

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., honorary member of the Royal Medical Society of Edinburgh.

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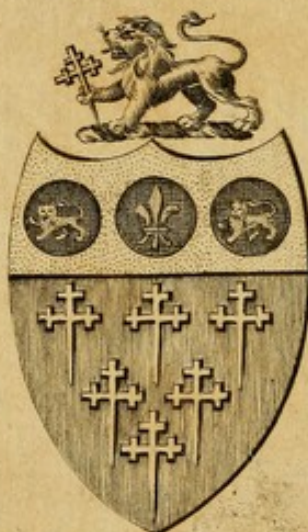
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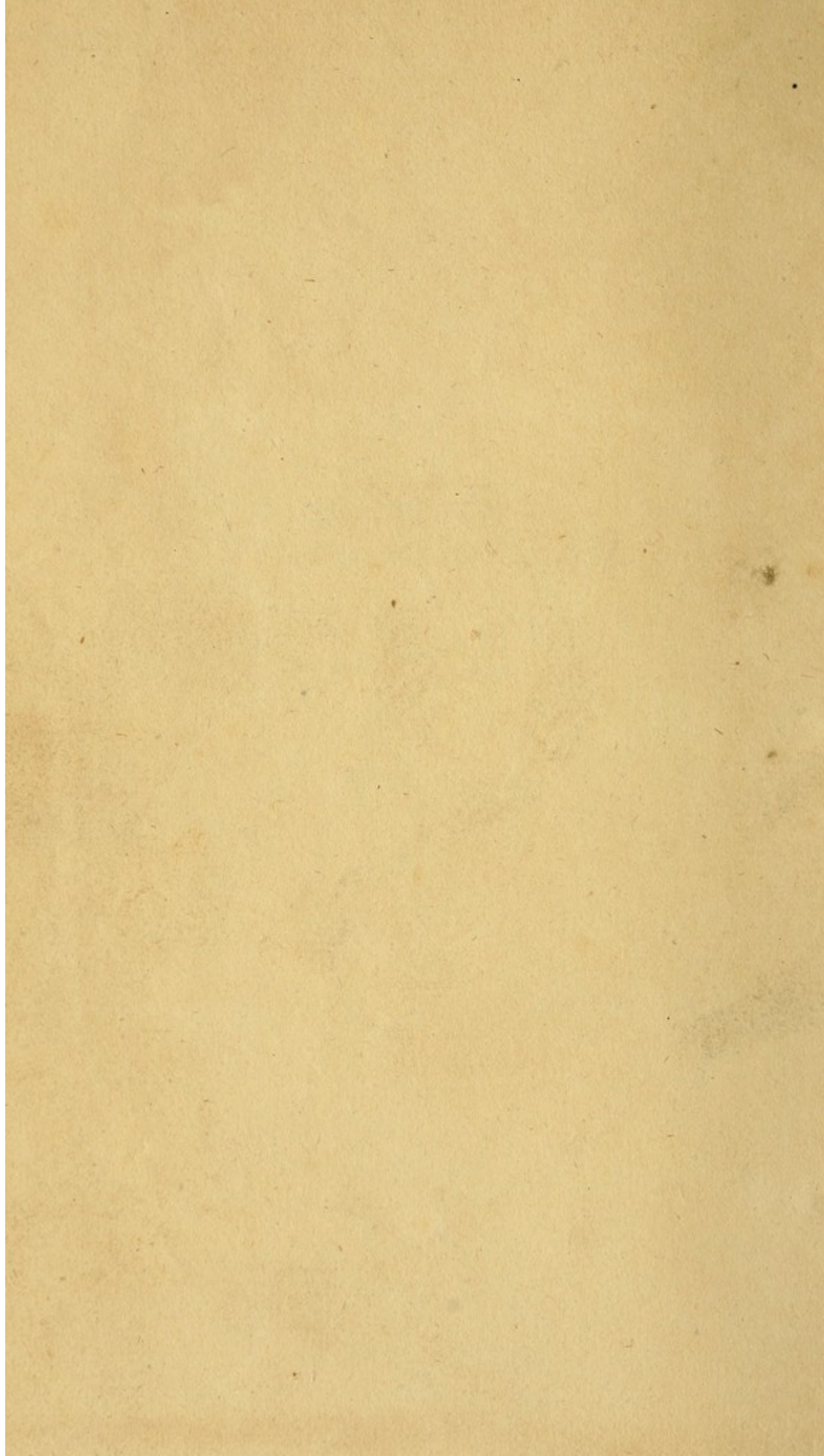


