

A practical treatise on haemorrhoids or piles, strictures, and other important diseases of the rectum and anus : being, with some additions, a treatise to which the Jacksonian Prize was adjudged by the Royal College of Surgeons / by George Calvert.

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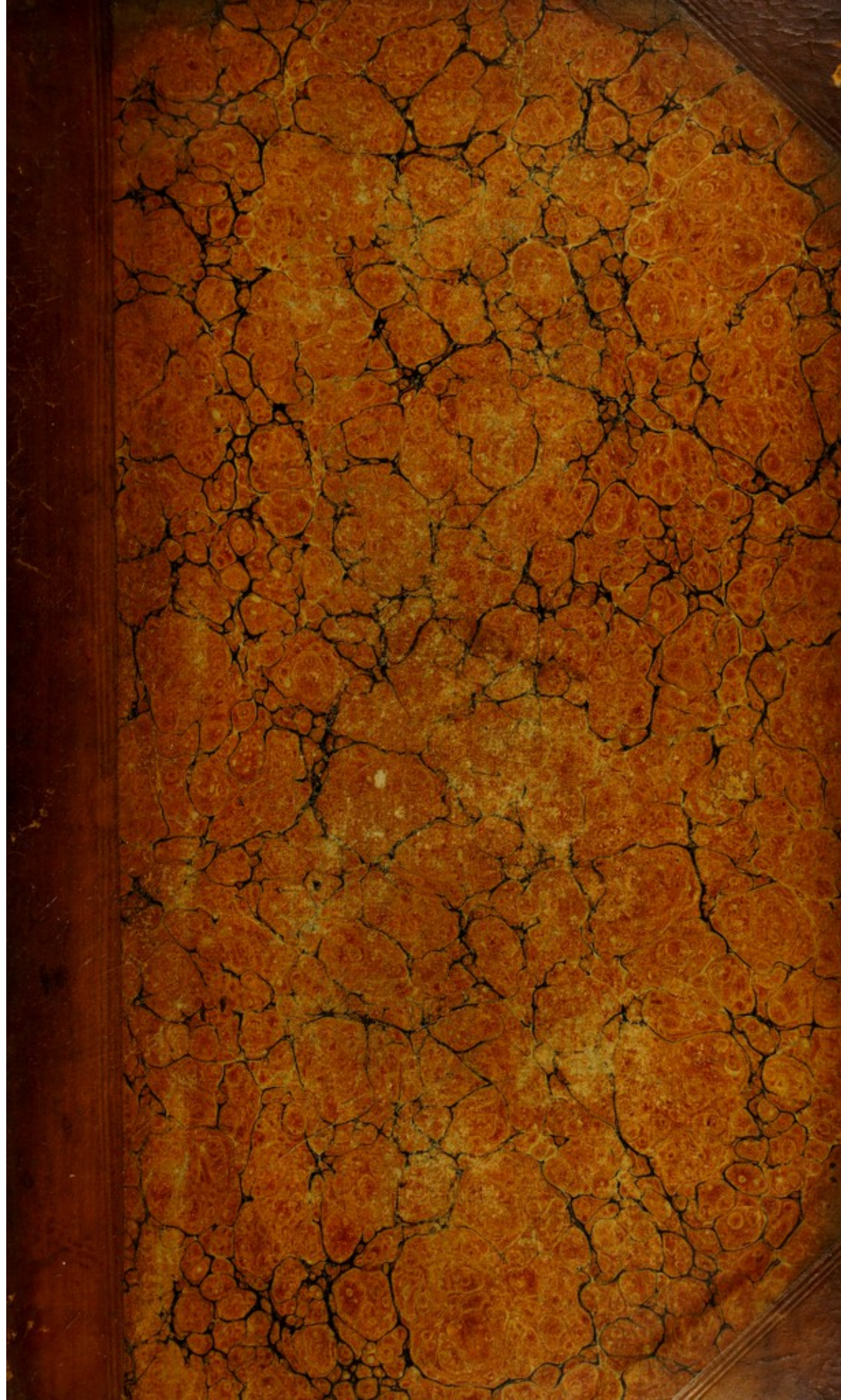
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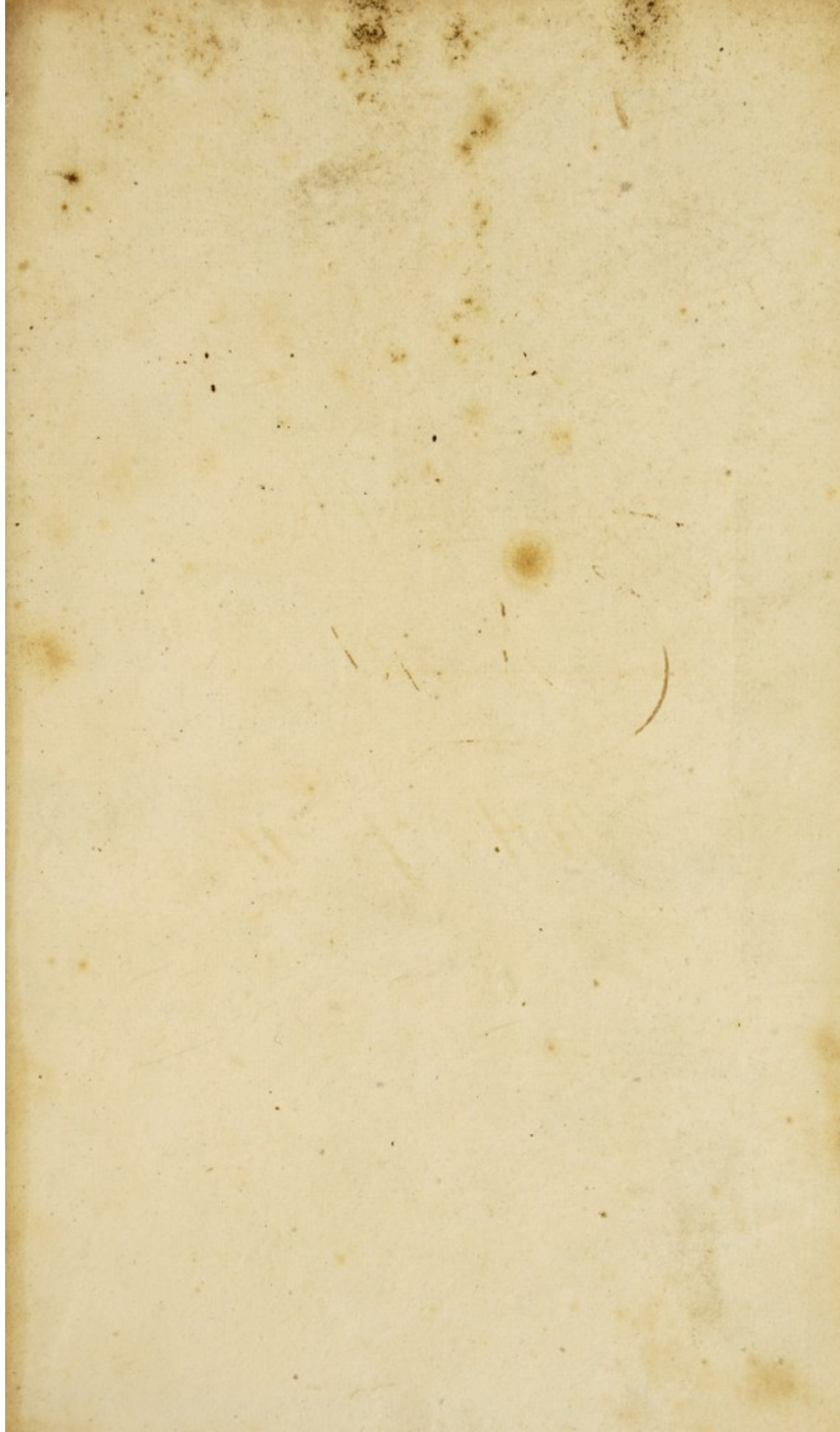
