſight was ſo much affected, that ſhe could not read; and ſhe entertained an apprehenſion that ſhe ſhould loſe her ſenſes. Her tongue was but ſlightly furred; her bowels were habitually coſtive, and the ſtools dark coloured. It was evident where the injury had been received; for the aponeuroſis had been ſeparated from the

the pericranium by an effuſion of blood; and, though this blood had been abſorbed, the detachment of the ſcalp was diſtinguiſhable by the touch. No inequality was perceptible in the ſurface of the bone. When I mentioned my ſuſpicion that theſe ſymptoms were rather the effect of irritability of conſtitution, dependent on the ſtate of the ſtomach and bowels, than of local miſchief, ſhe gave not the leaſt credit to the opinion; but ſaid ſhe was perſuaded that the bone was ſtarred, and that three fiſſures extended in different directions. I ordered her to take five grains of the pilul. hydrarg. every ſecond night, and a draught twice a day, containing one ounce of the compound infuſion of gentian, two drams of the infuſion of ſenna, and one dram of the compound tincture of cardamoms. Theſe medicines produced a conſiderable purgative effect. On the ſecond day there was but little pain in the head; the patient walked about the room very ſteadily, and had read a newſpaper in the morning. When I aſked her opinion of this ſurpriſing alteration, ſhe imputed it to the evacuations which had taken place; but ſhe was ſtill perſuaded that the

bone

bone was injured, and ſtill apprehenſive that, without ſome operation, ſhe ſhould ultimately loſe her ſenſes. The medicines were continued in ſuch quantity as to procure only one alvine evacuation daily. A fortnight elapſed under this plan of treatment, during which the ſtools became nearly of a natural colour, and the patient's health was conſiderably amended. There were times when no uneaſineſs was felt in the head; and, during ſome nights, the pain was ſo trivial as to give but little interruption to her ſleep. It was, however, occaſionally diſturbed by pains, which were, in her opinion, as intenſe as at any former period of the complaint. Her pulſe was good, and her muſcular ſtrength greatly improved. The occurrence of the pain in paroxyſms ſtrongly impreſſed me with the belief that it was nervous, rather than depending upon local diſeaſe. Under theſe circumſtances all ideas of an operation were diſmiſſed from my mind, but it was far otherwiſe with reſpect to the patient. Being obliged to return into the country, ſhe conſidered the poſſibility of a relapſe with horror; and was ſo convinced that the bone had been injured, that

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ſhe earneſtly requeſted it might be examined, were it merely to aſcertain what was the fact. I ſaw no objection to this examination, but thought, on the contrary, that advantage might poſſibly ariſe from an inciſion, which would looſen the tenſion of the ſcalp, and produce a diſcharge that might relieve the irritation of the part. I accordingly made an inciſion of a ſemicircular form, extending farther back than the part which had been ſtruck, and turned up a portion of the ſcalp, ſo as to ſee the bone, covered by its pericranium, to the extent of a crown piece. The bone was uninjured, and, together with the pericranium, appeared perfectly natural. The ſcalp being replaced, the wound was dreſſed ſuperficially, without any attempt to favour the union of the parts. If they united under theſe circumſtances, there would be an additional reaſon for believing, that neither the bone nor the ſubjacent parts were diſeaſed. The pain was as ſevere for the two firſt days and nights after this examination as it had been at any former period; it abated when the wound began to diſcharge, and had entirely

tirely ceaſed on the fifth day. This ſtate of tranquillity continued as long as the patient remained in town, which was about three weeks after the diviſion of the ſcalp. The wound at that time had nearly healed. She has ſince had occaſional returns of pain in the head when her general health has been diſordered, but never to that degree as to induce a ſuſpicion that any local vaſcular diſeaſe exiſted.

To exhibit the effects of the re-action of diſorders of the digeſtive organs upon thoſe of the head in another point of view, I ſubjoin the following caſe.

CASE.

May 29, 1805, a labouring man, aged forty-five, fell from a conſiderable height upon his head, and was immediately brought to St. Bartholomew's Hoſpital. No fracture of the ſkull could be diſcerned: and the patient ſeemed to labour under the effects of violent concuſſion of the brain. By vene-

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ſection and other antiphlogiſtic means, he ſoon recovered his ſenſes. Every thing went on very favourably for three days, when he was attacked with ſhivering, nauſea, pain in the head, impatience of light, and other ſymptoms, which uſually are conſidered as denoting inflammation of the membranes of the brain. He was conſequently bled; and had a bliſter applied on the head. He was ſuddenly ſeized in the evening with a more excruciating pain in the head, which, after laſting half an hour, was ſucceeded by convulſions, ſo violent that three men could ſcarcely hold him. When the fit abated, he expreſſed himſelf much relieved, and ſaid that he was eaſier than before its acceſſion. Some calomel and rhubarb were given to obviate a coſtive ſtate of his bowels. On the next morning (June 2nd.) he had a return of the pain and convulſions; and the ſymptoms were ſo violent, that he was bled four times in the courſe of the day. This treatment, however, had no effect in diminiſhing the pain and other ſymptoms, and another fit of convulſions took place in the evening. The purgative operated

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on the ſucceeding night, and brought away a large quantity of highly-offenſive feculent matter of a light greeniſh-yellow colour. On the 3d of June his breath was extremely offenſive; his ſkin hot and dry; his pulſe quick; his tongue thickly furred; and he had great tenderneſs in the epigaſtric region, and right hypochondrium. He was ordered to take two grains of calomel immediately, and a ſaline medicine at intervals; this produced two motions in the courſe of the day. By purſuing this plan for a few days, the ſtate of his bowels was rendered more regular, and the diſcharges acquired a healthy colour; in proportion as this was effected, the tenderneſs of the abdomen was removed, and the tongue became clean. He had no return of convulſions, the pain and other ſymptoms ſubſided, and in a ſhort time, when the digeſtive organs had been reſtored to a natural ſtate, he went out of the Hoſpital perfectly well.

Caſes of this deſcription have been noted from the earlieſt ages. Many paſſages are

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to be met with in Galen, that ſhew that he was well acquainted with the circumſtances that have been ſtated in this ſection. Bertrandi * has related inſtances of abſceſſes taking place in the liver conſequent to injuries of the head. Andouillé † relates additional caſes, and makes further obſervations on the ſame ſubject. Of late, Richter ‡ has delivered ſimilar opinions, and has directed the practice which ſhould be purſued, when the head is diſordered by the re-action of affections of the digeſtive organs. Still however theſe circumſtances ſeem to me to be ſtated rather as occaſional, than as occurrences which are common and naturally to be expected, and I therefore think myſelf warranted in ſuppoſing, that they have not made a ſufficient impreſſion on the minds of Surgeons, in this country at leaſt.

I beg leave, in the concluſion of this ſection, to repeat what was ſaid in the former

* Mémoires de l'Academie de Chirurgie, tom. 3, p. 484.

† Ibid, p. 506.

‡ Chirurg. Biblioth. b. viii, p. 538.

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one, *viz.* that I conſider the diſeaſe as depending on nervous irritation in the parts affected, which is either cauſed, maintained, or aggravated by diſorders of the digeſtive organs. Yet as the local diſeaſe muſt be regarded as chiefly nervous, it might, in ſome rare inſtances, exiſt independently of any manifeſt diſorder of thoſe organs. I may further add, that much nervous irritation in any part generally excites vaſcular action. It becomes therefore highly important to attend to the nature and cure of ſuch diſorder, as it might ultimately lead to the production of organic diſeaſe, which would deſtroy the patient.

CASES.

Section III.

I proceed to ſpeak of ſome diſeaſes of the throat, ſkin, and bones, which ſo much reſemble venereal complaints, that they are frequently treated as ſuch; but which take place without any reaſonable ground for attributing them to the abſorption of any morbific poiſon. A diſorder of the digeſtive organs conſtantly exiſts in theſe caſes; and produces, or at leaſt aggravates and protracts a ſtate of weakneſs and irritability of conſtitution; to which the origin of the diſeaſe muſt undoubtedly be referred.

CASE.

A gentleman reſiding in the country, who had been many years married, and whoſe

moral character prevented any ſuſpicion of his having expoſed himſelf to venereal infection, had an ulcer in the right tonſil, poſſeſſing every character of a truly ſyphilitic ſore. The figure of the ulceration was oval; it had extended itſelf deeply, and preſented a ſurface covered with adhering matter, and without the leaſt appearance of granulations. It had continued three months without amendment, although various medicines had been employed during that period. Theſe circumſtances impreſſed the minds of the medical attendants with an opinion, that the diſeaſe was venereal. On me they had a contrary effect. I thought that a venereal ulcer would have become materially worſe in that time, as mercury had not been uſed to arreſt its progreſs. Finding that the patient had a furred tongue, and diſorder of the digeſtive organs, I recommended, as the firſt object of attention, the correction of that derangement of the ſtomach, from which the ſore-throat had probably originated. The patient went to the ſea-ſide, where his throat was alternately better and worſe; but the dimenſions of the

the ulcer were not enlarged. Three months elapſed before I ſaw the patient a ſecond time; when I told him, that my argument againſt the complaint being venereal was greatly ſtrengthened. It was manifeſt that the diſorder, to which I had imputed the ſore, ſtill exiſted. Being unwilling however that the reſponſibility ſhould reſt entirely upon myſelf, I adviſed him to conſult another ſurgeon, who, judging of the nature of the ſore from its appearance (which indeed was ſtrikingly characteriſtical of venereal diſeaſe), recommended a courſe of mercury. The patient underwent, in conſequence of this advice, a regular mercurial courſe; during which the ſore got well. Between two and three months afterwards another ſore formed in the palate, which had the characters of a venereal ulcer, in a ſtill more ſtriking degree, if poſſible, than the former. It was ſituated juſt where the ſoft palate proceeds from the bone. It was of a circular figure, and ſo deep as to expoſe the bone. The circumference of the ulcer was tumid and inflamed; its edges were not ſmooth,

but had a tendency to ulcerate. There was no appearance of granulations, and the diſcharge adhered to the ſurface of the ulcer. The patient now applied to me again; when I repeated my original opinion, that theſe ſores depended on the ſtate of his health in general. He conſulted another Surgeon, who recommended the uſe of the Liſbon Diet-Drink, with the application of the oxymel æruginis to the part; under which treatment the ulcer healed; and no other complaint has ſince occurred, though two years have elapſed.

CASE.

A gentleman, who was habitually ſubject in a great degree to diſorder of the digeſtive organs, had an excoriation of the prepuce, which had continued about three weeks, when copper-coloured eruptions came out all over his body, ſo ſtrikingly ſimilar to thoſe which are venereal, that ſome of his medical attendants recommended the immediate uſe of mercury. It was however agreed

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to delay the mercurial courſe for a little time; and to give the patient half a grain of calomel, with three grains of hemlock night and morning, and a ſolution of magneſia vitriolata in mint-water, ſo as to keep the bowels freely open. The ſpots began to die away almoſt immediately, and ſoon diſappeared altogether. The patient then mentioned that he had ſeveral times had the ſame kind of eruption, which had diſappeared in like manner upon taking ſome opening medicines.

In calling the reader's attention to thoſe diſeaſes of the bones which reſemble ſyphilitic affections, I ſhall not pretend to relate any caſe in detail; for Surgeons can ſeldom trace the progreſs of theſe diſeaſes for themſelves, but are obliged to rely on the doubtful hiſtory given of their patients. I ſhall endeavour to ſketch the principal parts of the ſubject, referring to particular caſes, merely to ſhew that the picture is not drawn from fancy, but is copied from nature.

I have been frequently conſulted on account of ſuppoſed venereal affections of the bones; where

where the perioſteum has been thickened and tender, and the bone enlarged, and the concomitant pains have been ſo much aggravated at night as to deprive the patient of reſt. The hiſtory of the caſe has removed all ſuſpicion of a venereal origin; while general indiſpoſition, a furred tongue, loſs of appetite, and other attendant ſymptoms, have clearly indicated great diſorder of the chylopoietic viſcera. By attending to the ſtate of the digeſtive organs in theſe caſes, the patient's health is amended; the general rheumatic pains are diminiſhed; ſleep is procured; and the diſeaſe has receded almoſt entirely. After ſome time has elapſed, the bone may again ſwell, the ſwelling may again be checked, and return no more. Perhaps ſimilar diſeaſes may take place in other bones, at times very remote from the firſt occurrence of the diſorder. If mercury be not employed, there are deciſive circumſtances in the hiſtory of the diſeaſe, which prove that it is not ſyphilitic. Sometimes ſuppuration takes place, and expoſes the bone: this occaſionally proves a kind of criſis to the diſeaſe at that part. But the circumſtances of theſe diſeaſes are ſo variable, as to

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preclude a complete enumeration of their ſymptoms.

I ſhall briefly mention the caſes of two patients, by whom I was conſulted about the ſame time, in order to identify the diſeaſes to which I allude. Both theſe gentlemen had been married for many years; and there was not the leaſt reaſon to ſuppoſe that any morbific poiſon had been imbibed. They became generally indiſpoſed, had reſtleſs nights, pain in the head and about the ſhoulders; and a painful thickening of the perioſteum of the tibia, with enlargement of the bone, took place. The chylopoietic viſcera were diſordered in both theſe caſes. One gentleman had uſed mercury repeatedly to a conſiderable extent, which produced a temporary alleviation of his diſeaſe; but his ſufferings ſeemed to be augmented upon the ceſſation of the mercurial excitement. The other patient never uſed any mercury. They both experienced a conſiderable mitigation of pain from thoſe medicines, which corrected the ſtate of the chylopoietic organs. Their diſeaſes were checked, and never became again ſo bad as before

before attention had been paid to the ſtate of the viſcera. Both theſe patients were better or worſe as the ſtate of the bowels varied; and they both gradually, but ſlowly, recovered.

Similar diſeaſes are ſo common, that I believe every ſurgeon of experience will admit that affections of the bones, with wandering pains, often occur from general diſorder of the health. I have never ſeen theſe caſes unaccompanied by diſorder of the chylopoietic organs; and I have always found them moſt benefited by whatever has tended to rectify the functions of theſe organs.

There was no reaſon, in any of the caſes alluded to, to ſuſpect the abſorption of poiſon. I will add another, to corroborate this ſtatement. A gentleman, who had been married about eight years, and had no venereal diſeaſe during that period, was ſeized with a violent fever. Shortly after his recovery, a thickening of the perioſteum on the parietal bone took place. The ſcalp was alſo much ſwollen, ſo as to threaten ſuppuration. He was at this time

time in ill health, and had great derangement of the digeſtive organs. By ſuch attention to this latter diſorder as I have mentioned in former caſes, this ſwelling ſubſided, and no trace of it remained. The patient afterwards went into the country, where his health was ſtill more amended. In about twelve months he had ſeveral tumours of the ſame kind in different parts of the cranium; one alone threatened to ſuppurate: for theſe he underwent a mercurial courſe, which relieved them, ſo as to induce him to perſevere in it to an extent, which almoſt conſtantly cures venereal diſeaſe. His health, during the latter part of the mercurial courſe, being much diſordered by the medicine, his diſeaſes became proportionally aggravated; he therefore deſiſted from the uſe of mercury; at which time his complaints were but little better than at their commencement. Theſe diſeaſes, however, gradually got well in the ſpace of little more than a year; ſtill the patient continued in a bad ſtate of health, the ſymptoms of which were a furred tongue, indigeſtion, and faulty biliary ſecretion.