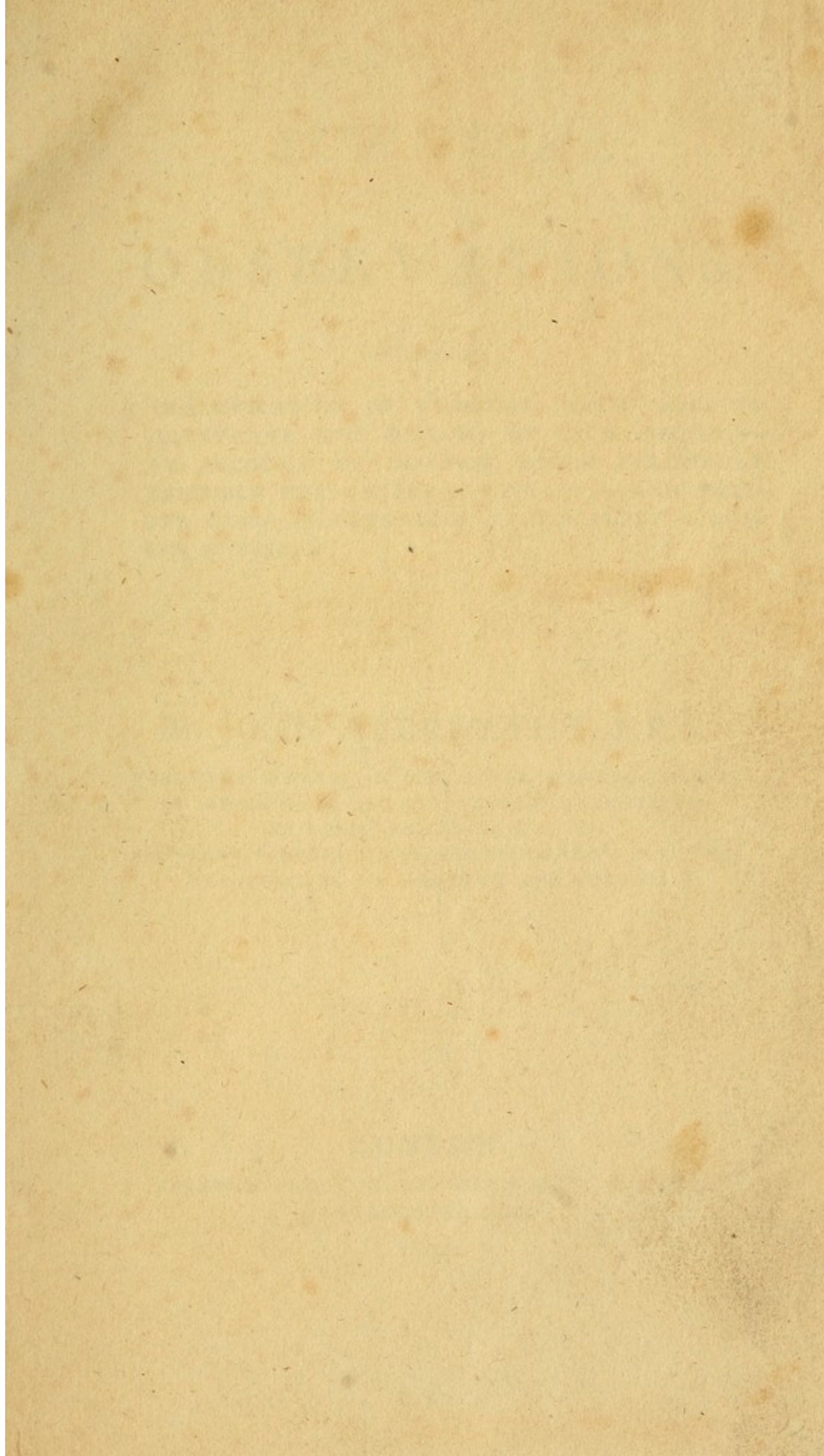
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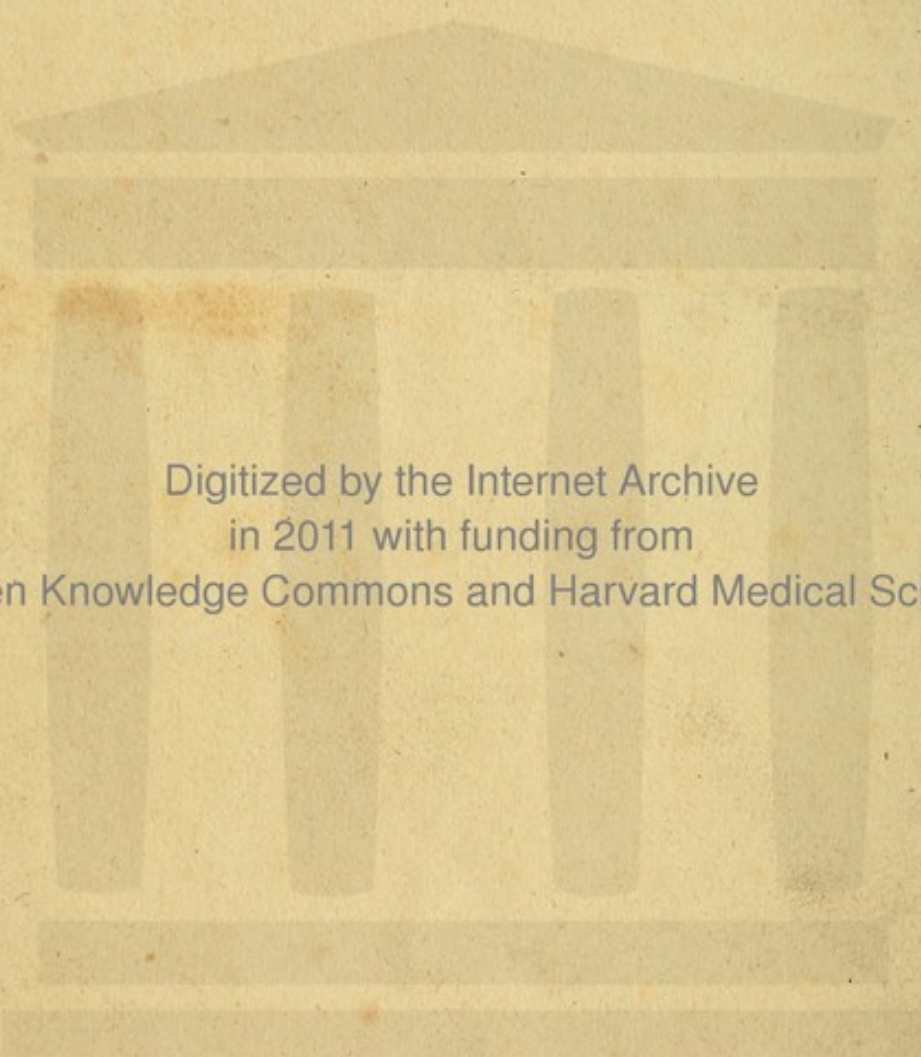
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SURGICAL
OBSERVATIONS,