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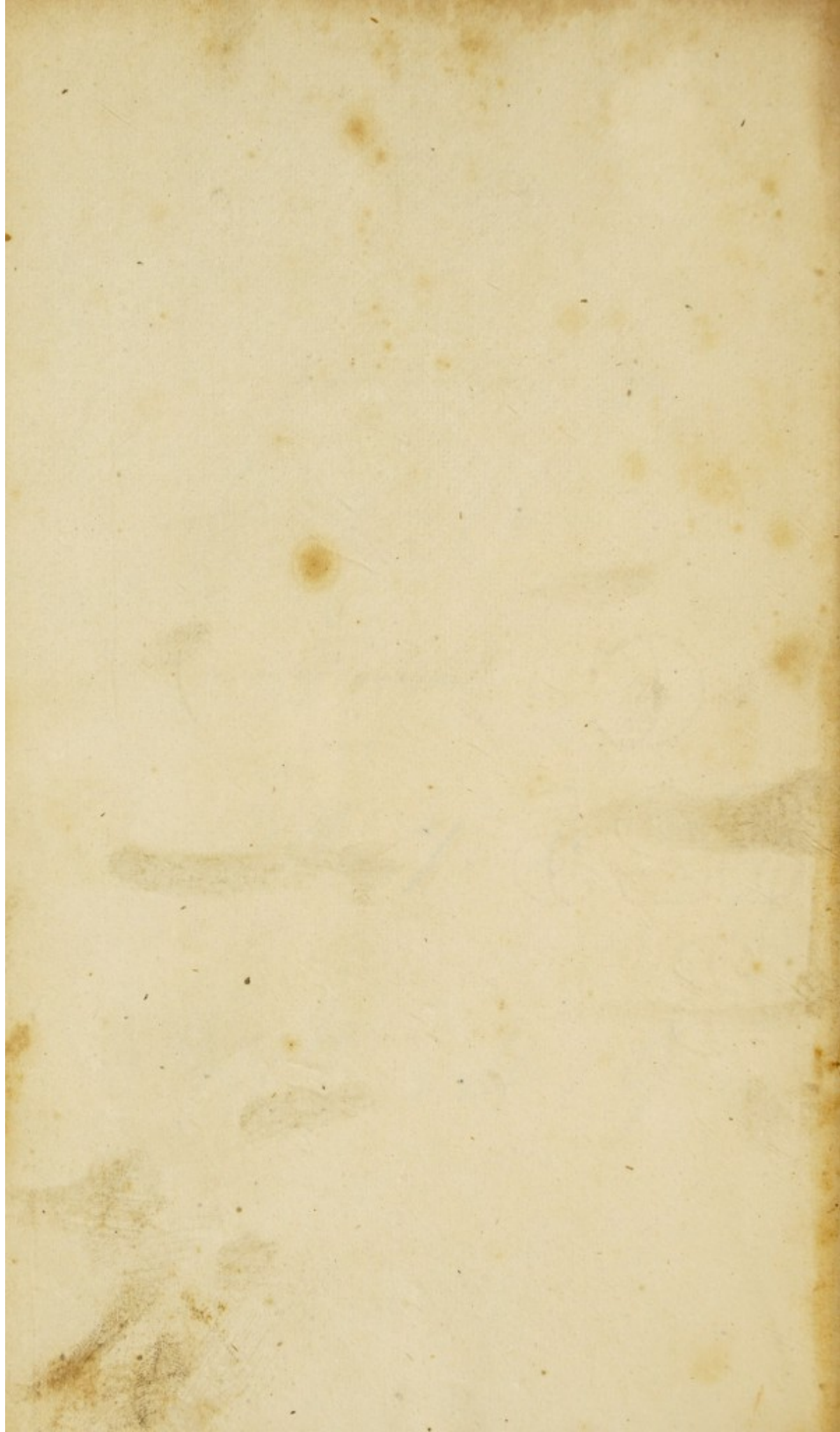
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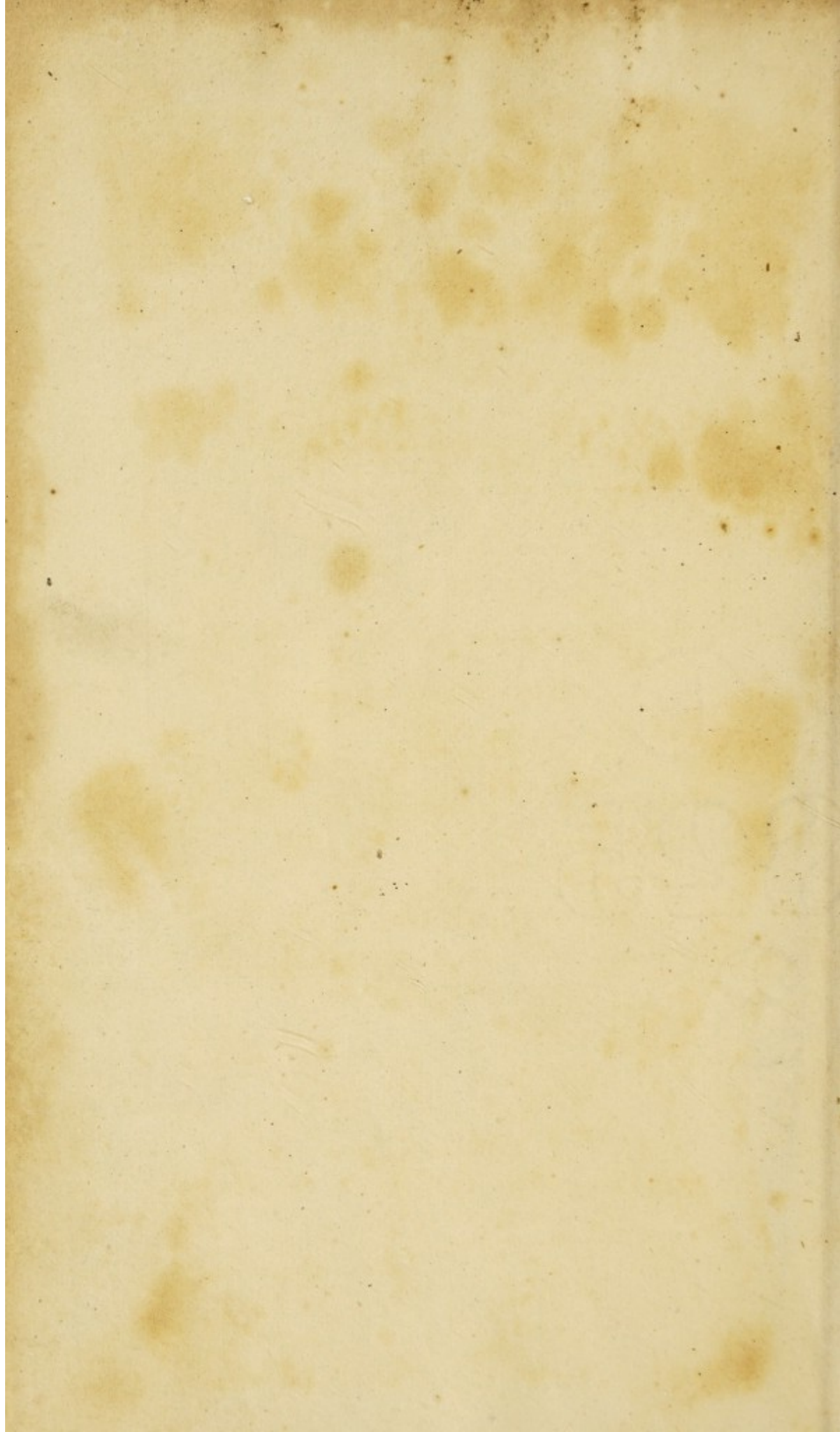