I add

I add another caſe, which came under the obſervation of Dr. Baillie. A ſtudent of medicine, who attended the lectures in Windmill-ſtreet, was obſerved to look very much out of health; and, on enquiry, it was found that he had nodes upon his ſhins, which ſo exactly reſembled thoſe that are venereal, that no doubt was entertained of their being of that nature. It was therefore earneſtly recommended to him not to delay the mercurial courſe, which ſeemed requiſite for the cure. He was very reluctant to comply with this advice, and declared upon his honour that he had ſimilar ſwellings before he had had any ſexual connection. This declaration made the mercurial plan be laid aſide; and the nodes got well by a ſtrong decoction of ſarſaparilla, without a ſingle grain of mercury being employed. Now, if this account be accurate, it ſhews that diſeaſes like ſyphilis can ariſe from diſorder of the health, even without any ſexual intercourſe.

All ſurgeons of experience will, I believe, admit that diſeaſes reſembling ſyphilis occur from

from diſorder of the health in general. In all the caſes which I have inſtanced there was not the leaſt reaſon to ſuppoſe that any morbific poiſon had been imbibed to produce the diſeaſes which exiſted. I wiſh much to have this point aſcertained or refuted by the general experience of ſurgeons. The caſes, which would tend to eſtabliſh it, muſt be of rare occurrence. All the inſtances, to which I have alluded, occurred in men who had been long married, and on whoſe veracity I could rely. There is alſo, in my opinion, ſufficient intrinſic evidence in each caſe to prove that the diſeaſe was not venereal. It was this kind of caſes which I had in view in my laſt publication, in diſcuſſing the queſtion whether thoſe diſeaſes, which may be denominated pſeudoſyphilitic, ariſe from ſome modification of the venereal poiſon, or from a peculiarity of conſtitution in the patients, who are expoſed to the action of truly ſyphilitic virus. I have there ſaid, that "it deſerves to be obſerved that diſeaſes reſembling ſyphilis do occur, without any reaſon to ſuppoſe that any morbific poiſon has been admitted into the ſyſtem."

I have

I have been induced to dwell upon this ſubject, which may perhaps be conſidered more ſpeculative than uſeful, becauſe, if the opinion were verified, it would explain the occurrence of pſeudoſyphilitic diſeaſes in a very ſtriking and ſatisfactory manner. If local diſeaſes, reſembling ſyphilis, may take place in the throat, ſkin, and bones, from a certain ſtate of weakneſs, and irritability of conſtitution, then various modifications of animal matter being abſorbed may ſo diſorder the general health as to induce ſuch a ſtate of weakneſs and irritation, which is likely to produce thoſe ſymptoms; and ſuch ſymptoms are rather to be regarded as ariſing from the propenſities of the conſtitution, than from the peculiar properties of the matter which is imbibed. It is ſhewn in my former publication, that the poiſon which produces pſeudoſyphilitic ſymptoms is ſometimes abſorbed without an evident breach of ſurface in the ſkin; ſometimes from a trivial ſore which ſoon heals; whilſt, in other caſes, it produces local ſores of various and diſſimilar characters.

If, however, the reader ſhould doubt whether diſeaſes reſembling ſyphilis may ariſe without the abſorption of infectious matter, that doubt will probably be removed by the facts which are recorded in the next Section; for it will there be ſhewn that various and diſſimilar local diſeaſes originate from the ſame ſource, I mean from a ſimilar diſorder of the health in general.

CASES.

CASES.

Section IV.

The next claſs of caſes, to which I ſhall call the reader's attention, is that of unhealthy indurations, abſceſſes, and ſores. Sometimes but one local diſeaſe of this deſcription exiſts, but in general they break out in ſucceſſion in different parts of the body. The circumſtance of their ſucceſſive formation is, I think, a proof that they depend upon ſome error in the health in general; and I have accordingly obſerved that they are ſeldom, if ever, unattended with diſorder of the digeſtive organs. The imperfect hiſtory, which the patients generally afford of their previous ſtate of health, will not enable us to determine with certainty, that the diſorder of the bowels was the cauſe of their ill health and

ſubſequent

ſubſequent local diſeaſes; but I can confidently affirm, that thoſe diſeaſes in general become tractable, in proportion as the diſorder of the viſcera is corrected; and that frequently no new local ſymptoms occur, after ſome attention has been paid to the ſtate of the digeſtive organs. The diſeaſes to which I allude, have not been deſcribed in books of Surgery; and indeed it is ſcarcely poſſible to delineate with preciſion their various appearances. It would be quite impracticable to deſcribe all the diſeaſes which make the ſubject of the preſent ſection; namely, unhealthy indurations, abſceſſes, and ſores. They may be compared moſt juſtly, in variety and number, with the infinitely diverſified combinations and ſhades of colour. Yet a brief and general deſcription of them will aſſiſt to recall them to the remembrance of the experienced ſurgeon; and to enable the inexperienced practitioner to recognize them when they occur.

Some of theſe affections are quite ſuperficial, occupying merely the ſkin. The firſt

that

that I ſhall deſcribe is, I believe, well known to ſurgeons, as a diſeaſe, which is frequently, though not conſtantly, cured by giving mercury to ſuch an extent as ſlightly to affect the conſtitution. A ſmall induration or tubercle takes place in the ſkin, and this is followed by the ſucceſſive formation of others at ſmall diſtances from the original one. The ſkin between theſe tubercles becomes thickened. Chord-like ſubſtances, which are probably indurated abſorbents, may ſometimes be felt, extending along the thickened ſkin. The tubercles ulcerate, and form foul ulcers, which heal ſlowly and break out again.

Another ſpecies of ſuperficial or cutaneous ulcer begins generally in one point, and extends in every direction. The chaſm of the ulcer is formed either by a very ſudden ulceration, or by ſloughing. A ſore is left, which firſt ſecretes a ſanious, and then an ichorous fluid. Granulations afterwards ariſe, and the ſore heals. The granulations are however indurated and unſound; and when the patient ſuppoſes that the ſore is cured, it is ſuddenly reproduced

reproduced by a proceſs ſimilar to that by which it was originally occaſioned. After ſome time the ulcer again heals, and again breaks out. Whilſt theſe proceſſes are going on in the middle, the ſore enlarges in its circumference; the edges, which are thickened, become at times highly inflamed, and either ulcerate or ſlough. The diſpoſition to diſeaſe is aggravated by fits, and there are intervals when it is apparently tranquil. When this ſore has enlarged to a conſiderable extent, in the manner already deſcribed, the central parts, which have healed unſoundly, break out into ſeparate ulcers; and thus preſent an appearance of ſeveral ſores, connected with each other by indurated ſkin or newly-formed ſubſtance.

I ſhall briefly mention ſome of the principal circumſtances relating to the laſt ſore of this deſcription, which came under my care. The patient, who had been ill for more than two years, and had taken a great deal of mercury, came from the country in very bad health, and with his digeſtive organs much diſor-

dered. The ſore was ſo painful, particularly at night, that he was in the habit of taking a good deal of opium to procure reſt. It occupied the back of the hand and wriſt. He had had ſomewhat ſimilar ſores on his head and face; but they were nearly healed, though diſpoſed to ulcerate again. By that attention to the ſtate of the bowels which I have deſcribed, and by dreſſing the ſore with an aqueous ſolution of opium, the greater part of it was healed in the ſpace of three weeks; and the remainder was ſo much amended, and ſo little painful, that he had left off his opium ſhortly after the commencement of this treatment. As the patient's circumſtances made it inconvenient to him to remain in town, he went into the country, where the ſore broke out again. He then applied to a perſon who ſold a famous diet-drink; and before he had taken twelve bottles, the ſore was perfectly healed, and has not ſince broke out. The diet-drink, he ſays, had no ſenſible operation; but his bowels became regular and comfortable, and his appetite amended by taking it.

Another

Another variety of theſe ſores originates in a more deeply ſeated diſeaſe. The cellular ſubſtance under the ſkin becomes thickened, and an unhealthy abſceſs follows; after the burſting of which, a foul ſore is formed. In conſequence of this proceſs, the faſcia of the limb is ſometimes expoſed to view, and ſeems to have ſloughed: when the ſlough has ſeparated, the diſeaſe may get well ſlowly. In many caſes, however, there is no expoſure, nor ſeparation of the faſcia. Sometimes the ſore does not extend beyond the limits of the original induration, but heals ſlowly; while other diſeaſes of the ſame kind occur in ſucceſſion in various parts of the body. In other caſes, the ulceration of the original ſore ſpreads along the contiguous parts, whilſt thoſe which were firſt affected get well; and thus the ſore aſſumes an herpetic character. In many caſes the ulceration extends from the whole circumference of the ſore, and thus the ſcar and ulcerated edges have a circular or oval form; in others, the diſeaſe is propagated in particular directions, ſo that the

ulcerated ſurface preſents the moſt irregular and peculiar figures.

Theſe diſeaſes ſometimes are ſmall in extent in the beginning, but enlarge conſiderably before the ſkin gives way; and, when this happens, it proves a kind of criſis to the diſeaſe, which afterwards heals ſlowly. In theſe caſes it becomes the object of ſurgery to bring the diſeaſe to a criſis, whilſt it is yet of ſmall extent; which may be effected by producing ulceration of the ſkin by means of cauſtic.

Some of theſe ſores are formed from diſeaſes beginning in the abſorbent glands; in which caſe the gland, having firſt been indurated, ſuppurates and burſts, and ulceration enſues. When this circumſtance has taken place, in an abſorbent gland of the neck for inſtance, another ulcer may form, in the manner above ſtated, in the ſkin and ſubjacent parts, without any gland being involved in it. A third ulcer, having a diſeaſed gland for its cauſe, may form in the vicinity; and thus the diſeaſe proceeds without any regularity.

I once

I once thought it a neceſſary but moſt difficult taſk for a ſurgeon to remark the varieties of theſe diſeaſes, in order to underſtand his profeſſion, and contribute to its improvement. But, ſince I have found that theſe diſeaſes indicate ſome diſorder of the health in general, the correction of which is the great object in their cure and prevention, I have perceived that there is leſs neceſſity for undertaking this moſt arduous inveſtigation; which, indeed, could never be accompliſhed without very extenſive opportunities and indefatigable diligence.

It will be found in the majority of theſe peculiar diſeaſes, that the patient had been indiſpoſed for ſome time before the occurrence of the complaint, and, that afterwards the health had become more evidently deranged. The digeſtive organs are diſordered. The tongue is furred at the back part, chiefly in the morning; and the biliary ſecretion is deficient or depraved. My attention has been directed to the correction of this diſorder; and the moſt beneficial effects have reſulted from

from this attention. The ſores have healed readily in ſome inſtances; and, in thoſe caſes where many had formed in ſucceſſion, no new diſeaſe has in general taken place. In ſome few inſtances, new ſores have formed after the medical treatment of the diſorder had commenced, and even after it had been for ſome time continued. This probably ariſes from the difficulty, which is experienced in correcting an habitual and long continued conſtitutional diſorder. In ſome ſtill rarer caſes I have found ſimilar but much milder diſeaſes ariſe, after the diſorder of the digeſtive organs had been in a great degree corrected.

Whilſt I am writing this, there are four patients, whom I have attended in St. Bartholomew's hoſpital, with theſe diſeaſes; which I mention, to ſhew the younger part of the profeſſion how frequent they are. The health of theſe patients has been ſurpriſingly amended in a very ſhort period, by employing the means which I have deſcribed; and the ſores have healed rapidly, although nothing but ſimple dreſſings have been applied to them.

It

It is not meant by theſe obſervations to depreciate the utility of topical applications to diſeaſed ſores, but merely to ſhew how much they depend on the ſtate of the health in general; for ſome of them, which have remained uncorrected by a great variety of local applications, will get well under ſimple dreſſings, when the ſtate of the conſtitution is amended. It is not, however, to be expected that this will generally happen; for local diſeaſed actions have been excited, are eſtabliſhed, and may continue, independently of the cauſe which produced them. Topical remedies will, under theſe circumſtances, be employed with the greateſt advantage. Again, topical applications are of the higheſt utility in general practice, becauſe an irritable ſore affects the whole conſtitution, and aggravates and maintains that diſorder by which it might have been originally cauſed. The diſorder of the digeſtive organs cannot in many inſtances be corrected, till the fretful ſtate of the local diſeaſe is diminiſhed. I may further mention, with relation to this ſubject, that I have ſeen patients who ſcarcely ever ſlept, from the pain

of

of the local diſeaſe, whoſe ſtomachs were greatly diſordered, and who had a diſtreſsing purging, which could only be controlled by opium, ſleep without interruption during the night; regain their appetite, and have their bowels become tranquil and regular, when, after various trials, a dreſſing has at laſt been applied, which quieted the irritable ſtate of the ſore. It is right however to mention, that the effects of ſuch an application are not, in general, permanent; but after a time the ſore becomes again fretful, and requires ſome new dreſſing to ſoothe or controul its irritability.

I have ſeen ſome caſes of ſuch diſeaſed ſores as I have deſcribed, in conſultation with other ſurgeons, who have become convinced that my opinions are well founded. Others have occurred, even in the perſons of medical men, whoſe feelings co-operated to render their conviction more ſtrong.

Having thus, by general obſervation, imbibed the opinion that the peculiarities of local

local diſeaſe depend chiefly on the ſtate of the conſtitution, I ſhall relate ſome caſes, which were treated in conformity with the principles which ſuch an opinion would naturally ſuggeſt. I muſt, however, previouſly caution the reader againſt inferring, that I attribute all local diſeaſes to ſome general error in the ſtate of the health. I have ſeen local diſeaſes, which could not be deduced from any general indiſpoſition, nor corrected by remedies which act on the conſtitution at large. I wiſh to guard againſt the ſuſpicion of being inclined to make general aſſertions; while I avow at the ſame time, that my obſervations induce me to believe, that the peculiarities of local diſeaſe generally depend upon conſtitutional cauſes. Reaſon alſo ſuggeſts the ſame opinion; for if ſores of the ſame character break out in ſucceſſion in different parts of the body, can we doubt but that they ariſe from the ſtate of the health in general?

There appears to me a combination of nervous irritability and weakneſs, and to ſuch a combination

tion I am inclined to attribute the peculiarities of theſe variable and unclaſſed local diſeaſes. Perhaps I may explain my meaning further, by adverting to what happens not unfrequently in caſes of venereal and other buboes. The part and the conſtitution have been both weakened by the diſeaſe that has occurred; they have been further debilitated by the mercury employed for its correction. The diſeaſe ſubſides, but a new diſeaſe and action commences; a trivial wound frets out into a phagedænic ſore, which is very difficult of cure. The ſores, in different caſes, are nearly as various in appearance, as thoſe of which I have been ſpeaking. To what are we to attribute theſe diſſimilar, perplexing, peculiar ſores, if not to irritation occurring in weak and irritable parts? As the peculiar diſeaſed actions of theſe ſores originate chiefly from the weakneſs and irritability of the parts, induced by the previous diſorder which they have undergone; ſo in their advanced ſtages they frequently preſent the beſt inſtance, that can perhaps be adduced, of a peculiar local diſeaſe exiſting

ing independently of conſtitutional diſorder. It is true they affect the health in general; but it may, by attention, be kept in a moderately right ſtate, and yet the ſore remains unamended. The diſeaſed actions of theſe ſores ſometimes gradually, and ſometimes ſuddenly ceaſe; when healthy actions ſucceeding, the ſore heals. I remember a ſore of this deſcription, to which almoſt every variety of dreſſing had been tried without benefit. It was very extenſive, and had burrowed in various directions beneath the ſkin. The ulceration at length became ſtationary; but after nine months the ſore ſtill remained as foul and fretful as it had been for a conſiderable time; when in the courſe of one week it perfectly cicatrized, leaving the hollows which I have deſcribed; for it had thrown out no granulations to fill theſe chaſms.

Having thus ſtated the opinions, which I have formed, relative to theſe kinds of local diſeaſes; and which were deduced from caſes too numerous to record, of which I have preſerved no accurate accounts; I proceed to relate

relate ſome caſes treated in conformity to theſe opinions, which will, I truſt, be ſufficient to exemplify and illuſtrate the preſent ſubject.