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 VARI-
OUS CASES ILLUSTRATIVE OF DIFFERENT SURGI-
CAL SUBJECTS.

BY JOHN ABERNETHY, F.R.S.

HONORARY MEMBER OF THE ROYAL MEDICAL SOCIETY
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LONDON:

PRINTED FOR T. N. LONGMAN AND O. REES,
PATERNOSTER-ROW.

1804.

STUDY

OBSERVATIONS

ON

A CLASSIFICATION OF THE
HISTORICAL RECORDS OF THE
UNITED STATES OF AMERICA
AND THE
THEORY OF THE
HISTORICAL RECORDS

BY JOHN A. HARRIS

OF THE
HISTORICAL RECORDS OF THE
UNITED STATES OF AMERICA
AND THE
THEORY OF THE
HISTORICAL RECORDS

LONDON:

PRINTED FOR W. H. LINDSAY AND CO. LTD.
PATENT OFFICE

1894

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 embryo, 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 vessels

fels 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,
2 and

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

5 mentioned

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, floughs and falls out; sometimes portions seem to be detached, and come away without floughing. 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.

C A S E.

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 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 hectic 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,

fule, 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.

C A S E.

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

D

word

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 sup-
puration.

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 circumstance was not perceived; and the edges of the wound were brought together by one future, 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.

C A S E.

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 ferous 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 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 farcocele 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 the 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 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 fimilar tubercles were found on the furface of the lungs, heart, liver, fpleen, omentum, and mefentery. The abforbent glands of the mefentery, and the other internal abforbent glands were, however, unaffected by this difeafe.

Medullary Sarcoma.

The farcoma which is next to be defcribed is generally found in the teftis, and is diftinguifhed by the name of the foft cancer of that part. The term cancer is objectionable, becaufe it conveys an erroneous idea of its nature; for this difeafe, though perhaps equally deftructive, will be fhewn to be unlike cancer in its nature and progrefs.