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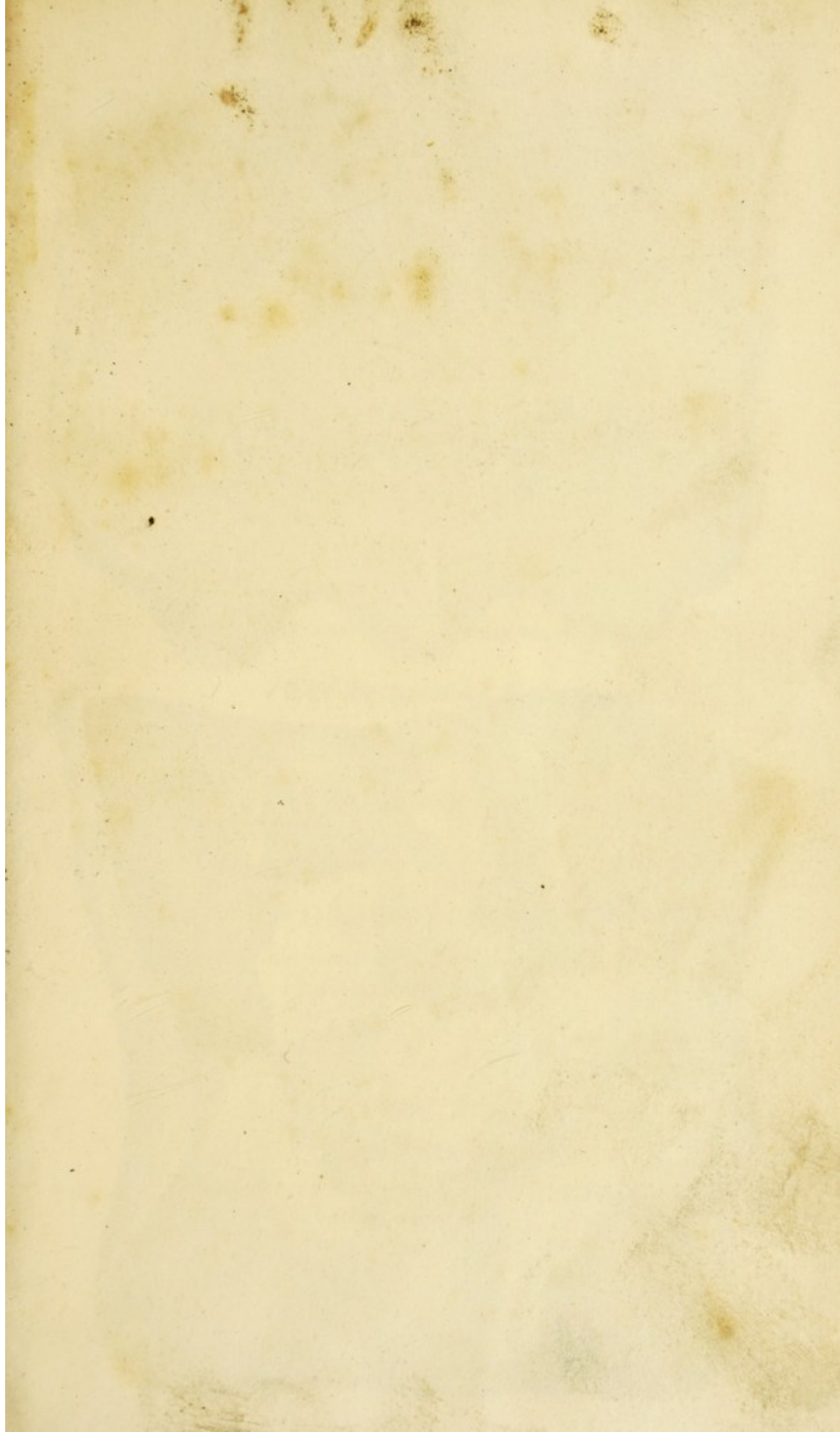