CASE.

A gentleman's ſervant, between thirty and forty years of age, was ſent to me with a bad ulcer in his cheek, ſituated between the noſe and under eye-lid. The ſurrounding parts were inflamed, ſwoln, and indurated, ſo as to riſe fully half an inch above their natural level. The ſore was of an oval figure; meaſuring about an inch and a half in length, and half an inch in breadth and depth; indeed I could ſcarcely ſee its bottom. The ſurface was covered by adhering matter of a greeniſh hue. The cuticle round the margin was thickened, and had in ſome parts ſcaled off. The patient had been rubbing in the mercurial ointment for this complaint. He declared that he had had no chancre for many years, but had contracted a gonorrhœa about a year before his preſent

preſent diſorder. His health was much diſturbed; he had no appetite; his tongue was much furred and tremulous; his bowels alternately coſtive and lax; his fæces blackiſh. I adviſed him to take five grains of rhubarb about an hour before dinner, and five grains of the pil. hydrarg. every ſecond night, with caſtor oil or ſenna tea occaſionally, ſo as to procure a motion daily. The ſore was dreſſed with ſperma ceti cerate. I ſaw him again in three days; when he ſaid that he felt himſelf under the greateſt obligations to me. He had been entirely free from pain and diſtreſsful ſenſations, ſince he began to take the medicines; although he declared, that before that time, he ſhould have been thankful to any one who would have deſtroyed him. I mention this, becauſe I have often remarked in theſe caſes, the ſurpriſingly great relief and comfort which have ariſen from a change, produced by means apparently inſignificant and inadequate. The bowels now acted regularly, and the ſtools were more copious and of a more natural colour, and to this correction of the biliary

ſecretions

ſecretions I am inclined to impute that relief, which he ſo forcibly depicted. The ſore had diſcharged profuſely; the ſurrounding ſwelling and inflammation were much leſſened. He purſued the ſame plan of treatment for a month; during which time he recovered his appetite; his tongue became clean; his bowels regular, and the biliary ſecretion natural. The ſore had contracted into a ſmall compaſs, but without the appearance of granulations; and the ſurrounding parts were not ſwoln, though ſtill red. His health became at this time again much diſordered, in conſequence of his catching cold, from expoſure to rain. He had pain in the bowels, with a ſlight purging; his appetite failed; his tongue was furred; and he had a ſevere cough, attended with copious expectoration. The ſore on the cheek alſo enlarged to about one half of its former ſize: and the ſurrounding parts became tumid. I had the patient admitted into St. Bartholomew's Hoſpital, where he took the decoction of caſcarilla with ſquills. His cough got materially better in a ſhort time: the ſtate of his ſtomach

and

and bowels alſo greatly improved. The ſore again diminiſhed in ſize. About a fortnight after his admiſſion into the hoſpital, an eruption came out over his whole body. The ſpots were of a copperiſh hue, but rather ſmaller, and more elevated, than venereal eruptions generally are *. Some of the eruptions gradually diſappeared; and, in about a fortnight, it was certain that many were entirely gone. About this time he began to complain of his throat; and an ulcer, of the ſize of a ſhilling, formed in each tonſil. The edges of theſe ſores were elevated, and uneven, without any appearance of granulations; the ſurface was covered with yellow adhering matter. The patient now again caught cold: he was attacked with pain in the bowels, and purging, which obliged him to get up frequently in the night, and to remain for ſome time out of bed. The cough and expectoration returned: he loſt his appetite; and had a furred tongue. Dr. Roberts, whom I met at the hoſpital, did me the fa-

* Many perſons who ſaw this patient did not entertain a doubt but that all the ſymptoms aroſe from ſyphilis; it was their progreſs alone which evinced the contrary.

vour to preſcribe for him. In a day or two afterwards, an eryſipelatous inflammation appeared on the right ſide of his face, oppoſite to the ſituation of the ſore. The eyelids were ſo tumid that he could not open them: the eryſipelas ſpread to the other ſide of the face; and the other eye was equally cloſed. The fever alſo ran very high, and the patient became delirious; ſo that he was obliged, for many days, to be confined by a ſtrait waiſtcoat. Theſe ſymptoms gradually abated, and he recovered, ſo as to be in better health than I had ever ſeen him. He was diſcharged in about ſix weeks, in a ſtate of convaleſcence; and attended Dr. Roberts as an out-patient. The eruption and ſore throat had entirely diſappeared; the original ulcer was firmly healed; and the contiguous ſkin had become ſoft and natural, though it was ſtill diſcoloured. A year has ſince elapſed, and he has had no return of his complaints.

It is, I think, ſufficiently evident, in the preſent inſtance, that the peculiarities of the local diſeaſes had their origin in the ſtate of the conſtitution.

CASE.

CASE.

I was conſulted, by a medical gentleman in my neighbourhood, on the caſe of a lady about forty years of age; who had been long ſubject to dyſpepſia, and ſevere head-aches. Her preſent and chief complaint had been of about three months duration. It began with weakneſs, and an apparent irregularity in the motions of the lower extremities, attended with conſiderable pains reſembling rheumatiſm, and rigidity of the calves of the legs. Theſe ſymptoms increaſing, ſhe was unable, in the courſe of a month, to move about at all; but was obliged to be lifted in and out of bed. At this time an induration of the muſcles of the calf of each leg had taken place. The indurated ſubſtance was about three inches in length, and between two and three in breadth. It was ſeverely painful at times, and the integuments covering it were occaſionally inflamed. There was alſo ſome pain and ſwelling in the ham. Leeches, ſedative lotions, and mercurial oint-

ment had been applied, cicuta and tonics had been given, but without alleviating the ſymptoms. I firſt ſaw the patient about ſix weeks after ſhe had been obliged to keep her bed entirely; and the peculiarities of the preſent caſe led me at once to refer its origin to the ſtate of the health in general. The appetite and digeſtion were impaired, the tongue was much furred, and the fæces blackiſh. I merely recommended fomentations to the indurated parts, conſidering it the primary object to correct the morbid ſtate of the digeſtive organs. With this view the compound infuſion of gentian with the infuſion of ſenna and tincture of cardamoms was given, in ſuch doſes as to procure an adequate evacuation daily, and five grains of the pil. hydrarg. were taken every ſecond night. Theſe ſimple medicines were completely ſucceſsful: after taking them a ſhort time, the diſcharges from the bowels were natural, and properly coloured with bile. The appetite returned; the tongue became clean, and the pains almoſt immediately ceaſed. No cutaneous inflammation indicating a diſpoſition to ſuppuration, appeared again

again over the indurated parts, which gradually recovered their natural ſtate. In a fortnight the patient could go about with a ſtick, and in two months could walk as well as before her complaint. She has enjoyed better health, ſince this time, than for many years before *.

CASE.

A gentleman, thirty-two years of age, who had been ſubject for ſeveral years to occaſional attacks of ſevere pain in the bowels, was ſeized, about the end of Auguſt, with a violent purging, which continued for a fortnight, and was attended with fever. About a month afterwards, he felt pain in his leg at night, which became gradually continued even during the day, and obliged him

* The ſtate of the indurated muſcles, in this caſe, was ſuch as would lead to the belief that ſuppuration would take place in different parts of the hardneſs; indeed, I have ſeen many caſes leſs formidable in appearance terminate in that manner. Seeing how much the irritability of muſcles is diſordered by that ſtate of conſtitution which I have been deſcribing, I think it is allowable to conclude that moſt of the organic diſeaſes of muſcles originate from this cauſe.

to confine himſelf to bed. In the beginning of October a ſwelling was perceived near the inner ankle, which ſuppurated, and was opened on the twentieth of the ſame month. Two large tea cups full of dark brown matter were evacuated. The diſcharge continued profuſe for ſome time, and afterwards diminiſhed. Four other ſmall gatherings then took place in ſucceſſion, and burſting continued to diſcharge; each aperture fretting out into a foul ſore. About the beginning of February I firſt ſaw this caſe, which was conſidered as a diſeaſe of the bone. The five ſores had apertures in them leading to ſinuſes, which communicated with each other. A probe introduced into one of theſe, near the bottom of the tibia, could be moved upwards and downwards along the ſurface of the bone, which was not, however, denuded. From an upper ulcer the probe could be paſſed behind the bone, and under the muſcles of the calf; this indeed ſeemed to be the original ſeat of the abſceſs, from which the ſinuſes proceeded to their different outlets. The integuments were œdematous, and firm to the touch; ſo that I could not diſtinctly

tinctly feel the outline of the tibia; but I thought that the bone was not altered either in form or ſize. The firmneſs with which the patient ſtood upon the limb, and the want of aching pain in the bone contributed alſo to make me believe that it was not diſeaſed, and that the whole diſorder conſiſted in an unhealthy abſceſs, the diſcharge from which had cauſed various ſinuſes in the manner already deſcribed. I could not but attribute ſuch a diſeaſe to a general diſorder of the health, and indeed the patient's countenance and appearance indicated a conſtitution much weakened and harraſſed by illneſs. His tongue was furred, and the diſcharges from the bowels were irregular, deficient in quantity, and of a blackiſh colour. With a view to the correction of theſe ſymptoms, I directed the patient to take five grains of the pil. hydrarg. every ſecond night, and the infuſion of gentian with ſenna, ſo as to procure one motion daily. But little benefit was obtained by theſe meaſures; and in about a fortnight afterwards a thickening of the integuments took place over the fibula; a conſiderable ſwelling gradually aroſe, and another abſceſs formed,

which

which burſt in about three weeks, and diſcharged a conſiderable quantity of brownifh matter mixed with blood. During this time the limb was merely poulticed, and the patient could not leave his bed. His pain was extreme, and he had no reſt at night. The uſe of opium was neceſſary to alleviate his ſufferings, and opening medicines occaſionally to procure ſtools. He took but little nouriſhment, and his health greatly declined. The diſordered ſtate of the ſtomach and bowels was much aggravated by this local irritation. Indeed, the ſituation of my patient was now particularly perplexing. The local diſeaſe made the general health worſe; and the aggravation of this general diſorder, which appeared to have been the cauſe of the local diſeaſe and of its continuance, proportionately increaſed the latter malady. The confinement to bed afforded an additional obſtacle to recovery; yet it was impoſſible to remove him in his preſent ſtate, on account of the pain which motion occaſioned. The leg was inſupportably painful in a dependent poſture. As change of air and exerciſe ſeemed eſſential to his recovery, I was induced to try if Mr. Baynton's

excellent

excellent bandage, by ſupporting the weakened veſſels, would prevent their diſtention, and the conſequent pain. The ſores were dreſſed, after as much matter had been expreſſed from the ſinuſes as could be done without occaſioning pain. Strips of ſticking-plaiſter were applied after the manner of a many-tailed bandage; and the limb was afterwards rolled with a calico roller. The patient felt comfortable, and found his limb ſtrengthened. He was directed to wet the roller, if the parts became heated. The effect of this treatment was ſurpriſing both to the patient and myſelf. The pain, which had been conſtant before preſſure was employed, ceaſed from the time of dreſſing till five o'clock on the following morning; but from that time it gradually increaſed till noon, when the dreſſings were renewed. The cauſe of this occurrence now became manifeſt; for, upon opening the bandage, more than a tea-cup-full of matter was diſcharged from the different ſinuſes. I dreſſed the limb as before, cutting holes for the eſcape of the matter oppoſite to two of the chief ſinuſes. I deſired the patient to put his leg to the ground, in order

to

to aſcertain the effect of the perpendicular poſition when the veſſels were ſupported; and he experienced no inconvenience. This day paſſed, as the former, without pain; and, as the matter poured into the ſinuſes readily eſcaped, he had no uneaſineſs from its detention. I recommended him to ſit up, and put his leg to the ground ſeveral times in the day, in order to accuſtom it to that poſition. After I had dreſſed it on the third morning, the patient ſtood up, and took two or three ſteps very feebly; but this was rather the effect of general weakneſs than of particular infirmity in the diſeaſed limb. I now adviſed him to go a little way out of town in a carriage. The air and exerciſe, together with the freedom from pain, produced a very beneficial effect. He began to recover his appetite, ſlept at night, and acquired ſo much ſtrength, that he was able in a week to go about his houſe, and to reſume his attention to buſineſs. The diſcharge from the ſinuſes was very trifling, and the ſores looked much better. The patient now undertook to dreſs his leg himſelf, and hired a lodging out of town, ſo that I only ſaw him occaſionally. His limb was

ſo

ſo much amended in the courſe of a fortnight, that it cauſed no more trouble than that of daily dreſſing. But his health was not good. His countenance had the ſame expreſſion of illneſs as when I firſt ſaw him; his tongue was white and dry; his bowels coſtive; and the ſtools of an unhealthy colour. I therefore recommended him to take again the ſame medicines which I had formerly ordered him. His health now improved; his tongue became moiſter, and leſs furred; the bowels more regular; and the fæces coloured with a more healthy bile. He continued recovering till the middle of April, when he began to complain of the trouble of applying the ſticking-plaiſter, and uſed the calico roller alone. I did not ſee him for three weeks, and then found him in a very deſponding ſtate. He complained of the tedioufneſs of his confinement, which had laſted more than half a year, and ſaid that he would willingly ſubmit to have the ſinuſes laid open, if that would make him well. I found his leg well, excepting two orifices near the tibia; three ulcers, which formed the apertures of as many ſinuſes, had healed;

healed; the outline of the bone could be diſtinctly felt; and there was no alteration of it in form or ſize. I was unable at firſt to account for this deſpondency under ſuch favourable circumſtances; but I ſoon diſcovered that it was the effect of hypochondriaſiſm. For his tongue was much furred and dry; and at the ſame time that he left off the bandage, he had alſo diſcontinued his medicines. I urged him to return to them immediately; and called on him again in ten days, when he perceived clearly the abſurdity of his late deſpondency, as well as its cauſe. He called on me on the 10th of July, with a new ſwelling near the upper part of the tibia, which threatened to form an abſceſs, ſimilar to thoſe which had formerly taken place. I covered the limb with the bandage of ſticking-plaiſter, as at firſt. The new diſeaſe diſappeared entirely; and the old ones were ſo much benefited by the exact and equal preſſure, that the patient felt no difference between the ſound and the affected limb. The ulcers gradually healed, and his health is better than it has been for ſome years: yet ſtill there is an evi-

dent

dent tendency to diſorder of the digeſtive organs.

If upon an extenſive and accurate examination of the ſubject it were to appear that many very peculiar and very diſſimilar local diſeaſes originate from a common cauſe, namely from weakneſs and irritability of the ſyſtem in general, our enquiry would be further extended, and we ſhould feel anxious to know whether ſimilar cauſes may not operate in the production of more common and more frequent local diſorders. As far as my late obſervations have enabled me to determine, that ſtate of the digeſtive organs, which I conſider as denoting conſtitutional diſorder, exiſts prior to the formation of a carbuncle; and is exacerbated during the progreſs of that diſeaſe. This opinion indeed will appear probable, if we conſider the kind of perſons who are attacked with carbuncles, and the conſiderable derangement of health, which even a trivial local diſeaſe of this nature occaſions. I ſhall mention but one caſe in ſupport

port of this opinion, though I have made ſimilar remarks in ſeveral other inſtances.

CASE.