The tumour, in thofe cafes of the difeafe which I have moft frequently met with, has been of a whitifh colour, refembling, on a general and diftant infpection, the appearance of the brain. The difeafe is ufually of a pulpy confiftence; and I have, therefore, been induced to diftinguifh it by the name of medullary farcoma. 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.

C A S E.

A tall thin healthy-looking man, of about forty years of age, had, about fifteen years before, a swelled testicle from a gonorrhœa; 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 swollen 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

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 texture 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 apparently grown into the deposited matter. I am also much mistaken if I have not seen tubercles in the lungs suppurate, though they

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

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

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

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

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 swollen. 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
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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.

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 some-
times, lymphatic glands out of the course of
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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 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 that 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.

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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.

There

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 opinion, 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 familiarly 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.

C A S E.

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,

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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 pulpi-ness 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 teasing 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

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 fifty 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

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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
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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 farcomatous 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 offic 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 many 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 the 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
in

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.

C A S E.

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
try

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.

Under this treatment the tumour was dis-
cuffed, and the sore at the same time healed.
About three weeks afterwards the patient
called on me, and said that there were vene-
real ulcers in his throat; and in each tonsil
there was an ulcer deeply excavated, with ir-
regular 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 ve-
nereal. Shortly after also, some copper-co-
loured 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 thick-
ening and elevation of the pericranium cover-
ing 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.

C A S E.

A gentleman had a sore on the lower part of the prepuce near the frænum, 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.

C A S E.

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.

C A S E.

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 swollen 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 fore,
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 forenefs spread over the other half of the corona glandis; but this disease was not accompanied with so much tendernefs 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.

C A S E.

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
was

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.

C A S E.

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

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 mercury, 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
may

may question if the secondary symptoms were the consequences of the fores 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 fores 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 fore 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 morbid 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.

In

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

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surface

surface of the fore with argentum nitratum, but that did harm. I therefore was obliged to soothe this fore 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 fore that it would have been absurd to persevere in the use of mercury. The fore continued to slough, and to extend in a circular direction nearly all round the prepuce, the lower part of which became extremely swollen. 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
encreased

increased 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 fore of the penis, which also gradually acquired a healthy appearance, and the parts became found, 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 state,

state, and healed. This also happened in the remaining diseased part of the fore 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 forethroats. 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 fore 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
so

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

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
a fur-

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 fucceffively take place in another.

In recommending delay it cannot, I fup-
pofe, be thought that I would advife any one
to wait till an ulcer destroyed the velum pen-
dulum palati, or did material injury to any
important part. There are cafes where the
progrefs of the difeafe obliges a furgeon to ufe
mercury even though he may be fufpicious
that it is not fymphilitic. The effect of ex-
citing a mercurial affection of the conftitu-
tion in difeafes refembling fymphilis is, as far as
my obfervation enables me to determine, very
various. It fometimes cures them very fud-
denly and very differently from the gradual
amendment which it produces in truly vene-
real difeafes. Sometimes, however, thefe
difeafes yield more flowly to its operation,
and are cured permanently. Sometimes the
difeafes recur in the fame parts after a fe-
vere courfe of mercury; fometimes mercury
merely checks the difeafe, and can fcarcely be
faid to cure it; in which cafe it feems impor-
tant to fupport the ftrength of the conftitu-
tion,

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 fore 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.

S E C T. 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

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

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cured

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

characteristic 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.

C A S E.

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

tion should be avoided ; and when, therefore, the retraction of the prepuce cannot be effected without injury to the fores, 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 fores 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 fores. 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 capiti papaveris. This fore 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 fore-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?

C A S E.

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 surpris'd 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 fores. 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 fore 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
like

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 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

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surface.

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 fores 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, fores 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 fores 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 fores 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 fores 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 fores from about the orifice of this part. These are of a different nature from the fores 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 fores 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 fores 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 gonorrhœa 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, forethroat, 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.

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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 experience ; 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

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cases

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
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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
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to the deficiency in the bone, through which the effused blood and crushed brain had been discharged. In other respects these membranes were perfectly found. 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 found, 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 uncontrollable 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

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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 paralyze 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.

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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.

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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.

C A S E.

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

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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
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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

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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
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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 between 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
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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 derangement, 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.

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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
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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 Desault, 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.

C A S E.

—— 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
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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 performance.

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
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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 future, and some strips of sticking-plaster. The threads of the upper ligature were left out of the wound

above the future 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
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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 foetid. 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,

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and

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 foetid by putrefaction, infomuch 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
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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 foetid 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 floughing fore 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,

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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 periosteum.