Fig. 1.

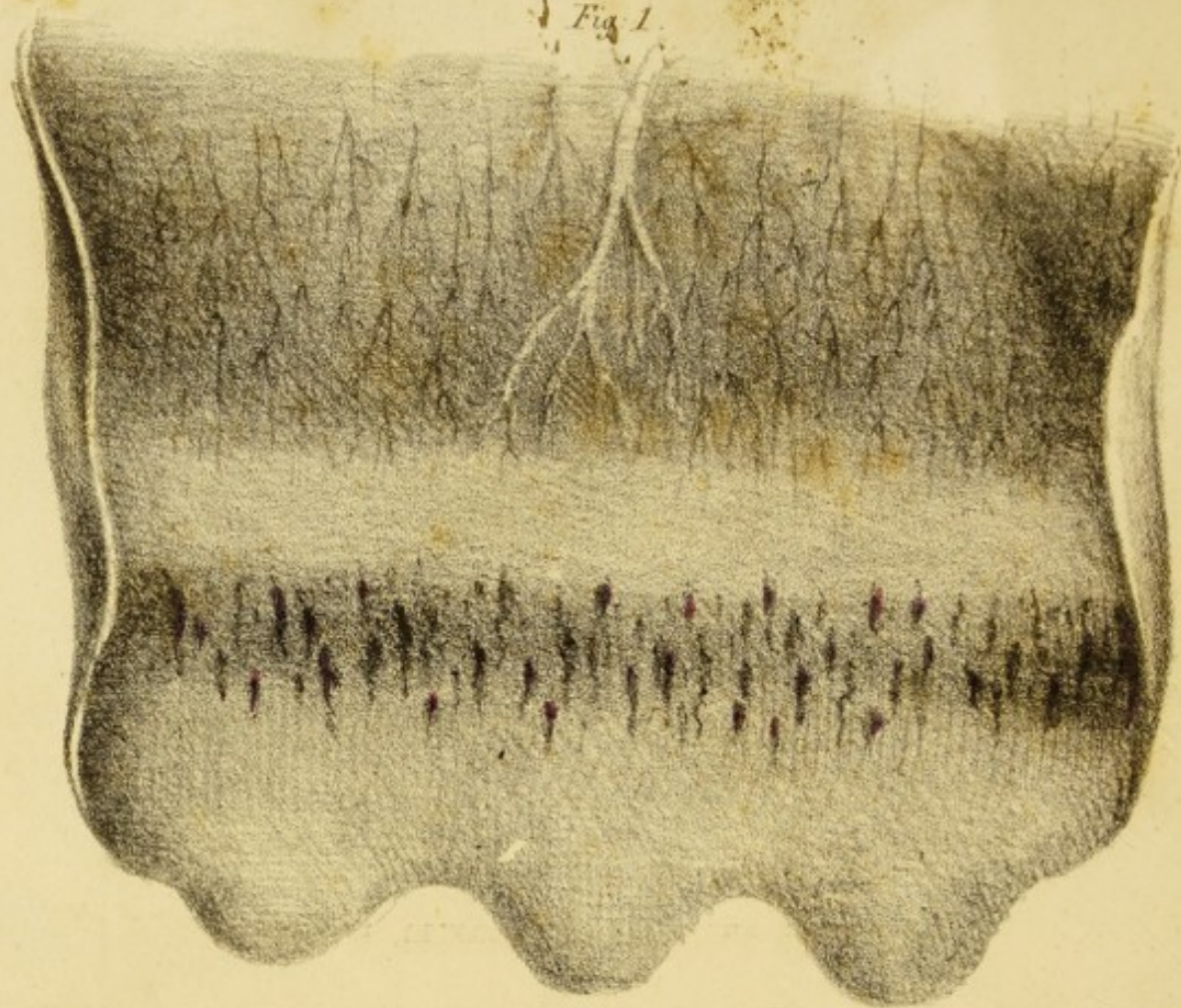
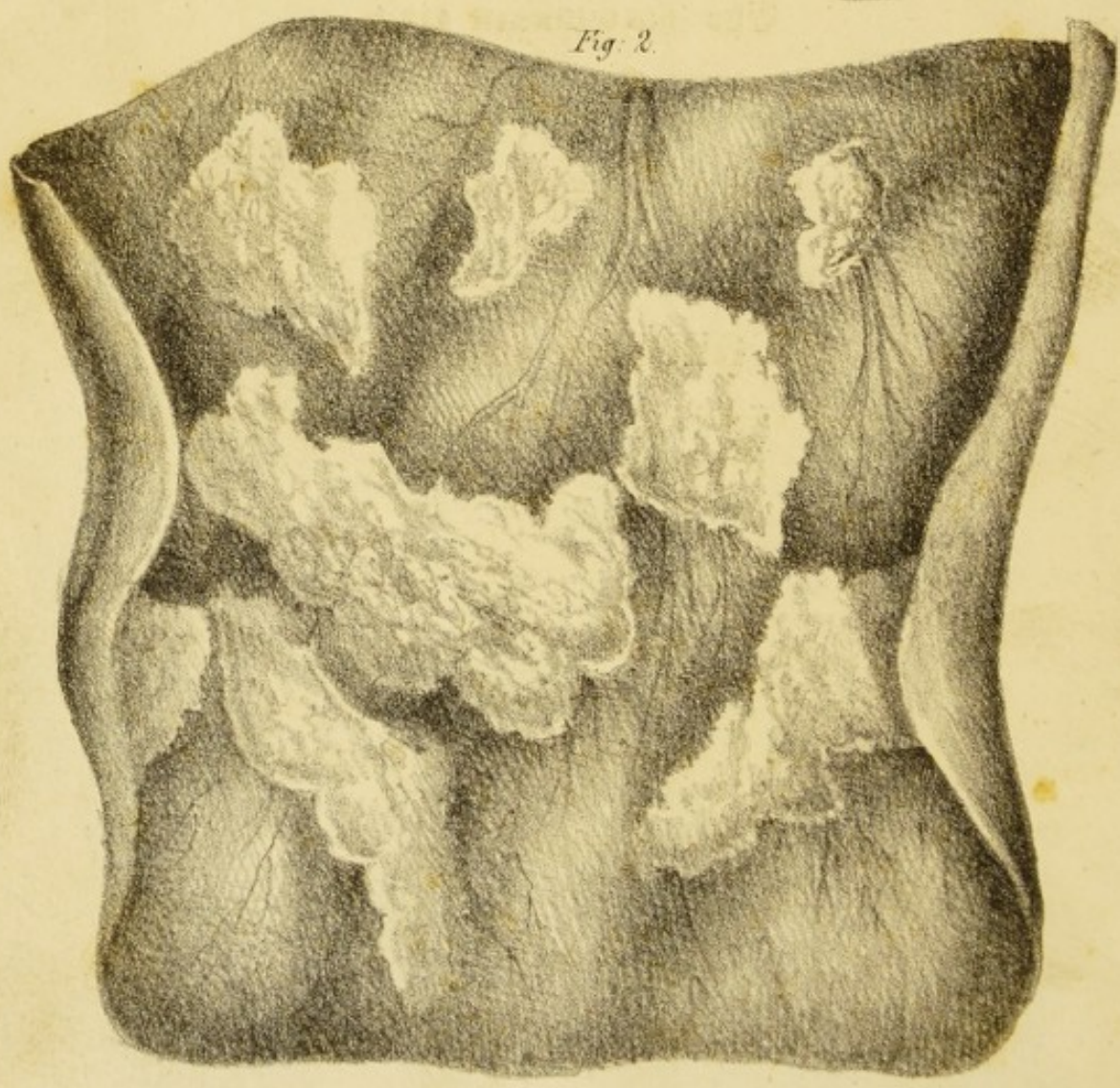


Fig. 2.



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A
PRACTICAL TREATISE
ON
HÆMORRHOIDS OR PILES,
STRICTURES,
AND OTHER IMPORTANT
DISEASES OF THE RECTUM AND ANUS:

BEING,
WITH SOME ADDITIONS, A TREATISE, TO WHICH
The Jacksonian Prize
WAS ADJUDGED BY
THE ROYAL COLLEGE OF SURGEONS.

BY GEORGE CALVERT,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS OF LONDON, AND OF THE
MEDICO-CHIRURGICAL SOCIETY, &c.

LONDON:
PRINTED FOR CALLOW AND WILSON,
PRINCES STREET, SOHO.
1824.

1888
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MEMORIALS OF PILES

STRICTLY

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STREET-CHURCH, LONDON, E.C.

LONDON:

PRINTED FOR AND BY WILSON

LONDON:

PRINTED BY CHARLES WOOD,

Poppin's Court, Fleet Street.