I attended a gentleman, who was afflicted with carbuncles, during three ſucceſſive attacks, at the interval of about a year between each. I made an inciſion through the indurated ſkin, down to the ſubjacent ſloughy cellular ſubſtance, and thus brought the local diſeaſe to a criſis. This treatment was ſufficient in the two firſt attacks; the extenſion of the diſeaſe was prevented; the ſloughs ſeparated, and the wound healed. The patient, whoſe mode of life was intemperate, had cough; difficult reſpiration; fullneſs and tenderneſs of the parts ſituated in the epigaſtric region; unhealthy ſecretion of bile; and in ſhort, all thoſe ſymptoms which denote a very conſiderable degree of diſorder of the digeſtive organs: it is probable indeed that ſome organic diſeaſe of the chylopoietic viſcera exiſted. After he had recovered from the

the carbuncle, I told him that the moſt important diſeaſe ſtill exiſted; and urged him to be attentive to his diet, and to the directions of his medical attendants. He ſtill however continued to live intemperately, and his diſorder increaſed. He was indeed nearly dying from diſeaſed viſcera, when he was attacked with carbuncle for the third time. The diviſion of the parts produced a temporary ceſſation of the diſeaſe; but it began again to ſpread in every direction from its circumference, and he died.

It will not, I believe, be doubted, that boils are a ſlighter degree, with ſome variation, of the ſame diſeaſe, which cauſes anthrax and carbuncle; and it is almoſt unneceſſary to remark, that ſome perſons are ſubject to a ſucceſſive formation of very large and troubleſome boils from the leaſt irritation of the ſkin. I have ſeen many perſons thus affected; and there has been in every inſtance diſorder of the digeſtive organs, the correction of which has prevented the return of theſe vexatious local diſeaſes. One gentleman,

tleman, who had been tormented for many years by the quick ſucceſſive formation of boils as large as eggs, has been free from them for ſome years; though he has had other diſorders which denote ſuch a condition of the conſtitution, as it has been my object to deſcribe in this paper.

I have remarked in many inſtances that diſeaſes of the abſorbent glands, ſuch as are uſually and juſtly denominated ſcrofula, occurring in adults, have apparently originated from the diſorder which I have deſcribed. In ſeveral caſes the local diſeaſe was of long duration, and had become worſe rather than better under various plans of medical treatment; yet it amended regularly, and ſometimes even quickly, in proportion as the ſtate of the digeſtive organs was corrected. I need not detail any caſes on this occaſion, ſince every ſurgeon muſt know them familiarly. The patients are commonly ſent to the ſea-ſide, or into the country; where enlarged glands ſubſide, and thoſe which have ſuppurated and ulcerated heal; and the local

diſeaſe

diſeaſe recovers, in proportion as the health in general is amended.

There are caſes of ſcrofulous diſeaſes occurring ſuddenly, and in various parts of the body at the ſame time, which ſeem to originate in that ſtate of health, which is occaſioned by diſorder of the digeſtive organs. I have chiefly obſerved theſe caſes in children; and they have followed ſome violent febrile affection. In two caſes which I ſhall particularly mention, the ſmall-pox was the antecedent diſeaſe. I have already ſtated, that when the health has been conſiderably diſordered by ſome violent diſeaſe, the digeſtive organs may become ſubſequently affected; and that this diſorder proves a cauſe of many ſecondary diſeaſes.

CASE.

A child of two years old had the ſmall-pox, from which he did not ſeem to recover, but, on the contrary got into a very bad ſtate of

of health. The abſorbent glands on the right ſide of the neck became enlarged in ſucceſſion, ſo as to form altogether a very conſiderable tumour, which extended down to the collar bone. The axillary glands then became affected in the ſame manner; the ſwelling was unuſually great, and ſeemed to extend under the pectoral muſcle, elevating it, and forming by this means a continuation of tumour, with the glands of the neck. Theſe ſwellings had partially ſuppurated, and had broken in two places, viz. in the neck, and about the margin of the pectoral muſcle: but no relief followed; on the contrary, the maſs of diſeaſe ſeemed to be rapidly increaſing. The child was bowed forwards, ſo that the ſpine was much curved in the loins; the left leg appeared paralytic; and a ſwelling was perceived in the abdomen, which I could not but aſcribe to an enlargement of the external iliac glands. The child was extremely emaciated; his ſkin felt hot and dry; his tongue was covered with a brown fur; and the ſtools were black and highly offenſive. As there was no expectation that he could ſurvive this

deſperate

deſperate ſtate, thoſe medicines only were preſcribed that ſeemed likely to correct the ſtate of the digeſtive organs; ſuch as occaſional doſes of calomel and rhubarb. A ſtrict attention to diet was alſo recommended. Under this treatment the ſtools gradually became natural, and the tongue clean. The diſeaſe ſeemed to ſtop immediately. As the health was reſtored, the ſwellings rapidly ſubſided; and the child became one of the healthieſt and ſtouteſt of the family.

CASE.

A female child, after having had the ſmall pox, got into bad health from diſorder of the digeſtive organs. She was then ſuddenly attacked with a ſcrofulous affection of the knee and elbow of the oppoſite ſides of the body. Two collections of fluid had taken place beneath the faſcia of the leg and thigh. The joints were greatly enlarged, and the ſwelling was apparently cauſed by an increaſe in the ſize of the bones. Had I ſeen either

joint, as a ſingle caſe of diſeaſe, I ſhould have ſaid that it would leave the child a cripple. It was manifeſt, in the preſent inſtance, that theſe diſeaſes were the conſequence of ill-health; and that the firſt object was to correct the general diſorder of the ſyſtem The functions of the digeſtive organs, which were deranged, were reſtored to their natural ſtate, by employing the ſame diet and medicines which had been ſo ſignally ſucceſsful in the preceding caſe. By theſe means the health was re-eſtabliſhed, and the local diſeaſes gradually diſappeared.

I have heard it remarked by ſurgeons of great experience, that patients often recover when many ſcrofulous diſeaſes appear at the ſame time; although ſome of them may be ſo conſiderable, that they would ſeem to warrant amputation had they appeared ſingly. The caſes which I have related afford a moſt clear and ſatisfactory account of the mode of recovery. General irritation and weakneſs bring on diſeaſes, to which perhaps a pre-diſpoſition may exiſt, in ſeveral parts

parts of the body; theſe ceaſe when their exciting cauſe is removed.

After having attempted to ſhew that pſeudo-ſyphilitic and many other non-deſcript diſeaſes ariſe apparently from the ſtate of the conſtitution, and that carbuncle and ſcrofula are ſometimes conſequences of the ſame cauſe; it may be enquired, whether all theſe various affections originate from a ſimilar diſorder of the general health. If the ſame general diſturbance of the health can produce a great many varieties of local diſeaſe, it may produce many others, and even every variety *. If the actions of any part of the body are excited by accidental cauſes, it may be reaſonably inferred that, in a ſtate of health, they will be ſimple and common, unleſs the ſtimulant is of a peculiar nature. But if theſe actions are ſpecific and diſeaſed, we naturally conclude that the cauſe of their becoming

* Even in cancer, diſorder of the digeſtive organs appears to be antecedent to the local diſeaſe, and aggravated by its exiſtence; but whether this diſorder be the effect or cauſe of the conſtitutional diatheſis cannot be at preſent determined.

ſo is conſtitutional. The occurrence of ſimilar local diſeaſes in different parts of the body, furniſhes an additional proof that the cauſe of ſuch diſeaſes is conſtitutional. But although the caſes related in this paper naturally ſuggeſt an opinion that there is ſome conſtitutional cauſe for the production of local diſeaſes, they do not amount to a complete proof. Indeed I have never inveſtigated this point particularly, though it deſerves and admits of examination.

The ſubject may be viewed in another way: weakneſs and irritability occurring bring on thoſe local diſeaſes, to which a pre-diſpoſition exiſts; and thence the connexion which I have obſerved of ſuch diſeaſes with impaired health may be accounted for. The caſes contained in this paper are, in my opinion, inſufficient to determine whether the conſtitutional diſorder is to be regarded as the exciting or the pre-diſpoſing cauſe of the local diſeaſe.

I have alſo obſerved that diſeaſes of particular organs ſeem to originate, in many inſtances,

inſtances, from diſorder of the ſyſtem in general. The teſtis of the male ſubject, and breaſt of the female, have furniſhed me with examples of this obſervation. In the caſes to which I allude, the teſtes were alternately affected, enlarging conſiderably, and then ſubſiding *. I have met with numerous and intereſting caſes of ſuch diſeaſes of the breaſt; however, the relation of a few will be ſufficient to inform the reader of all that I know concerning this ſubject.

CASE.

A lady came to London, to ſubmit to the removal of a diſeaſed breaſt, if it ſhould be judged neceſſary. The diſeaſe had exiſted for more than two years. The breaſt of the affected ſide was one third larger than the

* The cauſe which excites and maintains alternate irritation and diſeaſe of the teſtes, generally reſides in the urethra; but there was no diſeaſe of that part, in the caſes which I now mention. The patients firſt became unhealthy, and diſorder of the teſtes followed. Similar affections are not uncommon in pſeudo-ſyphilis.

other;

other; indurated in ſeveral parts; and ſo much enlarged and hardened in one place, that this might have been taken for a diſtinct tumour on a haſty and inattentive examination *. This part was ſituated near the margin of the pectoral muſcle. The diſeaſe had reſiſted the various means employed with a view to diſperſe it, ſuch as leeches, lotions, mercurial ointment, &c. It was occaſionally painful, and cauſed the patient ſo much mental anxiety, that the ſurgeon, who attended her in the country, thought it ſhould be removed. The mammary gland of the oppoſite ſide was far from being in a perfectly healthy ſtate; which circumſtance appeared to forbid an operation, ſince the ſame diſeaſe might take place afterwards in the oppoſite breaſt. The patient's general health was much impaired, her tongue was furred, her appetite deficient, her digeſtion

* It may not be improper to obſerve here, for the inſtruction of the younger part of the profeſſion, that if a breaſt containing a portion which is particularly indurated be examined with the points of the fingers placed circularly, the diſeaſe will feel like a ſeparate tumour; but if the flat ſurface of the fingers be moved over it, its true nature will become manifeſt.

imperfect;

imperfect; the biliary ſecretion was diſordered, and the bowels coſtive. I ordered her to take a compound calomel pill every other night, five grains of rhubarb half an hour before dinner, and the infuſion of gentian with ſenna, ſo as to procure a ſufficient evacuation of the bowels daily. Linen moiſtened in water was applied to the part in the evening, or when it felt painful and heated. This plan of treatment reduced the bulk of the diſeaſed gland by at leaſt one third in the courſe of a fortnight. The patient went afterwards into the country, ſtill employing the ſame medicines; and was entirely free from the diſeaſe in three months, though ſhe felt occaſional ſhooting pains, which probably indicated that her health was not completely re-eſtabliſhed.

CASE.

A lady conſulted me on account of a conſiderable ſwelling of the breaſt, attended with much pain. It had come on ſuddenly, and had been painful about a week; but ſhe thought

thought that a lump had exiſted previous to this time. The principal tumour was on the ſide next the ſternum, and was as large as an hen's egg; it ſeemed to be diſtinct, yet there was a general ſwelling, with partial induration of the ſubſtance of the gland. The tongue was furred, the bowels coſtive, and the pulſe frequent; and ſhe was, to uſe her own expreſſion, very nervous. I directed her to uſe the ſame means as were mentioned in the preceding caſe. Small doſes of mercury act beneficially on the bowels, by inducing regular and healthy ſecretions; and I know no better method of adminiſtering it as a diſcutient. The general induration of the breaſt and tumefaction of the integuments ſubſided quickly under this treatment, and left the lump in the ſame ſtate which I ſuppoſed it to have been in before the attack of general ſwelling and pain. In another week this apparently diſtinct tumour was flattened on its ſurface, diminiſhed in ſize, and confuſed with the ſubſtance of the mammary gland. Its form varied each ſucceſſive week; it firſt became oblong, and afterwards ſeemed to ſeparate into two parts; but in leſs than ſix weeks no trace of it could be felt.

CASE.

CASE.

A medical man, who reſides in the country, brought his daughter to town for advice. She had apparently a tumour in her left breaſt, between the nipple and the axilla; in which part ſhe had felt a good deal of pain. The ſwelling was of very conſiderable ſize, and the breaſt ſo tender, that I could not exactly make out whether it aroſe from diſtinct tumour, or from a partial enlargement of the mammary gland. Want of time prevented the patient's father from ſhewing the caſe to another ſurgeon. I could only give him this opinion; that in the preſent circumſtances no one would think of an operation. I recommended the application of the lotio ammon. acetat. when the part felt heated; and as the patient had diſorder of the ſtomach and bowels to a great degree, that the chief attention ſhould be paid to the ſtate of theſe organs. A grain of calomel was directed to be taken every ſecond night; rhubarb before dinner, and infus. gentian. and ſenna, if neceſſary.

About

About two months afterwards, having occaſion to be in that part of the country where the patient reſided, I called on her. Her father then told me that the ſwelling had ſubſided conſiderably, after his daughter's return in the country; and that of late he had not examined the complaint, as ſhe told him ſhe felt no uneaſineſs from it.

When I now examined the breaſt, I could not perceive any difference between it and the other. No veſtige was left of a diſorder, which had been of ſuch a magnitude, as to occaſion conſiderable alarm; a circumſtance that excited the greateſt ſurprize in the mind of her father, who was a practitioner of much experience *.

Before I had paid attention to thoſe complaints which ariſe from, or are aggravated by conſtitutional cauſes, I could not have believed that ſuch conſiderable local diſeaſes, after reſiſting various topical and general

* I have alſo known caſes of induration and ſuppuration of the ſalivary glands, apparently cauſed by the ſame general diſorder, and cured by the ſame treatment.

means,

means, ſhould give way ſo readily and completely to ſmall doſes of medicine. It is only by conſidering the manner in which this effect is produced, that the ſubject can be placed in a proper point of view.

An attention to the ſtate of the bowels is indiſpenſably neceſſary, even in the common practice of ſurgery. A ſimple cut of the finger frets into a bad phagedænic ſore, which reſiſts every local remedy ſo long, that amputation is at laſt propoſed. This is the conſequence of bad health, which in its turn is aggravated by the irritation of the ſore. The patient has a furred tongue, with other ſymptoms of diſordered digeſtive organs. An attention to this diſorder corrects the painful ſtate of the ſore, which now heals rapidly under ſimple dreſſings.

A patient has a diſorder in the urethra, almoſt too trivial for ſurgical attention; yet producing much inconvenience. The functions of the digeſtive organs are impaired, and he is hypochondriacal. He conſults a phyſician,

phyſician, under whoſe care, his general health is amended, and he no longer feels or thinks of the local diſeaſe.

An eryſipelatous inflammation of the leg is imputed to ſome trivial cauſe; as for inſtance a gnat-bite. It becomes worſe under the common remedies. The health has been long declining, and the chylopoietic viſcera are obviouſly deranged. The eryſipelas is quickly cured by medicines preſcribed for that diſorder.

A patient ſuppoſes that his knee is ſtrained; for pain and inflammation of the joint ſuddenly come on, with depoſition of fluid into the articular cavity; this attack is attended with fever, furred tongue, and unnatural diſcharges from the bowels. Leeches, cooling waſhes, and poultices, in ſhort, all topical applications are unavailing. It is a caſe of rheumatic inflammation, for which a phyſician is conſulted. Five or ſix weeks elapſe without any abatement of the diſeaſe, the patient being almoſt unable to ſtir in bed.

An

An alteration in the health ſuddenly takes place; the tongue becomes clean; and there is no longer any pain in the knee. All the fluid is abſorbed from the joint in two days, and the patient walks about his chamber. Or there may actually have been ſome local injury; but the conſequences are very conſiderable and violent, and quite incommenſurate to the cauſe. Such occurrences can only be aſſigned by imputing the effects to the ſtate of the health in general. I could relate a great number of caſes to illuſtrate this ſubject, but it does not ſeem to me to need any further exemplification *.