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.

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

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operation

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 floughing 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
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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
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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 muscoli pyramidales abdominis, so that the lower part of the wound laid bare the top of the symphysis 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 apprehension

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 symphysis 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
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cyft made by the protrufion of the internal coat of the bladder, had been formed between the bladder and the rectum, which contained the greateft quantity of the retained urine. The orifice, by which this cyft communicated with the bladder, did not exceed in dimenfions the barrel of a common quill. It alfo appeared that, though the bladder itfelf could not in this cafe be faid to have been diftended, yet the front of it only was wounded by the trochar, and the back part was uninjured.

To return from this digreffion to the operation in the cafe which I was relating: after I had, by an incifion between the pyramidales mufcles, enabled myfelf to pafs my finger along the upper part of the fymphyfis pubis, fo as to prefs againft the diftended bladder, I introduced a common trochar of the middle fize, in a direction obliquely downwards. There is an advantage, as Sabatier, in his *Medicine Operatoire* obferves, in introducing an inftrument in this direction, for it accords with the axis of the bladder, and is therefore not

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likely

likely to injure the opposite side of that organ. When I found that the instrument had penetrated the cavity, I withdrew the stilett 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 stilett 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

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flowed

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.

C A S E.

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-

fionally 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.

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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
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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 Frotfcher's of the Cervical Nerves, in Ludwig's Opera Minora, or Walther's Plates.

fo. 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 ischiadic 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. Cruik-
shank

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.

C A S E.

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
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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 prefs firmly againft 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 flighteft touch caufed them to difappear, and to glide with velocity into the general cavity of the joint.

This is the fituation, and the manner in which I think thefe bodies can be moft conveniently and certainly fixed. The inner furface of the internal condyle of the os femoris prefents an extenfive and nearly plain furface, 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 preffed upon this edge fo as to form a kind of line of circumvallation round thefe bodies, they cannot pafs into the joint in this direction, nor can they recede in any other, on account of the tenfe ftate of the internal lateral ligament. Here thefe fubftances are near the furface, and may be diftinctly felt; and there is nothing to be divided in order to expofe them, but the integuments, fascia, and the capfule 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

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-

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maining

maining unaffected by moisture and moderate warmth is well known.

Folded linen kept damp 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.

FINIS.