TO
THE ROYAL COLLEGE OF SURGEONS,

THE FOLLOWING

TREATISE

IS

MOST RESPECTFULLY DEDICATED,

BY

THEIR VERY FAITHFUL

AND MOST OBEDIENT HUMBLE SERVANT,

GEORGE CALVERT.

THE ROYAL COLLEGE OF SURGEONS

THE FOLLOWING

The investigation of the various import-
ant diseases affecting the termination of
the alimentary tube, has of late years
been prosecuted with very considerable
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tant but still more distressing and fatal

P R E F A C E.

THE investigation of the various important diseases affecting the termination of the alimentary tube, has of late years been prosecuted with very considerable ardour, and the advantage gained in consequence has been rapidly progressive. To the writings of Mr. Pott in particular, and to those of some eminent French surgeons, the profession is largely indebted for principles of treatment in respect to fistulæ in ano, &c., to which but little could be added by those who succeeded them; and in respect to the different morbid contractions of the rectum and anus, constituting a much less frequent, but infinitely more distressing and fatal

range of disease, it may be said, that although their true nature, and the proper mode of treatment, was not unknown to some practitioners at the summit of professional eminence, yet the requisite degree of information on this subject was very far from being generally diffused, until the able remarks of Mr. Copeland, and subsequently of Mr. White, elicited a more earnest attention to it; in consequence of which, the mind of the medical attendant, being more alive to the probability of such an occurrence as stricture in the intestine, when the patient is affected with uneasiness in this part, or with the more prominent symptoms of obstruction, it is now frequently discovered, where it would not have been suspected to exist; and many cases are relieved, which would formerly have been abandoned as hopeless.

When I first heard that the College of Surgeons had made choice of the Diseases

of the Rectum for the subject of the Jacksonian Prize, the time was almost expired for receiving the respective essays of the candidates (having been some time absent abroad); and the present one was therefore written with much greater haste, and perhaps with less consideration than the importance of the subject required. This remark is not made with a view to elicit any unmerited indulgence for the defects it may contain, as I am well aware that this would form but a very insufficient apology for imposing an imperfect and unconnected work, however trifling it might be, upon the notice of the profession; but because, in taking advantage of the permission granted me to copy the original manuscript, I have ventured to add a few further remarks, and to make some slight alterations in the arrangement of the different sections; a license which I did not consider myself authorised to take without assigning a reason.

It may be proper also to state, that nearly two years have elapsed since the following treatise was written; its publication even at the present time being more the result of accidental circumstances than any original intention. During this interval another edition of Mr. White's valuable remarks on stricture has appeared; and the circumstance of its following upon the manuscript of the present volume will explain why I have allowed some passages to remain, that are quoted by this author, and which, in the contrary case, I should of course have considered superfluous to introduce. A short time before, Mr. Howship had also published on the diseases of the lower intestines; but I have to regret, that my not being aware of this prevented me from referring to a work so replete with valuable practical information.

It is not, therefore, without considerable diffidence and hesitation, that I adventure

my own remarks on a subject, which, either wholly or in part, has fallen to the special consideration of many so deservedly eminent, and of maturer judgment than myself; but the field of science, if industriously cultivated, and with proper views, will ever yield something; and as the substance of the following pages is as much the result of extensive observation as of some reading, and no plan of treatment is recommended that has not been either more or less sanctioned by my own experience, I trust it may be considered not altogether useless in contributing a mite to the present fund of chirurgical knowledge.

68, Lamb's Conduit Street, 1824.

my own remarks on a subject, which, either wholly or in part, has fallen to the special consideration of many so deservingly eminent and of maturer judgment than myself; but the field of science, if industriously cultivated, and with proper views, will ever yield something; and as the substance of the following pages is as much the result of extensive observation as of some reading, and no plan of treatment is recommended that has not been either Sect. I. General Remarks more or less sanctioned by my own experience. II. Origin and General Character of the Hemorrhoidal Disease. III. On the Hemorrhoidal Disease, as it may be considered not altogether as a primary or as a secondary disease, and as it may be associated with other diseases. IV. On the Hemorrhoidal Disease, as it may be associated with other diseases, and as it may be associated with other diseases. V. On Hemorrhoidal Tumours. VI. Hemorrhoidal Warts. VII. Information, &c. of the Hemorrhoidal Disease. VIII. On the Causes of Hemorrhoidal Disease. IX. General Treatment of Hemorrhoidal Disease. X. On the Local Treatment of Hemorrhoidal Disease. XI. On the Hemorrhoidal Disease, as it may be associated with other diseases, and as it may be associated with other diseases.

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A
PRACTICAL TREATISE,

&c. &c.

CHAPTER I.

ON HÆMORRHOIDS.

SECTION I.

General Remarks.

AMONGST the number of those diseases to which we are peculiarly liable there are few so tedious and inconvenient, or so acutely painful in their aggravated state, as those commonly denominated Hæmorrhoids, or Piles; and although, from the manner in which these have been noticed by the generality of medical writers, it would seem that their nature and mode of cure are fully determined, yet there are no

diseases, I believe, respecting which more erroneous and contradictory opinions still obtain. Nothing, indeed, is more common in the practice of surgery than to meet with individuals, who have suffered from the different forms of hæmorrhoids for a series of years, when a little attention to prescribed rules, or a trifling operation, might, in the first instance, have produced a perfect cure; and whilst, in most cases, they have been subjected to the tedious process of what is termed a palliative mode of treatment, on other occasions they have been exposed to the most imminent risk, from a want of proper discrimination on the part of the medical attendant*.