I again repeat at the concluſion of this ſection, that though I admit the poſſibility of the exiſtence of diſeaſes ſtrictly local, and have adduced ſome inſtances of them, I conſider the diſeaſes, which I have been deſcribing, to ariſe from diſorder of the health in general, which is

* As operations are injuries, ſo we ought not to perform them when the conſtitution is in this ſtate. I could relate ſeveral inſtances of the wounds made in operations, aſſuming diſeaſed actions from ſuch a ſtate of the conſtitution.

often

often cauſed, though ſometimes merely aggravated, by diſorders of the digeſtive organs; and it follows, if this view of the ſubject be correct, that ſuch diſeaſes may ſometimes exiſt, without any manifeſt diſorder of the digeſtive organs. The diſorders of theſe viſcera may act in a two-fold manner on the conſtitution; they may be the cauſe of an impure or imperfect ſtate of the blood, and they may cauſe or aggravate nervous irritability. Whether in conſequence of ſuch effects they are to be regarded as the predispoſing, as well as the exciting cauſes of ſuch diſeaſes as I have deſcribed, is an enquiry very worthy of inveſtigation; but it does not appear to me to be determinable by the facts which have been recited.

CASES.

CASES.

Section V.

Diſorders of parts which have a continuity of ſurface with the alimentary canal.

I had formerly obſerved ſpaſmodic ſtrictures of the œſophagus to diſappear under various modes of treatment, in a manner which I did not underſtand. Mercury ſeemed to effect the cure in three inſtances. Many caſes have occurred to me lately, in which the irritation in the œſophagus ſeemed to be firſt excited and afterwards maintained by diſorder of the digeſtive organs. It will be readily allowed, that ſpaſmodic ſtrictures of the œſophagus, when long continued, may cauſe a thickening in the affected part of the tube, and thus the ſtricture may become permanent. One inſtance will be ſufficient to illuſ-

trate

trate and verify this view of the ſubject; indeed I merely wiſh to excite attention to this ſubject, for I am incompetent to give an opinion as to the frequency or degree, in which affections of the ſtomach produce theſe diſorders.

CASE.

A lady, who had been in bad health for many years, and was ſuppoſed by her medical attendants to have a ſtricture of the œſophagus, became at laſt incapable of ſwallowing any food, except in very ſmall quantities; ſhe was even then obliged to drink ſome fluid after each morſel, to facilitate its deſcent into the ſtomach. Some mucus and blood roſe into the mouth after vomiting, which very generally followed the taking of food. Under theſe circumſtances, I was requeſted to paſs a bougie, in order to aſcertain the ſtate of the œſophagus; but I declined this examination, on account of the diſorder which exiſted in the ſtomach. The tongue was greatly furred; the parts in the epigaſtric region

region very tender: the bowels much diſordered; the ſecretion of bile either very unnatural, or entirely wanting; every ſymptom, in ſhort, which indicates an aggravated form of diſorder of the digeſtive organs, exiſted in a ſtriking degree. The ſtomach and bowels were brought into a better ſtate by ſuch medical attentions as I have already ſo often deſcribed; and the œſophagus partook of this amendment: for moderately ſized morſels of food could now be ſwallowed without the neceſſity of waſhing them down by liquids. The general health alſo improved, and ſhe became fat. But the diſorder of the digeſtive organs, which had been of long continuance, was not completely ſubdued; ſhe was ſtill ſubject to relapſes, and in ſome of theſe the difficulty of deglutition again occurred.

The throat and mouth are the parts next in order; but it is unneceſſary to relate additional caſes under this head: ſome of the inſtances already recorded will be ſufficient to confirm my ſentiments on this ſubject,

and the propriety of the practice which I have recommended.

That diſeaſes of the noſe may be cauſed or aggravated by irritation ariſing from the ſtomach is a propoſition, which will, I think, be readily granted. Indeed it ſeems ſurpriſing that the operation of this cauſe has been ſo little adverted to in books of ſurgery; ſince the phænomena which prove the fact are ſo well known. Are the monſtrous noſes, cauſed by exceſſive drinking of vinous and ſpirituous liquors, to be otherwiſe accounted for, than by irritation ariſing from the ſtomach? And do not worms in children cauſe a teazing ſenſation in the extremity of the noſe? I had ſeen in private practice, ſeveral caſes of irritation and ſwelling of the end of the noſe, in ſome inſtances accompanied with ſmall ulcerations of the pituitary membrane. In theſe caſes, the ſkin over the noſe, which was tumid, became rough and diſcoloured: the middle of the diſcoloured part became ſound; whilſt the circumference retaining its morbid actions, the diſeaſe there ſpread in a ſmall degree. In theſe caſes

caſes the tongue was furred; and there were evident indications of diſorder in the ſtomach and bowels. The diſeaſe was checked, and cured, by attention to this diſorder. I was ſtrongly impreſſed with the opinion, that if theſe caſes had been neglected, they would have terminated in that herpetic ulceration, which ſo often affects the end of the noſe. I have alſo ſeen ſeveral inſtances of that herpetic ulceration in its confirmed ſtate more materially benefited by medical attention to correct the diſorder of the digeſtive organs than by any local application: and I feel confident that it may be frequently cured by ſuch endeavours.

I have obſerved, in all the caſes of that noiſome and intractable diſeaſe, ozæna, which have come under my care lately, that the ſtomach and bowels have been diſordered; and more benefit has been obtained by endeavouring to bring theſe organs into a healthy ſtate, than by all the local applications which had been previouſly tried. I ſtated to a medical friend my opinions reſpecting one patient

who came from the country, and begged to know the effect of the treatment which I had propoſed. He informed me, after ſome months, that he had not been able to ſucceed in correcting the viſceral diſorder; and after relating the means which had been uſed, he adds, "The patient was now attacked with a bilious diſorder, to which ſhe had formerly been ſubject, and for which I gave her ſix grains of calomel in a bolus, which ſoon relieved her. During this attack the noſe ſeemed well; there was no fetor in the diſcharge, and ſhe recovered her ſenſe of ſmelling." However the diſeaſe returned afterwards as before.

In farther confirmation of the opinion, that diſeaſes of the noſe depend much upon the ſtate of the ſtomach, I ſhall mention the caſe of a woman, who had a diſeaſe of the noſe, which I expected would, at leaſt, prove very tedious and very troubleſome, but which got well ſpeedily under ſimple dreſſings, in conſequence, as appeared, from the effect of internal medicines.

CASE.

CASE.

This patient was between thirty and forty years of age; had a furred tongue, bowels alternately coſtive and lax, and their diſcharges diſcoloured. An enlargement of the left ala naſi, cauſed by a great thickening of the parts covering and lining the cartilage, had gradually taken place. The ſkin was diſcoloured, and an ulcer, about the ſize of a ſixpence, had formed on the under ſurface of the ala. The ſore was deep, with a ſloughing ſurface, and uneven and ſpreading edges. Spermaceti cerate was employed as a dreſſing; and the external ſkin was frequently bathed with Goulard's waſh. She was ordered to take internally five grains of rhubarb an hour before dinner, five grains of the pil. hydrarg. every ſecond night, and the infuſion of gentian with ſenna occaſionally. The ſore ceaſed to ſpread, the ſwelling gradually ſubſided, and all diſeaſed appearances were removed in the courſe of a month. The patient alſo found her health conſiderably amended.

In

In moſt caſes of deafneſs, there is probably a ſtate of irritation, and a tendency to inflammation, throughout the paſſages of the ear. The external meatus is unuſually ſenſible, the ſecretions being either ſuppreſſed, or diſcharged in an unnatural quantity. The lining of the euſtachian trumpet is thickened; and hence it becomes partially obſtructed. It muſt be admitted that ſuch a ſtate of the organ is likely to be aggravated by a cauſe, which maintains or produces irritation in the noſe. When dullneſs of hearing alſo depends on a torpid ſtate of the nerves, it may be cauſed by the ſame circumſtance, which is known to affect the ſenſibility of other nerves.

Indeed, I have remarked that the hearing of many perſons has conſiderably varied with the ſtate of their health in general; ſo that I felt no ſurpriſe from the occurrence related in the following caſe.

A gentleman applied to me on account of ſome pſeudoſyphilitic ſymptoms, which I told him would gradually become well. I adviſed him,

him, at the ſame time, to be particularly attentive to the ſtate of his digeſtive organs, which were generally diſordered by the effects of the poiſon. He took five grains of the pil. hydrarg. every ſecond or third night. The diſorders for which he had conſulted me were all removed in the courſe of two months; when I received a letter from him, ſaying, that he thought it a duty he owed to me and to the public to inform me, that the lenient courſe of mercury, which I had recommended, had cured him of a conſiderable degree of habitual deafneſs.

It is well known that ophthalmy frequently ariſes from conſtitutional cauſes; and in ſuch caſes the digeſtive organs are generally deranged. The health will be moſt ſpeedily reſtored, and the local diſeaſe moſt effectually diminiſhed, by correcting the diſordered ſtate of the abdominal viſcera. There is no neceſſity for enlarging upon this ſubject; yet it may be uſeful to ſtate what I have obſerved reſpecting thoſe ophthalmies, which take place ſubſequently to gonorrhœa, and which have generally

generally been aſcribed to a retropulſion of that diſorder, or to the accidental application of the diſcharge to the ſurface of the eye. In the worſt of the caſes which I have ſeen lately there was conſiderable redneſs and irritability of the eye, laſting nearly a fortnight. The digeſtive organs were deranged in all the caſes to which I allude; and I attribute the comparative well-doing of theſe patients to the attention which was paid to their correction, and to tonic and ſtimulating applications, as a ſolution of zincum vitriolatum to the ſurface of the globe, and unguentum hydrargyri nitrati to the eyelids. In other caſes, which I had formerly been witneſs to, where evacuations by bleeding and purging, &c. were employed, the diſorder was extremely obſtinate; nay ſeveral patients loſt their ſight.

That cutaneous diſeaſes* are much connected with the ſtate of the ſtomach, is generally

* It may perhaps be right to advert to the direct and ſudden ſympathy which exiſts between the ſkin and the ſtomach. In affections of the latter organ, the ſkin is dry and cold, moiſt and cold,

rally known. Hence various medicines have been recommended to correct diſorders of that viſcus, with the view of removing the more evident, but conſequent diſeaſe of the ſkin. The account, which I have given of diſorders of the digeſtive organs, may lead to a more rational and leſs empirical treatment, and to the more juſt appreciation of the value and mode of action of remedies, which are ſanctioned by experience. It is almoſt ſuperfluous to relate any caſe to authenticate ſo well known a fact; the following, however, may be found intereſting and inſtructive.

A patient in St. Bartholomew's hoſpital had an herpetic diſeaſe of the ſkin. This had

cold, hot and dry, or moiſt and dry; and it ſuddenly changes from the one to the other condition, as the ſtate of the ſtomach varies. When the digeſtive organs are diſordered, the irritable ſtate of the ſkin is manifeſted by the effects of bliſters and other irritating applications. A bliſter produces a tormenting local diſeaſe, and even a Burgundy pitch plaſter cauſes extenſive erythema. Indeed, when the conſtitution is irritable, all the modes of counter-irritation, which ſurgeons employ under other circumſtances with ſucceſs for the cure of local diſeaſes, are likely to do harm; and thus theſe curative methods obtain diſcredit in conſequence of their ill-timed employment.

healed

healed in the middle, and ſpread in the circumference to ſuch a degree, that it occupied nearly the whole length of the leg, and included two thirds of its circumference. The ſkin had recovered a moderately ſound ſtate in the centre. The diſeaſe was propagated in the circumference by an ulceration, which threw out a projecting and firm fungus of a tawny colour, of about half an inch in breadth. A ſmall groove or channel ſeparated this fungus from the ſurrounding inflamed ſkin, which had not yet ulcerated. A ſimilar diſeaſe occupied the back part of the arm; this was of an oval figure, and reſembled, in every circumſtance, that which I have already deſcribed upon the leg. Theſe diſeaſes had exiſted for nearly two years, and continued to ſpread in oppoſition to every mode of treatment. Mercury had been employed, even to ſalivation, without any marked alleviation of the local complaint. I immediately perceived that the digeſtive organs were greatly deranged: upon correcting this diſorder, the ſkin ſurrounding the diſeaſe became pale; and all diſpoſition to ſpread ceaſed. The fungus, however,

however, ſtill projected, and did not heal; it was therefore dreſſed with a weak ſolution of kali arſenicatum. This remedy ſeemed to ſubvert the diſeaſed actions, which had produced the fungus; ſo that, in leſs than two months, the patient was diſcharged from the hoſpital perfectly well.

I have ſeen ſimilar herpetic diſeaſes, of much leſs extent, ſucceed to the abſorption of matter from ſores upon the genitals. Theſe have got well when the patient has gone into the country, and appeared again when he has returned to town. They have healed under a courſe of mercury, and broken out again when it was diſcontinued.

In this review of diſorders, occurring in parts having a continuity of ſurface with the digeſtive organs, I have traced them from the ſtomach. Another ſet of diſeaſes may originate from the ſame ſource. The large inteſtines ſuffer more in advanced ſtages of theſe diſorders than the ſmaller ones; hence diſorders of the rectum, and particularly many irritable

irritable diſeaſes about the orifice of that bowel, are deducible from this cauſe. I ſhall not, however, prolong the account by the relation of caſes; but content myſelf with aſſuring the reader, that the opinion has been derived from facts, and not from preconceived notions of the operation of ſuch diſorders.

SECTION

SECTION VI.

IN this Section I ſhall mention what information I have obtained by diſſection, relative to the cauſation of other diſeaſes by thoſe of the digeſtive organs. The reciprocal ſympathy, which exiſts between the brain and the digeſtive organs, is generally admitted; but the kind and the degree of the effects ariſing from this ſympathy, is not, perhaps, in general, ſufficiently underſtood. Theſe organs mutually increaſe each other's diſorder; till the affection of the ſenſorium leads to the greateſt diſturbance of the nervous functions, and even of thoſe of the mind.

All this may happen without any viſible diſeaſe of the brain. Dr. Kirkland particularly directed the attention of medical men to nervous apoplexy; and the obſervations, which have been made ſince that time, have proved, that not only a general derangement of the functions

functions of the nervous ſyſtem producing apoplexy, but alſo partial effects of a ſimilar nature cauſing hemiplegia and paralyſis, may take place, without any viſible change of ſtructure in the brain. I have met with numerous inſtances of this kind; but could not determine whether the affections were merely nervous, or whether they were produced, or aggravated by diſorder of the digeſtive organs. I only know, that the patients died affected by apoplexy, hemiplegia, or more local paralyſis, without any derangement in the evident ſtructure of the brain. I may alſo mention, that I formerly examined the brains of three perſons who died in a comatoſe ſtate, in conſequence of the metaſtaſis of rheumatiſm. In theſe caſes no morbid appearance was obſerved in the brain, except ſome ſlight marks of inflammation of the pia mater. It therefore appears clearly to me, that diſorder and abolition of the nervous functions may take place, without any organic affection of the brain. The perfect recovery of patients, which ſometimes happens, after ſuch diſorders, may alſo be conſidered as additional

evidence

evidence of there having been, in ſuch inſtances, no organic diſeaſe of the brain.

There can be no doubt but that epilepſy may, in like manner, take place without any morbid alteration of the ſtructure of the brain, or its membranes. Some of the perſons whoſe heads were examined, without the diſcovery of any diſeaſe of thoſe parts, had been ſubject to attacks like thoſe of epilepſy. Dr. Henry Fraſer has, of late, publiſhed a deciſive inſtance in proof of this fact. A patient died of epilepſy, and his brain was examined with particular attention, by Mr. Cooper, without any morbid alteration of ſtructure being diſcovered *. In general, however, morbid appearances are evident in the brains of thoſe perſons who die of epilepſy. Tubercles are moſt frequently met with. There is, however, a diſorder of ſtructure which I wiſh briefly to mention, as I do not find that it has been noticed. In two perſons, who died of epilepſy, I found the medullary ſubſtance of each hemiſphere altered from its natural

* See Fraſer on Epilepſy, page 39.