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BY

JOHN BURNET

OF THE UNIVERSITY OF OXFORD

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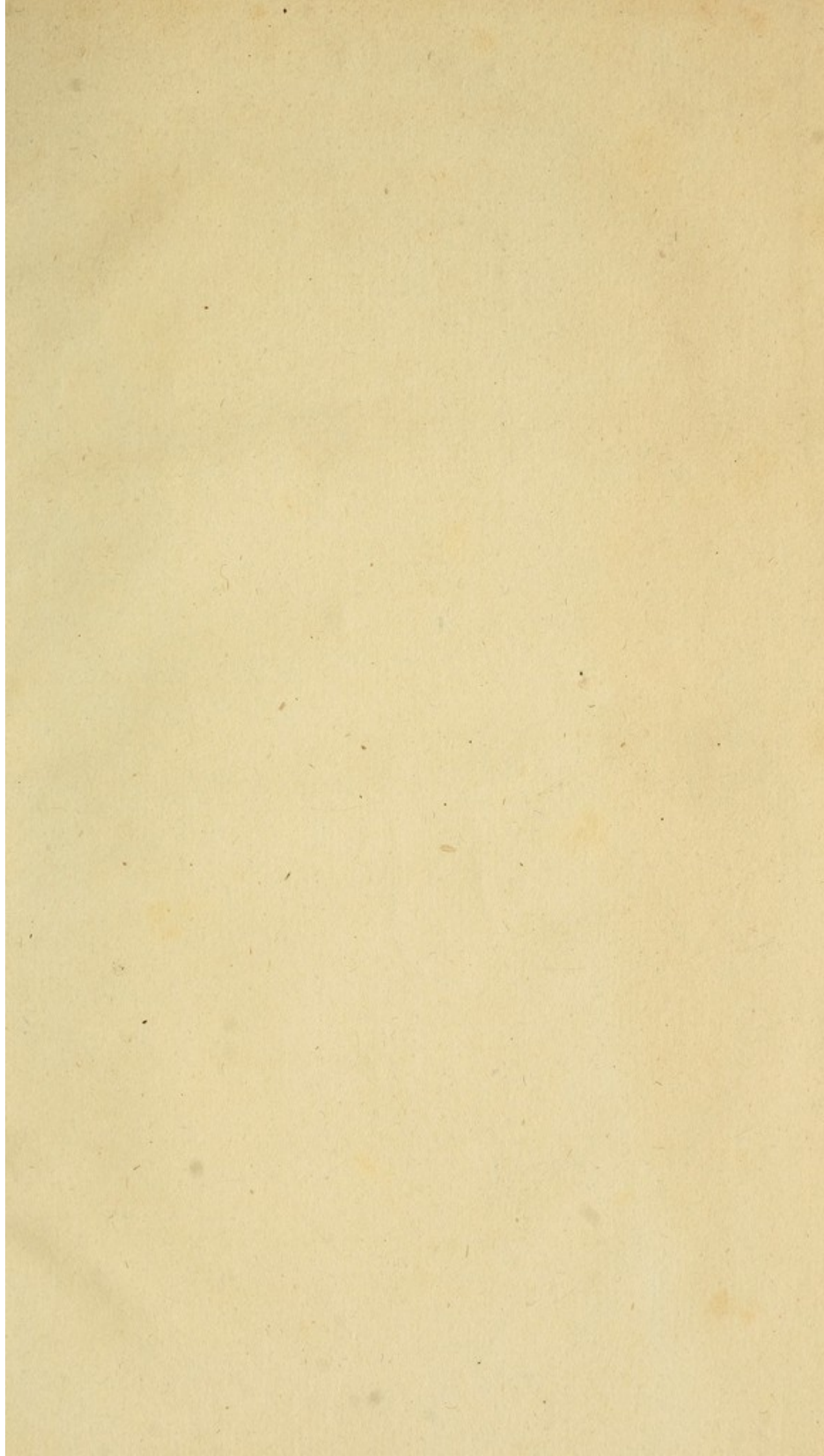