To the latter cause must, in a great measure, be attributed those numerous in-

* Since this was written, I have seen one instance of fatal hæmorrhage from puncturing some tumours formed by a varicose state of the hæmorrhoidal veins; and several cases, in which the common piles, chiefly of cellular structure, were allowed to increase and ulcerate, so as to deprive the patients of exercise, and prevent them from pursuing their respective avocations. The severity of such cases is not unfrequently aggravated by the supervention of fissures about the anus, and painful spasm of the sphincters.

stances of hæmorrhage, abdominal inflammation, metastasis, &c., some of which are recorded, and the consequences of which have not unfrequently proved infinitely worse than any thing attendant upon the original complaint. Hence the general dread, in many cases, of submitting to means of relief, that could only be dangerous from their misapplication, and the opinion still more prevalent, that hæmorrhoids form, as it were, an outlet to disease, and should not be interfered with.

The general discrepancy of opinion in regard to hæmorrhoidal diseases, and the consequent inefficacy and opposite results of the more usual mode of treatment, may be traced to a variety of causes; to the term itself by which they are designated, namely, hæmorrhoids; to the diversity in their appearance, causes, mode of treatment, &c.; and the great, and often insurmountable difficulty that obtains to a proper examination of the parts in which they are seated. In respect to the definition of the term, I shall venture to make a few general remarks, before entering more im-

mediately upon the subject of the present section.

In the most common acceptation of the term, hæmorrhoids, or piles, are tumours, which appear at stated or irregular intervals, about the anus or within the rectum, attended sometimes with an effusion of blood. These tumours have in general been divided into two principal kinds, the distinction being formed from the circumstance of the effusion ; when this is present they are termed open or true piles ; in the other case they are called blind piles.

The situation of the tumours has also given rise to a further division, into external and internal. This distinction, as it is generally received, is scarcely worthy of notice, since the tumours formed within are frequently protruded ; but if it be applied to the part from which they arise, it is of great importance in the surgical treatment. The different terms employed by former writers, which were derived from supposed resemblances, appear to have fallen into disuse.

In the preceding distinctions, the effu-

sion of blood appears to be regarded as a symptom or consequence of the tumours, and whenever it is present the latter are supposed to exist, although not visible externally ; an opinion, which, as will afterwards be shown, is perfectly erroneous.

The term hæmorrhoids, signifying in its literal acceptation a flow of blood, is often made use of by Hippocrates, and from the time of that celebrated writer almost to the present day has been applied to a dilatation of the veins at the extremity of the rectum and anus, accompanied with an irregular or periodical flow of blood ; and the vessels of the parts have, in consequence, been denominated the hæmorrhoidal vessels. Many writers, however, have used the same term to signify not only every complication of hæmorrhoids, but also affections of a very different nature, a licence which the etymology of the word will admit, but which was not, perhaps, originally granted. Hence, in the works of some of the ancient authors*, and occa-

* Celsus,—Aëtius, Cæl. Aurelianus, and others.

sionally in those of more modern date, we read of hæmorrhoids of the mouth, uterus, bladder, &c., the terms hæmorrhoids and hæmorrhage being substituted for each other, and considered synonymous.

Sauvage and other writers have employed the same term to denote merely an effusion of blood from the anus or rectum : “*Fluxus cruentis ex podice vel recto mariscis ruptis obsito;*” the appearances, therefore, by which hæmorrhoidal diseases are generally accompanied, are excluded from the definition ; and the flow of blood, which certainly does not occur in many cases, is made the sole characteristic of the disease.

Most writers, however, since the time of Morgagni, referring at once to the supposed nature of these affections, define the word hæmorrhoids, dilatations of the hæmorrhoidal veins : — “*Hæmorrhoides nihil esse aliud quam varices venarum ani**.” “*Hæmorrhoides nihil aliud sunt quam varices venarum ani, varix vero est vena aperta vel immodice dilatata†.*”

* Morgagni.

† Waleus Medic. Pract.

It is scarcely requisite, however, to point out the inutility of restricting the term in question to the flow of blood, or to the tumours separately, since it is sufficiently evident, that both proceed from the same source, and may, in general, be considered as varieties of the same complaint. Nor would it be better to include, by the definition, the special and immediate cause, since this, as will be shown, is not the same in every instance. Without making any further remarks, therefore, on this point, I shall define the term hæmorrhoids to be a morbid state of the vessels of the rectum and anus, with pain, tension, &c., accompanied or followed by the formation of tumours in those parts, and a flow of blood frequently periodical. This definition includes the distinctions that exist with regard to hæmorrhoidal diseases in general, which I shall proceed to relate as concisely as I am able.

SECTION II.

Origin and General Character.

THE first attack of hæmorrhoids is generally very slight, and is not preceded by any marked constitutional derangement. There is some sensation of weight or fulness about the sacrum, and extremity of the rectum, extending, perhaps, to the perineum; and the sensibility of the bladder, urethra, &c. is sympathetically increased. This state continues for a short time, perhaps for two or three days, when in many cases a slight flow of blood takes place during the expulsion of the fæces, and smears their surface of a bright red colour. This flow never occurs in some individuals, particularly during the primary attacks; but when this is the case it forms, as it were, a crisis to the complaint, and the above-mentioned symptoms disappear at an earlier period.

After a greater or less interval the same train of symptoms are generally renewed, but in a greater degree, acquiring strength by repetition. The sensations of weight,

tension, &c. are more perceptible; some sympathetic phenomena are observed; the blood is discharged in greater quantity, and tumours of varied size begin to appear within or around the anus.

These tumours are preceded by a peculiar stinging or pricking pain, which increases as they dilate, and is generally much aggravated by the pressure of the sphincters. Sometimes blood oozes from their surface, or is squirted out through small apertures when at stool. On other occasions they remain dry, or they are moistened by a whitish serum, exhaled from the surface; but in either case, after a short time, they collapse, presenting, when they have been often distended, so many flaps of skin, forming, when external, a projecting and serrated margin to the anus.