ſtructture;

ſtructure; it had loſt its natural firmneſs, and ſmoothneſs of ſurface, and appeared like thick curdled cream.

Now, if diſorder of the digeſtive organs is capable of cauſing or aggravating nervous diſorder, even to the production of thoſe effects which have been mentioned, when there is no alteration of ſtructure; it muſt be granted that ſuch a ſtate of irritation of the ſenſorium may lay the foundation of an excitement of the vaſcular ſtructure of the brain, and thus very frequently produce organic diſeaſe. When this has occurred, it will aggravate and eſtabliſh the nervous affection, and thus perhaps render it inſuſceptible of cure.

Such are the general obſervations which I have made, by means of anatomical enquiry, relative to theſe ſubjects. With reſpect more eſpecially to the inveſtigation of my preſent object, I have examined the bodies of ſix patients, in whom diſeaſe moſt certainly began in the abdominal viſcera, and was continued

tinued in them to the concluſion of their lives. Neverthelefs the patients ſeemed to die rather of nervous diſorder, than of diſeaſe of the parts firſt affected. One of the patients died affected with apoplectic ſymptoms, and five with hemiplegia.

In all theſe caſes the liver was greatly diſeaſed, and the bowels alſo exhibited diſeaſed appearances. In three of the caſes there was conſiderable inflammation of the membranes of the brain; and a good deal of water in the ventricles. In two of them no morbid appearance of the brain was diſcovered. I have alſo examined a child, who was ſuppoſed to have died of the hydrocephalus, accompanied by great diſorder of the ſtomach and bowels. In this caſe the bowels were inflamed, the liver ſound, and the brain perfectly healthy in appearance; yet there had been ſo great a diminution of ſenſation and motion, as to leave no doubt of the exiſtence of hydrocephalus. I am aware, that great opportunities of obſervation, accurate attention to the hiſtory of diſeaſes, and anatomical exami-

nation of fatal caſes, are requiſite to enable us to form juſt notions relative to the preſent ſubject. I thought, however, that it might not be improper to ſtate what had been the reſult of my own enquiries by diſſection, in order to promote a more general attention to the ſubject.

When my attention was firſt directed to the ſubject of the ſympathetic affections of other organs, which were cauſed by the diſorders of thoſe concerned in digeſtion, my primary object was to endeavour to aſcertain, by diſſection, how far pulmonary diſeaſes originated from ſuch a ſource. I have, in the courſe of my enquiries, had ſeveral opportunities of examining the bodies of patients who apparently died of phthiſis, combined with diſeaſes of the digeſtive organs. In theſe caſes both the hiſtory and diſſection tended to prove, that the chylopoietic viſcera were the ſeat of the greateſt and moſt eſtabliſhed diſeaſe, and that the pulmonary affection was a ſecondary diſorder. The liver was greatly diſeaſed, and the lungs were alſo beſet with tubercles; yet a conſiderable

ſiderable portion of thoſe organs was found. But diſſections can never concluſively aſcertain the truth of the opinions which I have ſtated; for the ſame diſpoſition to diſeaſe exiſting in the conſtitution may equally affect both the pulmonary and digeſtive organs. Nay, obſervations made in diſſection in general, would tend to diſprove the opinions alluded to; for diſeaſes of the lungs are very commonly met with in dead bodies, while thoſe of the liver and bowels are much leſs frequent. Yet conſiderable diſorder of the digeſtive organs does exiſt, and may continue for many years, without any organic diſeaſe being apparent: it is poſſible, therefore, that ſuch diſorder may excite diſeaſe of the lungs, and thus produce a worſe diſeaſe in the latter organs, than what exiſted in the former. In ſhort, the opinions which I have mentioned, cannot be either aſcertained or refuted by anatomical reſearches alone.

Accurate attention to the ſtate of the digeſtive organs may determine this important ſubject, and lead to the prevention and cure of

the ſympathetic diſeaſes which I have mentioned. The attention alluded to, is not of that general kind which adverts only to the quantity of the ingeſta, and the periodical expulſion of the egeſta, but one that more ſtrictly obſerves whether the viſcera are free from irritation, and whether their ſecretions are healthy or otherwiſe. My opportunities of acquiring practical information on this ſubject muſt neceſſarily have been very limited; yet I have ſeen many caſes which, to me, appeared to prove, that pulmonary irritation ſometimes proceeds from diſorder of the digeſtive organs. In ſuch caſes of ſurgical diſeaſes, accompanied by diſorder of the digeſtive organs, as have been related, I have occaſionally obſerved a cough attended with expectoration to ceaſe, upon the correction of the diſorder of the digeſtive organs.

A caſe, which happened about five years ago, ſtrongly impreſſed theſe opinions on my mind. A ſervant of mine told me, that his wife was dying of a conſumption, which had been rapidly increaſing for ſix months, and had

had baffled all attempts to relieve it. Thinking that I could procure her ſome medical aſſiſtance from the hoſpital, I went to ſee her. The caſe, however, ſeemed paſt hope. She was extremely emaciated; her pulſe beat 140 in a minute; her face was fluſhed; ſhe had a moſt diſtreſſing cough; and ſpit up more than a pint of mucus, mixed with pus and ſtreaked with blood, in twenty-four hours. The circumſtance, however, which moſt diſturbed her was a continual purging of black and offenſive matter. She told me that the diſorder of the bowels was the firſt diſorder; that it had preceded the pulmonary affection, and, indeed, that it was an habitual complaint. I thought it unneceſſary to trouble my medical friends in ſo hopeleſs a caſe; and ordered ſome pills, containing one grain of opium, to be taken in ſuch quantity as was neceſſary to ſtop the purging. As ſhe informed me that the diſorder began in the bowels, I added to each pill half a grain of calomel. By theſe means the purging was ſo much checked, that ſhe did not find it neceſſary to take more than two pills in twenty-four hours; and when ſhe

had

had taken twelve, the mercury, very unexpectedly, affected the mouth. From that period, the ſtools became of a natural colour and conſiſtence; the cough and expectoration ceaſed; and ſhe was ſoon ſufficiently recovered to go into the country; from whence ſhe returned apparently in good health.

Now if it were to be aſcertained, that pulmonary irritation, which might of courſe produce pulmonary diſeaſe, ſometimes ariſes from diſorder of the digeſtive organs; it would be right to enquire farther, whether it produces ſuch effects, by the nervous diſorder it occaſions, and by its operation on the health in general; or by means of a more immediate ſympathy exiſting between the pulmonary and digeſtive organs. I do not mean to inſinuate, by what has been ſaid, that pulmonary diſeaſes do not ariſe originally and idiopathically; but only to ſuggeſt that they may ariſe ſympathetically, or in conſequence of diſorder of the digeſtive organs. The proportionate number of caſes, in which they originate in this manner, can only be determined by

by very extenſive experience. That the ſtomach and bowels are diſordered, during the progreſs of phthiſis, will, I conclude, be readily admitted; and that an attention to correct ſuch diſorder is requiſite, muſt be acknowledged, from what has been ſaid relative to the influence of ſuch treatment upon various local diſeaſes.

The actions of the heart ſeem to me alſo to become diſordered from ſympathy with the ſtomach. That palpitations, and feeble or intermitting actions of that organ ariſe from this cauſe, is proved by their ceaſing, when the ſtate of the ſtomach becomes changed. The palpitations which take place after eating, in caſes where the heart is irritable, farther evince the ſympathy which exiſts between theſe organs. Surgeons are occaſionally conſulted on palpitations of the heart, which the patients miſtake for aneuriſms: I have ſeen many inſtances, where the great degree of palpitation led to a belief, that ſome organic affection exiſted. This has ceaſed on an amendment of the general health, apparently ariſing from

from an amelioration of the ſtate of the digeſtive organs, and the patients have continued in perfect health. I have not collected any accurate narratives of the caſes that I have ſeen: none at leaſt which I could properly preſent to the public as a proof of the fact. There is nothing, however, of which I am more perfectly convinced; for I have felt it to be true in my own perſon. After conſiderable and unuſual fatigue, I was ſeized with pain, and a ſenſation of coldneſs in the region of the ſtomach. I had no appetite, and the biliary ſecretion was ſuppreſſed. Whilſt this diſorder continued, which was for many weeks, my pulſe intermitted very frequently, and I was diſtreſſed with hypochondriacal ſenſations. Upon an alteration in the ſtate of the digeſtive organs, and a renewal of the biliary ſecretions, which happened very ſuddenly after taking five grains of the pil. hydrarg. my pulſe became perfectly regular, and my mind tranquil.

The obſervations, which I have made in ſurgical caſes, lead me alſo to attribute many hæmor-

rhages, and particularly thoſe from the noſe, to a ſympathetic affection of the heart and arteries, excited by diſorder of the digeſtive organs.

If ſuch a ſtate of the ſyſtem in general, as I have deſcribed, and which is manifeſted by circumſtances denoting the digeſtive organs to be in an unhealthy ſtate, and the nervous ſyſtem to be likewiſe diſordered, may, in ſome inſtances, cauſe various local diſeaſes of parts not eſſential to life, the care of which, cuſtom has conſigned to the ſurgeon; and may, in other inſtances, produce diſorders of organs eſſential to our exiſtence, the care of which is allotted to the phyſician; the ſubject muſt be allowed to be of the higheſt importance. Of late, indeed, I have been inclined to conſider theſe circumſtances as the cauſe of the complicated diſeaſes which are met with in man, ſo much more frequently than in animals. In man the brain is more ſenſitive, and liable to be diſordered by mental affections. In man the digeſtive organs are liable to be diſordered by ſtimulating and unnatural diet.

Sedentary

Sedentary habits and impure air co-operate to aggravate theſe diſorders. The diſorders of the brain and digeſtive organs mutually increaſe each other; and thus a ſtate of conſtitution ariſes, which is productive of the moſt general and complex diſeaſes. But even theſe do not ſeem to me to be the moſt calamitous terminations of ſuch cauſes. The diſorder of the ſenſorium, excited and aggravated by the means which have been deſcribed, frequently affects the mind. The operations of the intellect become enfeebled, perplexed, and perverted; the temper and diſpoſition irritable, unbenevolent, and deſponding; the moral character and conduct appears even liable to be affected by theſe circumſtances. The individual in this caſe is not the only ſufferer, but the evil extends to his connections and to ſociety. The ſubject, therefore, appears to me of ſuch importance, that no apology need be offered for this imperfect attempt to place it under general contemplation *.

* The ancients, who formed their judgment of the nature of diſorders by obſerving the excretions, denominated an irritable

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I feel myſelf under great obligations to Mr. Boodle, from whom, as I have mentioned in the preface, I firſt derived thoſe opinions which are recorded in the foregoing pages. By this view of the ſubject, which he firſt inſtructed me to take, I think I can perceive many circumſtances relating to the cauſes and effects of diſeaſes, which before would either have been very obſcure, or not all diſtinguiſhable. Mr. Boodle firſt inſtructed me how to detect diſorders of the digeſtive organs, when their local ſymptoms were ſo trivial as to be unnoticed even by the patient; and pointed out to me what were the curative indications in theſe diſorders. Many of the caſes, which I have related, ſhew how much faulty actions of the liver contribute to cauſe or aggravate the general diſorder. The relief, which frequently ariſes from the renewal or correc-

and deſponding ſtate of mind, Hypochondriaſis; and when a more fixed and irrational dejection took place, they deemed it an atrabiliary diſorder, and called it Melancholia. There can be no doubt of the correctneſs of their obſervations; for if the diſorder began in the nervous ſyſtem, it would generally produce and become aggravated by that diſorder of the digeſtive organs, from which they denominated it.

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tion of the biliary ſecretion, in theſe caſes, was the circumſtance which at firſt made the greateſt impreſſion on his mind. I believe, however, that his opinions of the nature of the diſorder of the digeſtive organs, and its operation in the production of other diſeaſes, have been, and are, very ſimilar to thoſe which I have delivered. Indeed, as we have lived in the moſt unreſerved communication of our ſentiments, it is not probable, that our opinions are materially different. I have been very ſolicitous that Mr. Boodle ſhould publiſh his own account of this ſubject, and the facts which he has collected: but as his time is fully occupied in the practice of his profeſſion, it is probable, that many years might elapſe before he could do ſo, in a manner ſatisfactory to himſelf. I hope and expect, however, that he will undertake this taſk. The medical treatment of diſeaſes, is the moſt important part of our knowledge relating to them. The plan, which I have ſuggeſted, may be applicable to ſuch diſorders of the digeſtive organs as require the attention of a ſurgeon, whoſe chief object is the cure of local diſeaſe; but it appears

pears to me very inadequate to the cure of thoſe more complicated forms of diſeaſe, which come under the care of the phyſician. To this ſubject Mr. Boodle has, I know, paid great attention; and a narrative of caſes muſt be valuable, when given by a perſon who remarks the progreſs of diſeaſe, and the effects of medicine, with ſagacity and accuracy.

On

On Diſeaſes of the Urethra; particularly of that part, which is ſurrounded by the proſtate Gland.

EVERY ſurgeon will, I believe, acknowledge that an obſcurity hangs over the ſubject of ſtrictures of the urethra, which prevents us from perceiving the cauſe of many circumſtances, which occur in daily practice. Contractions of this canal are ſometimes readily enlarged to their natural diameter by the introduction of common bougies, and the cure thus effected is permanent. In other caſes it is difficult to procure even a temporary enlargement of the contracted part; and the ſtricture returns, when the means by which it was relieved are diſcontinued. This variety in the event of different caſes may, in ſome inſtances, depend on the kind and duration of the

the diſeaſe in the ſtrictures themſelves; yet, in many others, I am convinced that it is owing to other circumſtances, which it is my deſign to conſider in the preſent paper. Before my obſervation had been directed to theſe circumſtances, I was much puzzled to account for the diſcordance in the reſult of caſes apparently ſimilar. I was equally unable to underſtand ſome occurrences, like thoſe which are repreſented in the following caſe.

CASE.

A gentleman, whoſe life was made uncomfortable by a very frequent and very urgent propenſity to void his urine, applied to me for advice. Two ſtrictures were diſcovered in the further part of the urethra, which did not oppoſe the paſſage of a bougie as large as a gooſequill. Some difficulty was experienced when the bougie entered that part of the urethra, which paſſes through the proſtate gland; and the patient complained of pain, which was conſiderably increaſed at the orifice

orifice of the bladder. The inſtrument, however, entered the bladder, though with difficulty; and it ſeemed to be graſped by the ſphincter. The proſtate was enlarged to twice its natural ſize; which circumſtance ſeemed to me to explain the cauſe of the ſlight impediment, which occurred to the paſſage of the inſtrument through it. The urethra was unuſually long in this patient; and though bougies had been frequently introduced, I ſuſpect that they had never been paſſed into the bladder. The patient was of this opinion, from the peculiar ſenſations which he experienced, and which he had never felt before. He called upon me four days afterwards, ſaid that he was much relieved, and requeſted to have the operation repeated. The ſame bougie which had been uſed before now paſſed with much greater facility. The patient ſtill felt peculiar ſenſations, though much diminiſhed in degree, as the inſtrument went through the proſtate. It entered the bladder without difficulty, and without appearing to be graſped. I now introduced a larger bougie, which went through the ſtrictures with leſs difficulty than

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the ſmaller one had done on its firſt introduction. This produced the ſame uneaſy ſenſation on entering the proſtate; it was retarded for a moment at the orifice of the bladder, and was ſlightly graſped at its entrance. All the ſymptoms were ſtill more relieved by this ſecond introduction. The ſame operation was repeated a few times; at firſt every fourth day, and afterwards once a week, till a bougie of the largeſt ſize could be paſſed without occaſioning any uneaſineſs. The patient, during the latter part of the time, did not require to void his urine more frequently than is common. He was relieved from a great trouble; and, though many years have elapſed, he has not experienced ſimilar inconvenience.