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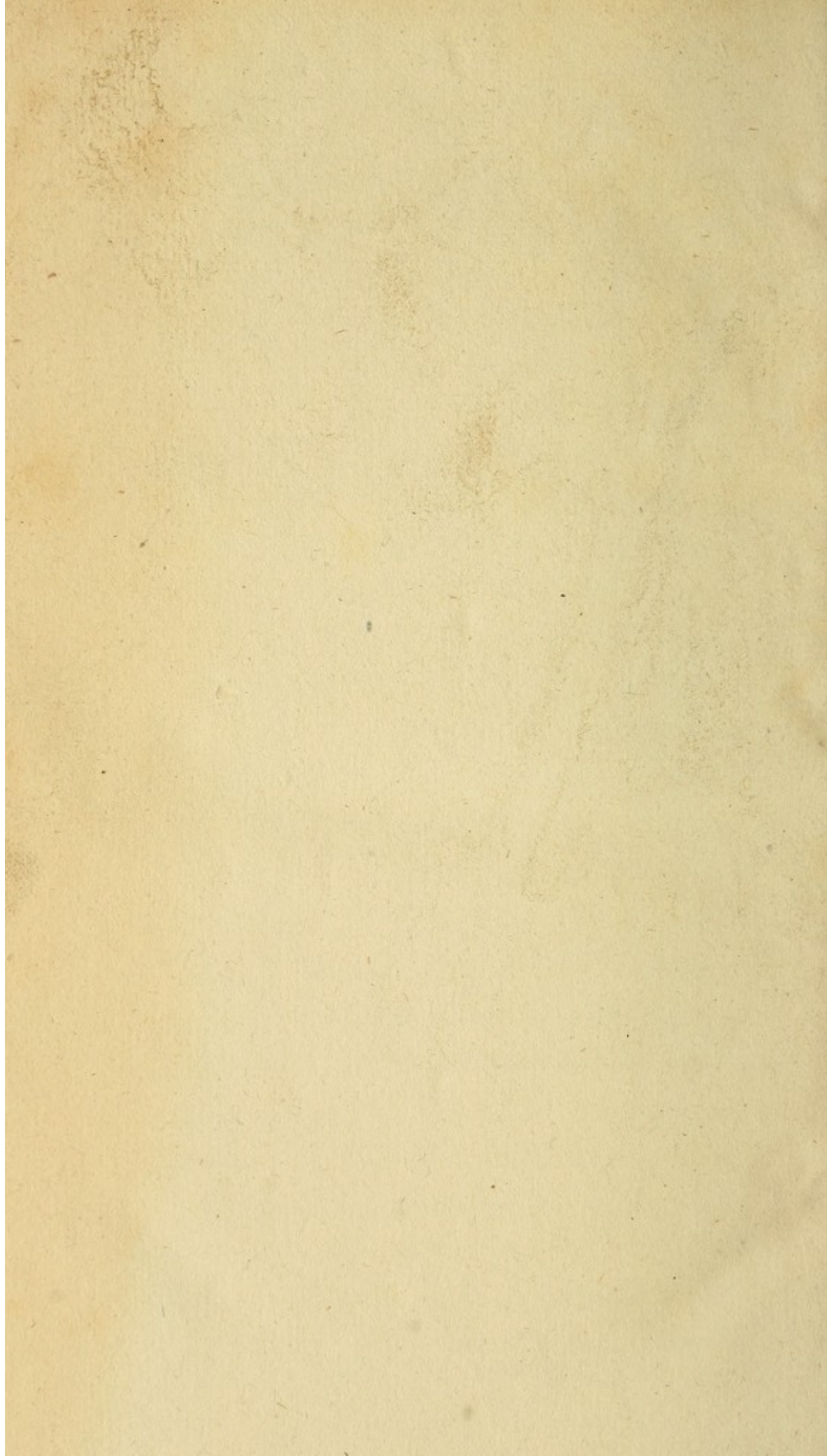
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