Such caſes as the preceding induced me to ſuſpect that a ſtricture might exiſt in the orifice of the bladder. The following caſe gave me new and, as I think, juſt ideas relative to this ſubject. Whether the opinions be correct or not, the caſes, it muſt be admitted, deſerve attention.

CASE.

A gentleman, more than ſeventy years of age, had experienced for about ſix years a difficulty in voiding his urine, which gradually increaſed, till the ſtream became very ſmall. This was attended with a frequent propenſity to diſcharge the urine, which diſturbed him every ſecond or third hour during the night. At laſt a complete retention took place when he was in the country; and a ſurgeon attempted to introduce a ſmall catheter, which however was prevented, by a ſtricture, from paſſing farther than ſix inches. The patient immediately came to London, when I directed him to take ſome caſtor oil, and to bathe the perinæum and adjacent parts frequently with warm water. After ſome time the urine flowed again, and he was relieved from the preſent urgent ſymptoms. In two days I examined the urethra, and found a ſtricture at ſix inches, through which I could not paſs even a very ſmall bougie. I touched this with the argentum nitratum; but the application

cation did not produce any alteration in the circumſtances of the diſeaſe. On the third day the bougie paſſed on to a ſtricture at ſeven inches, which was alſo touched with cauſtic; and the ſame treatment was repeated with another ſtricture, at the diſtance of half an inch from this. The bougie now paſſed through all the ſtrictures, and entered the proſtate, when I was obliged to withdraw it immediately, from a ſudden attack of pain and faintneſs. No enlargement of the proſtate was diſcovered by an examination per anum; nor was it tender when compreſſed. I told the patient that I conſidered it very deſirable to introduce a tubular inſtrument into the bladder, but that the minuteneſs of the ſtream of urine rendered it doubtful whether this could be accompliſhed. I requeſted him to call in another ſurgeon, that the attempt might be made by us conjointly. A flexible varniſhed catheter, containing a ſtrong wire, was readily paſſed into the proſtate, but could not be made to enter the bladder. The attempt was not long perſevered in, from an apprehenſion of doing injury, if the inſtrument

were not guided in the right track. No blood flowed upon withdrawing the catheter. A slight retention of urine followed this attempt; but, after a few days, the patient was in the same state as before. On examining the urethra four days afterwards, I found that the smallest bougie would not pass farther than six inches; so that the contraction of the first stricture had been re-excited by the irritation occasioned by our late attempt. As the application of the argentum nitratum had so suddenly and completely relieved this stricture in the first instance, I now repeated this application, although I knew that the stricture was merely spasmodic. In the course of a few days a small bougie was introduced into the prostate, and afterwards a larger one. I now wished to ascertain whether I could pass the bougie into the bladder, or learn, by means of that instrument, the cause of the obstruction. As the patient found that he could void his urine most easily when lying on the left side, it seemed probable that the orifice of the urethra might be found in that direction. I therefore depressed the point of the instrument, and

and carried the other extremity towards the right groin, when moſt unexpectedly it went forwards into the bladder. When the bougie was withdrawn, a conſiderable quantity of clotted blood and mucus, with ſome matter, oozed out of the urethra; and the patient afterwards voided in a large ſtream about eight ounces of turbid and fœtid urine mixed with mucus; after which he felt as if his bladder were completely emptied. From this time he had no occaſion to void his urine more frequently than is natural, and he expelled it in as large a ſtream, and with as much facility, as he had ever done at any period of his life. The bougie was for ſome time introduced every third day, and afterwards once a week. It paſſed eaſily not only through the urethra, but into the bladder, when guided in the direction which has been mentioned. At firſt the point was ſoiled with blood and matter, but afterwards theſe appearances were no longer obſervable, which led me to conclude that the circumference of the ulcerated orifice of the bladder had completely healed. Two years afterwards this

gentleman

gentleman experienced a recurrence of his former complaints; a ſmall bougie only could now be introduced into the bladder. A larger bougie was paſſed through the urethra on the next attempt; but it was not carried forwards into the bladder, from an apprehenſion of irritating the proſtate. After a few days the larger bougie was introduced into the bladder, and met with a little reſiſtance at its orifice. From this time it paſſed with the ſame facility as when I diſcontinued my former attendance, and the patient found himſelf equally well. Two years have now elapſed without any neceſſity for repeating theſe operations.

In this caſe a diſeaſe took place in the proſtate gland, without producing any evident enlargement or tenderneſs of its ſubſtance, though it proceeded to a ſtate of ulceration. The diſeaſe ſeems to have operated on the continuous parts in two directions; backwards upon the bladder, rendering that organ irritable; and forwards upon the urethra, cauſing ſtrictures, which were

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in ſome degree organic, but chiefly of a ſpaſmodic nature. It muſt be allowed, however, that the obſtruction of the aperture into the bladder by the diſcharges from the ulcerated ſurface contributed in a great degree to maintain the irritability of the organ, by impeding the diſcharge of the urine. This diſeaſe was alſo of a nature that admitted of relief, and the paſſage of a bougie ſeemed to effect its cure. It had, however, a tendency to recur, and the uſe of the bougie leſſened the irritability of the part, and arreſted the progreſs of the diſeaſe.

The circumſtances of this caſe do not indeed unfold the cauſe and preciſe nature of the diſorder, which, however, will in my opinion be elucidated by thoſe which follow. They induced me to ſuppoſe that thoſe inſtances, which I had formerly met with, and which appeared ſo unintelligible, were of a ſimilar nature; and they made me particularly attentive to the ſtate of the urethra, where it paſſes through the proſtate gland, as I ſaw the poſſibility of this canal being diſeaſed,

diſeaſed, without the proſtate being materially implicated in the diſorder. The following caſe occurred ſoon afterwards.

CASE.

A gentleman, between fifty and ſixty years of age, had for twenty years been ſubject to occaſional fits of dyſury. I was deſired to ſee him in one of theſe, which had been very ſevere and long continued. He was obliged to void the urine at leaſt every hour. The calls were ſudden and urgent, and the pain continued for a conſiderable time after the urine had been diſcharged. He had ſome fever, which ſuch irritation would naturally produce. A moderate-ſized bougie ſtopped at two ſtrictures, but paſſed through them without much difficulty: when it entered the proſtate, the patient complained of burning pain; of a ſtrong irritation to make water; and grew ſo faint that I had merely time, by a gentle preſſure, to aſcertain that the bougie would paſs into the bladder: when I with-

I withdrew it, the point was covered with blood, The patient was directed to bathe the perinæum with warm water frequently, if the dyſury was urgent. He was much relieved by the introduction of the bougie, and did not want afterwards to void his urine oftener than every ſecond or third hour. The calls were leſs urgent, and the ſubſequent uneaſineſs leſs in ſeverity and duration. After two days, a bougie of the ſame ſize was introduced to the extent of eight inches, and withdrawn; no blood adhered to its ſurface. A ſmaller bougie, much curved, was now paſſed into the bladder; the patient complained of the ſame uneaſy ſenſation as before, when it entered the proſtate; but he did not grow faint. The point was bloody for three quarters of an inch, but leſs ſo than on its firſt introduction. More relief was experienced this time. The urine was now voided only every fourth hour. Two days afterwards the bougie was again introduced into the bladder, conſiderably curved, and with the point carried along the upper ſurface of the urethra, where it paſſes through the proſtate gland.

gland. The point was ſoiled with a yellowiſh fluid, ſlightly tinted with blood. As the patient was getting much better, the operation was not repeated till after four days, and then at the end of a week; at which time the blood and the yellow fluid had entirely diſappeared. The urine was not voided more frequently than natural, nor was its expulſion attended or ſucceeded by any painful ſenſation. The ſtrictures in this caſe felt firm, and not eaſily dilatable: I thought it neceſſary to relieve them, leſt they ſhould contribute to reinduce the irritation in the proſtate; but the patient felt himſelf ſo well, that he was averſe to any thing which might renew his former ſufferings, and he has had no ſymptoms of dyſury ſince that period. The proſtate in this patient was not enlarged nor tender. Concluſions ſimilar to thoſe, which were deduced from the former caſe, may be more fairly drawn from this; viz. that a diſeaſe may occur in the membrane of the urethra where it paſſes through the proſtate, and that it may render the bladder irritable, and produce ſtrictures in the urethra; for in this caſe there

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was no mechanical obſtruction to the expulſion of the urine to produce irritation in the bladder. It alſo appears, that the diſeaſe admitted of relief by the introduction of a bougie.

I have lately met with another caſe in a younger man, who is between twenty and thirty years of age, and who was afflicted with ſimilar fits of dyſury, the cauſe of which could not be aſcertained. I paſſed a bougie for him a few times, but found no ſtricture in the urethra. The ſame painful ſenſations were produced in the proſtate, as in the preceding caſes. The bougie did not appear at the time to relieve the dyſury; but the complaint gradually ceaſed, and the patient left town. He has been much better ſince this time, and attributes his relief to the paſſage of the bougie.

CASE.

A gentleman, about ſixty years of age, was affected with dyſury, which increaſed in violence, though various means were employed during

during two years for his relief. He voided his urine every ſecond hour, or oftener, with great pain and ſevere irritation; which continued for ſome time after its expulſion. He had ſuch a ſenſation of heat and uneaſineſs in the perinæum, that he could not bear to bring his thighs together; and he was obliged to uſe a cuſhion, with a vacancy in the middle, when he ſat down. He could not ride in a carriage, or even walk out, although his general health was good. A moderate-ſized bougie halted a little at two ſtrictures, and when it arrived at the proſtate produced a violent burning ſenſation, a vehement propenſity to void the urine, and extreme pain at about two inches from the orifice of the urethra; which part was always particularly painful during the time of voiding the urine, and after its expulſion. On withdrawing the bougie, which had entered the bladder, its point was found to be covered with blood. The proſtate being examined, felt rather broader than uſual, but was not tender. The patient was relieved by the introduction of the bougie, which was repeated on the third day:

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it went more freely through the ſtrictures, and the ſenſations, cauſed by its paſſage through the proſtate, were diminiſhed. The point of the bougie was bloody. I aſcertained that the blood came from that part of the urethra which is ſituated in the proſtate, by introducing a large bougie to the diſtance of eight inches, and then withdrawing it: the point was not in the leaſt ſoiled with blood. The ſecond introduction of the bougie produced conſiderable relief. The urine was retained longer, the uneaſy ſenſation in the perinæum was diminiſhed, and the patient could walk or ſit down more comfortably. The bougie was uſed every third or fourth day for three weeks; and then once a week for a month longer, its ſize being gradually increaſed. The appearance of blood on the point gradually ceaſed: it was afterwards ſoiled with a purulent and then with a mucous fluid, which appearances alſo gradually ceaſed. The water was now voided only at intervals of four hours, the ſubſequent pain being either trivial or entirely abſent; the uneaſineſs in the perinæum was

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ſo inconſiderable, that the patient could walk for ſeveral hours, and ſit down without pain. The ſeminal diſcharges had been attended with extreme pain, ſo great as almoſt to produce fainting, before the ſtate of the proſtate had been relieved: they afterwards took place without any unuſual ſenſation.

Theſe caſes ſhew that the urethra may become irritable and diſeaſed, where it paſſes through the proſtate gland, without any material diſorder of the contiguous parts. They induced me to pay particular attention to the ſtate of that part of the urethra; which attention will, in my opinion, be found of great conſequence in directing our treatment of theſe diſorders. As it would render this paper extremely voluminous to detail the particular caſes which I have met with, I ſhall merely relate the obſervations which I have made, and the inferences which I have drawn from them; that the profeſſion in general may inveſtigate the ſubject, and determine how far theſe obſervations and opinions are correct.

Firſt,

Firſt, then, it has appeared to me that a ſtate of inflammation and irritation may take place in the remote part of the urethra to a greater or leſs extent. It may produce in the proſtate that peculiar ſenſibility of the part which I have deſcribed; and in the perinæum it may cauſe contractions of different parts of the canal. Either of theſe affections may be more permanent than the other, even where each part has been equally affected in the beginning. This ſtate of inflammation and irritation is frequently produced by gonorrhœa, though it may occur from other cauſes. If, injudiciouſly, a bougie be introduced when this diſorder firſt occurs in a gonorrhœa, numerous ſpaſmodic ſtrictures* are met with; the patient becomes alarmed by the difficulty of paſſing the inſtrument, and by the name of ſtrictures, and conſults a more experienced ſurgeon, who directs local warm bathing, and

* I have uſed the term ſpaſmodic ſtrictures in the indiſcriminate manner in which it is generally employed, though I am aware that it is objectionable: a ſtricture from ſpaſm is not a ſtricture; and a ſtricture may be irritable or ſpaſmodical, or otherwiſe.

the

the application of leeches to the perinæum. The diſorder is cured; the patient expects that ſtrictures remain; a full-ſized bougie is introduced to ſatisfy him, which paſſes without the leaſt difficulty. I am unable to determine whether in ſuch caſes the urethra is affected in the firſt inſtance in that part which paſſes through the proſtate, as I never made any examination under theſe circumſtances, though I think it very probable that it is ſo. When a gleet becomes unuſually protracted, it is frequently owing to the effects of this diſorder in the remote part of the urethra, maintaining a degree of irritation in the front. Under theſe circumſtances, it is allowable to introduce a bougie, when ſtrictures will frequently be found in the perinæum; and in many caſes, the patients whom I have attended have experienced thoſe ſenſations, which are characteriſtic of tenderneſs in the membrane of the urethra, where it paſſes through the proſtate. If, therefore, we look to the origin of thoſe caſes, which we are called upon to attend in their advanced ſtages, we might expect to find the diſorder of the urethra various

with

with reſpect to the kind and extent of the diſeaſe. That it will be found ſo in practice I do not heſitate to affirm, from the obſervations which I have already made relative to this ſubject. In ſome caſes, ſtrictures in that part of the canal, which is ſubject to ſuch contractions, will be the ſole diſeaſe. In others, an uneaſineſs, and ſuch ſenſations as I have deſcribed, will be complained of as the bougie paſſes through the laſt inch of the urethra, which is contained in the proſtate gland. In ſome caſes alſo, the ſtrictures will be the leſs degree of the diſeaſe, and the irritation in the proſtate the greater; and in ſome caſes it will be found that nothing is diſcoverable which can fairly be denominated a ſtricture, and yet the tenderneſs which I have deſcribed exiſts in a moſt painful degree. In deducing theſe diſeaſes from the inflammation which gonorrhœa excites, I mean only to trace them from a very common origin. The ſame diſorders frequently take place without having been preceded by that complaint. An attention to the circumſtances, which have been mentioned, ſeems to me to explain the contra-

dictory events which happen, when a ſimilar plan of treatment is purſued for the cure of diſeaſes of the urethra. When ſtrictures are the ſole diſeaſe, they are often readily, and generally permanently, cured. When an irritation, ſuch as I have deſcribed, exiſts in the proſtate, it is difficult to enlarge the contracted portions of the canal; and, when that is accompliſhed, the ſtrictures recur, as a cauſe of irritation to the urethra ſtill continues. In ſome caſes, the enlargement of the ſtrictures fails to mitigate the dyſury, and in others it is augmented by the meaſures, which have been employed to cure the ſtrictures, when the ſtate of irritation at the neck of the bladder has been unadverted to. Many patients have applied to me under theſe circumſtances, after having been under the care of other ſurgeons. They have ſtated, that ſmall bougies only could be paſſed in the firſt inſtance, and that though the largeſt could now be introduced, the complaint was no better; nay, ſome have thought themſelves materially worſe. A bougie has paſſed in theſe caſes eight inches, without meeting any conſiderable obſtruction,

or

or exciting much ſenſation; but, after this point, it cauſed a moſt acute and burning pain, with vehement deſire to make water. Some have enquired if I was withdrawing the bougie, whilſt it was ſlowly proceeding, and ſome have complained of great pain in the front of the urethra. Similar caſes have occurred in my own practice. I have relieved ſtrictures, without materially benefiting my patients; of late years, I may venture to ſay, without making them worſe; becauſe I have been cautious not to hurt the canal, where it paſſes through the proſtate.