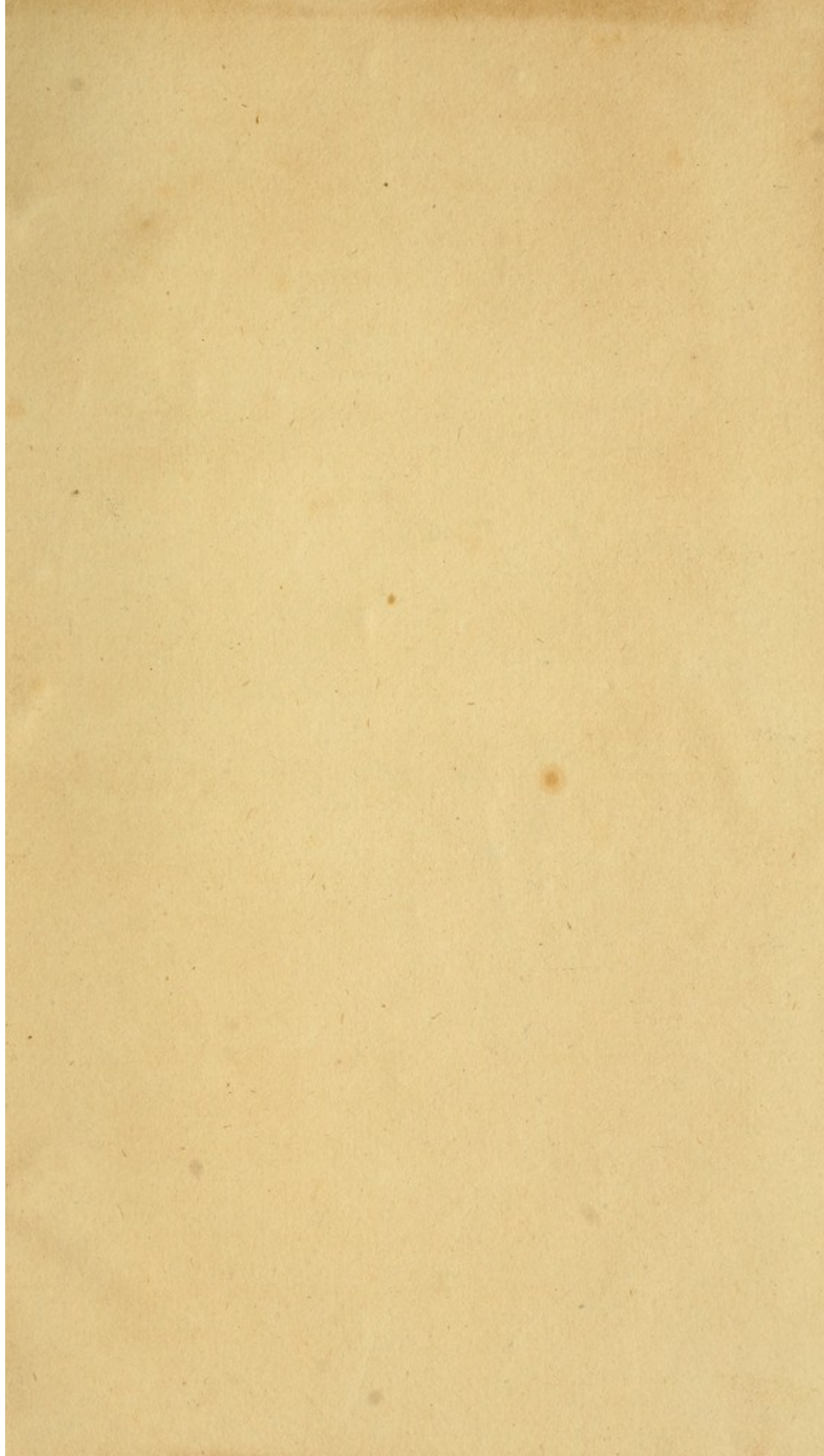
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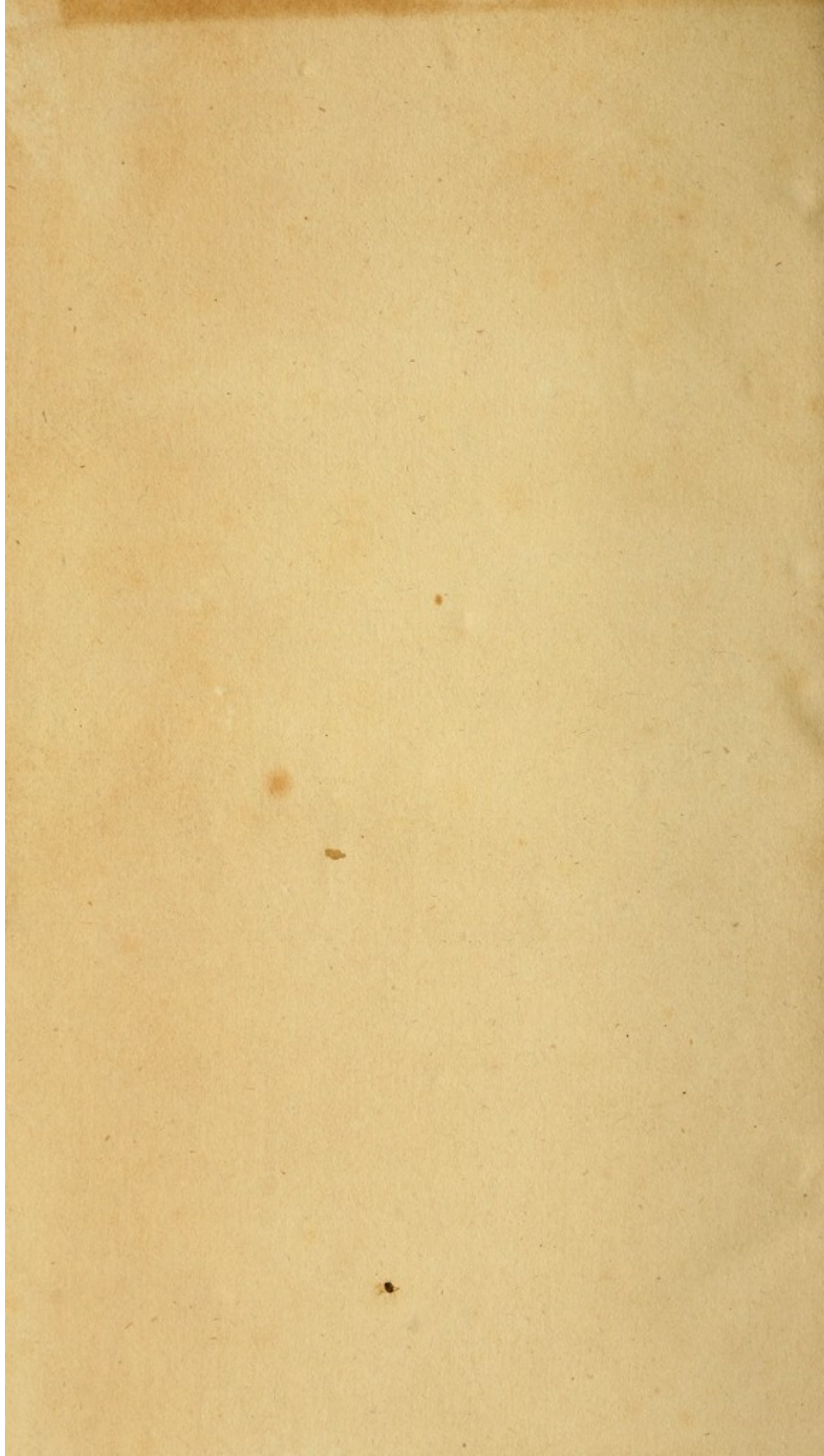
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