Some caſes of diſorders of the urinary organs are made worſe in the attempt to cure ſtrictures: and I think I deliver an important admonition, to the younger part of the profeſſion, when I caution them to beware, in their attempts to cure ſtrictures, that they do not irritate or injure the laſt inch of that canal, where there are no ſtrictures, but in which conſiderable diſorder may nevertheleſs exiſt.

In ſome caſes of diſeaſed urethra, which I have not unfrequently met with, ſtrictures are found, through which a ſmall bougie paſſes with difficulty; and it produces thoſe ſenſations, in paſſing through the proſtate, which I have deſcribed, as peculiar to that part of the canal when in a diſeaſed ſtate. The patient, however, experiences relief from the introduction of the bougie; and if it be paſſed again on the third day, it will meet with no obſtruction from the ſtrictures, and cauſe leſs uneaſineſs in paſſing through the proſtate. I have then taken a bougie of a larger ſize, ſuch as it would have been impoſſible to introduce in the firſt inſtance, and this has paſſed through the ſtrictures to the diſtance of eight inches; but I have forborne to carry it any farther, leſt I ſhould irritate the urethra near the neck of the bladder. It appears therefore to me, that you may relieve or aggravate ſtrictures in ſuch caſes in proportion as you diminiſh or augment the morbid ſenſibility of the remote part of the urethra; and an attention to the ſtate of this part is on this account of the greateſt importance.

Having

Having thus adverted to the probable origin of the diſeaſe, which I am endeavouring to deſcribe, and its connection with ſtrictures, I proceed to obſerve, that ſuch a ſtate of morbid ſenſibility in that portion of the urethra, which paſſes through the proſtate, may perhaps exiſt as a ſymptom of an irritable bladder. If the lining of the bladder were inflamed and irritable, it is probable that the diſorder would extend into the urethra for ſome ſmall diſtance. In the fourth caſe, I believe that the diſeaſe in queſtion was complicated with an irritable ſtate of the bladder; but whether it was to be conſidered as an adjunct circumſtance, or in the relation of cauſe or effect, cannot be determined. The irritability of the bladder was diminiſhed, but not cured, by the treatment which leſſened this diſeaſe. In one gentleman, who apparently died of an irritable bladder, and who complained of the ſenſations, which I have deſcribed, in an acute degree, on the bougie paſſing through the proſtate, the diſeaſed parts were examined, but very trivial morbid appearances were obſerved. The lining of the

the bladder was not perfectly natural, and was inflamed; yet the diſeaſed appearances were not ſtriking; and in the urethra the deviation from the healthy ſtructure was ſtill leſs ſo.

It is not improbable, however, that ſuch a morbid ſenſibility of the proſtatic urethra may ariſe from an irritable bladder. Perhaps, alſo, it may occaſionally ariſe from the irritation of the laſt ſtricture. Many patients with ſtrictures, who complained much of the ſenſations at the neck of the bladder, at the commencement of the treatment of their complaint, have aſſerted, that they felt no unuſual ſenſations when the bougie paſſed through the proſtate, after the ſtrictures had been cured. Yet, though I would admit that a tenderneſs of the canal of the urethra in the proſtate may ſometimes ariſe from its proximity and continuity with the lining of the bladder, or with the laſt ſtricture, I think it more frequently exiſts as an original and independent diſeaſe. It has been ſhewn, that it may render the bladder irritable, and excite contractions

tractions in the urethra. Some caſes have been adduced, which ſhew that this ſtate may exiſt, and yet the bladder may not be conſtantly irritable, but that it may be affected by fits. I have alſo met with a caſe where this ſenſibility exiſted in an extreme degree, and yet it ſeemed to have very little influence on the bladder. I have likewiſe known this irritable ſtate of the urethra complicated with the common enlargement of the proſtate.

I proceed, in the next place, to relate what I have obſerved reſpecting the treatment of the diſeaſe, which I have been deſcribing. The three firſt caſes ſhew, in a ſtriking manner, the advantage derived from the introduction of bougies; and I have ſeen many ſimilar ones, though I ſcarcely think ſo demonſtrative of the utility of this mode of treatment. I know ſome patients with occaſional attacks of dyſury, and who have this tenderneſs of the remote part of the urethra, in whom the paſſage of a bougie, together with warm bathing of the perinæum and adjacent parts, very ſpeedily relieves a diſeaſe,

which

which had proved very tedious and diſtreſſing, before theſe meaſures were adopted. If a bougie be introduced, for the firſt time, in a caſe of this deſcription, ſevere pain is felt, and faintneſs is occaſioned: if this operation be repeated three days afterwards, the pain perhaps is much leſs ſevere, and it may diminiſh at each ſucceeding introduction of the inſtrument. Should this be found to be the caſe, ſurely nothing need be farther ſaid in commendation of this mode of treatment. The morbid ſenſibility of parts is diminiſhed by it. This happened in the three firſt caſes in a remarkable degree, and I have known it take place in many others. Nor is there any thing in this event that ſhould excite ſurpriſe: every ſurgeon is familiar with the ſame circumſtance, with relation to ſtrictures in the urethra. The firſt introductions of a bougie are very painful; the ſubſequent ones are even diſregarded. Still, however, I think it may be uſeful to dwell a little on this ſubject, and conſider the probable cauſes of theſe effects, as it may tend to eſtabliſh rules for our conduct in practice. It appears to me, that we

diminiſh

diminiſh the morbid as well as the natural ſenſibility of parts by doing them a degree of violence, ſhort of that which produces a kind of re-action in them, by which their ſenſibility is heightened. This is, indeed, the conſideration, which guides my practice in theſe and in many other caſes. If, even in ſtrictures of the urethra, the ſenſibility of the canal becomes increaſed by the introduction of bougies, or, in other words, if inflammation is excited, ſurely it is wrong to proſecute ſuch meaſures at this juncture. If the morbid ſenſibility be diminiſhed, we may uſe more freedom in the proſecution of our meaſures. In paſſing the bougie, in the caſes now under conſideration, it ought at firſt, I think, to be ſo ſmall as not at all to diſtend the irritable urethra. I have always curved it conſiderably, and kept the point in contact with the upper ſurface of the urethra, as it paſſes through the gland. I recommend warm bathing to the perinæum, with a view to obviate or diminiſh irritation. If I find, on the ſecond introduction of the bougie, the ſenſibility of the parts diminiſhed, it induces me afterwards to

proceed

proceed more freely; but at all times with a caution excited and regulated by the conſideration which I have mentioned. Now, though ſuch conduct has been ſucceſsful in many inſtances, I am concerned to ſtate, that it has failed in ſome others; and, when I clearly aſcertain that I am not likely to ſucceed, I ceaſe to make farther attempts by the introduction of bougies, and purſue only general methods, ſuch as warm bathing, bleeding by leeches, &c. When there are ſtrictures, which it is right to enlarge, I paſs the bougie through the laſt ſtricture, without carrying it on, ſo as to irritate the tender part of the urethra, which lies behind it. A knowledge of the nature of diſeaſes cannot but be deſirable, even though it does not enable us to cure them all. If ſtrictures are removed, and dyſury remains, I believe it is common to conſider it as ariſing from an irritable bladder: now, though this may be a general truth, there are many exceptions. I do not find that attention is paid to that deſcription of caſes, which makes the ſubject of the preſent paper: I was unacquainted with them till

till I met with the cases which I first mentioned: the knowledge which I have thus obtained has enabled me to afford relief in many cases, and has prevented me from error in others.

On the Treatment of one Species of the Nævi Materni.

I ſhall relate two caſes, and ſay a few words on the treatment of this complaint, which is a congenital deformity, conſiſting in a cluſter of enlarged veſſels, filled, and occaſionally diſtended by the influx of blood from numerous ſurrounding arteries. The deformity to which I allude is ſo well known, and ſo frequent an occurrence, as to preclude the neceſſity of any deſcription. Mr. John Bell has of late propoſed an ingenious theory of its formation, and has denominated it an aneuryſmal enlargement of the veſſels, in conſequence of their anaſtomoſes. There can be no doubt that the repletion, diſtention, and conſequent enlargement of the dilated veſſels depends

depends upon a kind of inflammatory action of the ſurrounding arteries; for, if that be wanting, the mark ceaſes to enlarge, and if preſent, it increaſes in ſize in proportion to the degree of inflammatory action. In many caſes theſe marks, having increaſed to a certain degree, ceaſe to enlarge; they then remain ſtationary, or gradually diminiſh, till they almoſt diſappear. This occurrence is not ſo frequent as to induce ſurgeons to expect ſuch an event, or to prohibit, in conſequence of ſuch expectation, their removal. For, if they continue to enlarge, the operation muſt be commenſurate to their ſize. The conſequences of their burſting are alarming and vexatious. It is not, however, my intention to ſpeak of theſe affections in general, but only to ſtate what, perhaps, may in ſome inſtances be done with ſucceſs, when the removal of the unnatural ſtructure cannot be accompliſhed. For this preternatural enlargement of veſſels is not always cutaneous. I have ſeen it occupying the whole ſubſtance of the cheek, neither appearing beneath the ſkin nor the membrane of the mouth: I have

met

met with it in the orbit of the eye, and have found it covering the whole of an extremity, or nearly one half of the trunk of the body. If any means can be purſued, under ſuch circumſtances, to check the progreſs of the complaint, they ſurely deſerve attention. I was lately ſo fortunate as to ſucceed in ſuch endeavours, in caſes, the relation of which is my chief object at preſent.

CASE.

A child about two months old was brought to St. Bartholomew's hoſpital, with this unnatural enlargement of veſſels, diſtributed every where beneath the fore arm, from the wriſt to the elbow. In a ſhort time it had ſwollen to that degree, that the circumference of the affected fore arm was twice the ſize of the other. The veſſels were large and contorted; and to give the reader an idea of their appearance, I may mention that the child's mother affirmed that they reſembled the entrails of a pig, with which ſhe had either been frightened or diſguſted during her pregnancy.

The

The ſkin was of a duſky hue, and had not its natural ſmoothneſs of ſurface. The heat of this fore-arm was much greater than that of the correſponding ſound one. Preſſure forced the blood out of the veſſels, and temporarily diminiſhed the bulk of the limb, and made it of a paler colour. The child's mother lives at Turnham Green, where Mr. Graham, an ingenious ſurgeon who was for a long time a ſtudent at St. Bartholomew's Hoſpital, alſo reſides. I requeſted this gentleman to take charge of the caſe, and try the effect of the following plan of treatment, which it ſeemed to me right to inſtitute. Firſt, I was deſirous of aſcertaining whether a permanent and equable preſſure would not prevent the diſtenſion and conſequent enlargement of the turgid veſſels; ſecondly, whether reducing the temperature of the limb would not diminiſh the inflammatory action, upon which their repletion ſeemed to depend. Theſe two intentions admitted of being readily accompliſhed. A many-tailed bandage of ſticking plaſter ſeemed adequate

adequate to effect the firſt, and wetting the limb with water the latter. Theſe meaſures were judiciouſly carried into effect by Mr. Graham; the preſſure was firſt made ſlightly, and afterwards more forcibly, as the part ſeemed to bear it without inconvenience. A roller was applied over the plaſter and kept wet, if the limb felt hotter than natural, ſo as to regulate its temperature. The ſucceſs of theſe meaſures exceeded our moſt ſanguine expectations. The ſize of the limb gradually diminiſhed, and its temperature became natural. After ſix months, Mr. Graham removed the bandages, which it was not neceſſary to continue any longer. The limb was in ſome degree waſted, from preſſure and diſeaſe, but it ſoon gradually re-acquired its natural ſize. After the bandages had been left off for a month, I ſaw the child. The ſkin was pale and had a ſlightly ſhrivelled appearance. The contorted veſſels felt like ſolid chords interpoſed between it and the faſcia of the forearm.

CASE.

CASE.

A child had this unnatural ſtate of the veſſels in the orbit of the eye. They gradually increaſed in magnitude, and extended themſelves into the upper eye-lid, ſo as to keep it permanently cloſed. The cluſtered veſſels alſo projected out of the orbit, at the upper part, and made the integuments protrude, forming a tumour as large as a walnut. Of courſe, the removal of this diſeaſe did not appear practicable. I was conſulted on this caſe by Mr. Hurlock, whom I told of the ſucceſs of the former experiment. Preſſure to any extent was here evidently impoſſible; but the abſtraction of heat, and conſequent diminution of inflammatory action might be attempted. I recommended that folded linen, wet with roſe water ſaturated with alum, ſhould be bound on to the projecting part, and kept conſtantly damp. Under this treatment the diſorder as regularly receded as it had before increaſed. After about three months it had gradually ſunk within the orbit, and the child could

open its eye. Shortly afterwards all medical treatment was diſcontinued, and no appearance of this unnatural ſtructure remains.

A third caſe of a very extenſive mark of this deſcription, covering the back and ſhoulder, got well, as I am informed, by the ſame treatment. I have not, however, been able to learn the particulars. It appears to me probable, from the foregoing caſes, that if the preternatural diſtention of the veſſels could be prevented, the blood might coagulate in them; and thus this unnatural contexture of veſſels, being rendered impervious, might become obliterated.

The beſt mode of obtaining and increaſing profeſſional knowledge is, in my opinion, to pay that ſtrict attention to caſes, which enables us to note thoſe nice ſhades of difference, which diſtinguiſh diſeaſes from each other; and alſo to form ſome regular arrangement of them; ſo that, ultimately, we may be able to diſcover their natural ſeries and order. This method I have purſued from the beginning of my profeſſional

ſeſſional ſtudies. Whenever the opinions, which an attention to caſes had impreſſed on my mind, differed from thoſe which ſeemed to prevail amongſt other practitioners, I publiſhed the caſes, and the inferences which I drew from them; becauſe I thought the caſes, at leaſt, deſerved attention, and that the juſtneſs of my opinions would either be confirmed or confuted by thoſe of the public. It is alſo of acknowledged utility to the promotion of ſcience, to excite inveſtigation, and even publicly to announce the deficiencies of our knowledge. Such were the conſiderations, which induced me to lay before the public my former and the preſent eſſays and obſervations. I am induced to mention my motives, though indeed they are ſufficiently apparent, becauſe I ſuſpect that I may, on this occaſion, be again cenſured for producing unfiniſhed performances, and for not paying ſufficient attention to the records of ſimilar caſes, which are contained in books. The very deſign of the work includes in it, however, a degree and acknowledgment of imperfection;

and

and what I wiſh to obſerve on this ſubject will be beſt expreſſed in the words of Horace:

"*Eſt quódam prodire tenus; ſi non datur ultrà.*"

For my apparent inattention to reading on the ſubjects, which it is the intention of theſe eſſays and obſervations to illuſtrate, I have formerly aſſigned, what appeared to me to be an adequate apology—

"In proportion as we advance in knowledge, we are led to remark many circumſtances in the progreſs of a diſorder, which had before paſſed without notice; but which, if known and duly attended to, would clearly point out the nature of the complaint. Hence the records of former caſes are of much leſs value; as the ſymptoms, about which we are now anxious to inquire, have, in them, been entirely overlooked." To adduce caſes without opportunities of identifying them, would only lead to controverſy.

Again then I publiſh a work, with all theſe imperfections, regardleſs too of my own reputation,

putation, whilſt I am conſcious of performing a duty in not ſecreting knowledge, or making it merely ſubſervient to private views; but in publiſhing information, which could not be collected without opportunities that few poſſeſs, and which may, in various ways, contribute to promote the advancement of medical knowledge.

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