In weak and irritable constitutions the influence of the local affection bears upon the aspect of the patient; the face is paler than usual, the eye appears sunk, from the dark circle beneath it; the abdomen becomes tumid, the feet swell, and, in addition to these appearances, there is a sensation of coldness with shivering, hard pulse, dryness of the mouth, &c.

Such is the general and regular character of the hæmorrhoidal attack, from the commencement ; but it sometimes happens, that the sensations of weight, fulness, and constriction, with the consequent train of sympathetic affections already noticed, may occur without the slightest effusion of blood, or the formation of tumours, even when the attack has been often repeated ; or the flow of blood may occur without the tumours, though rarely without being ushered in by the other symptoms.

In all cases, however, those symptoms which indicate an increased action and congestion in the vessels of the part are present, in some degree at least ; and this state of the vessels should therefore be regarded as the most prominent feature of the disease. Hence it would appear, even from a cursory view, that the immediate cause of hæmorrhoids consists in a preternatural determination of blood to the vessels of the rectum ; and the examination of the tumours, as well as other circumstances, show, that the arterial capillary system of the part is chiefly implicated.

SECTION III.

On the Hæmorrhoidal Discharge, its Source and Nature.

THE ancients believed the hæmorrhoidal discharge to proceed from the tumid extremities of the hæmorrhoidal veins; Hippocrates and Galen were decidedly of this opinion, and considering the imperfect knowledge of the circulation of the blood at their time, they approached as near to the truth as could be expected. This opinion obtained for a long time, since it was in unison with the received notions of the animal economy, respecting the evacuation of morbid humours, from the communications of the veins of the rectum with those of the liver*. Morgagni then demonstrated, that in the bodies of some who had suffered from hæmorrhoids the veins of the rectum were preternaturally enlarged, after which it was generally con-

* "In profluvio hæmorrhoidum, velut quidam atrabil affine effluit." — *Hippocrates de Morb. Vulg.*

ceived that the blood oozed through, or proceeded from a rupture of their parietes.

Later investigations, however, have shown, that the hæmorrhoidal discharge does not proceed either from the tumid extremities of the veins, or from the parietes of these vessels in their natural state, or when ruptured ; but that it is given out by the exhalents. The truth of this assertion is readily established by the following circumstances :—First, The kind of pain and pulsating sensation that precede and accompany the discharge sufficiently indicate, that there is an increased action in the capillary system of the part. Secondly, The manner in which the constitution sympathises is analogous to what takes place, when in other cases the functions of the part being preternaturally increased, it becomes, as it were, a focus of vitality, exciting or diminishing the natural tone of other organs, with which, from the laws of the economy, it is more especially associated, and giving rise to functional disorder, which is more or less intense, according to the influence that has been ex-

erted, and the state of the general health. Thirdly, The discharge is of a florid red colour, resembling in every respect arterial blood ; and if attention be paid, when, by an effort, the inner coat of the rectum is protruded, it will be found to exude from the surface, producing an appearance similar to that which occurs when too much force is employed in filling the vessels of the same part with minute injection. Fourthly, The discharge is generally followed by an abatement of pain, heat, &c., which are the usual attendants of preternatural excitement in a part. It is also frequently preceded and followed by an exhalation of a serous nature, which proceeds from the same source, since the change of colour is gradual from white to florid red, and *vice versa*.

In many cases the blood flows for a short time, and the discharge is not renewed until the next attack, but on other occasions it is only observed when the fæces are expelled, or the parts are thrown into false action from irritation, as in tenesmus. The fæces are found smeared with blood, but it is only superficial ; there is no inter-

mixture of this fluid with the fæculent matter.

The foregoing remarks on the general character, &c. of hæmorrhoids are only applicable to the least complicated form of these affections, when the discharge is almost invariably followed by relief, and terminates the paroxysm ; but there are many cases in which the assemblage of symptoms are more marked and irregular, in which the discharge, in consequence of irritation from tumours, chronic inflammation of the mucous membrane, or other causes, is either too long continued, or too abundant, or the tumours become highly inflamed, slough, and ulcerate. Hæmorrhoids then become, in the strictest sense of the word, a disease, as painful and inconvenient as destructive to the general health, affecting, in a particular manner, the functions of the stomach, and the whole of the digestive organs.

The hæmorrhoidal discharge has nothing peculiar in its nature. It is almost invariably, as I have already stated, of a brilliant red colour, except in rare cases, where the veins of the part being dilated, are ac-

cidentally ruptured during the paroxysm, when it is dark, and often mixed up with the fæces.

The quantity of blood that sometimes escapes is enormous, and many writers have quoted cases of this nature, which appear incredible. Hoffman states, that a female, in whom the hæmorrhoidal as well as the menstrual discharge had been suppressed, lost more than twenty pounds of a bloody fluid in less than twenty-four hours ; and Borelli alludes to the case of a man subject to hæmorrhoids, in whom the discharge resembled uterine hæmorrhage, amounting at one time to as much as ten pounds of blood. Other accounts, equally surprising, may be found in the works of many of the accredited continental authors.

Although relations like the above are very liable to be exaggerated, even by the patients themselves, who are often desirous of adding to the peculiarity of their situation ; yet there can be no doubt, that discharges of blood, or of fluids bearing a strong resemblance to it, sometimes occur, to a very great extent, without proving fatal, as exemplified in the following cases,

which fell under my observation some years ago, during my apprenticeship at the Manchester Infirmary :—

A middle aged woman, a patient of the Manchester Infirmary, in whom the hæmorrhoidal discharge had been long suppressed, was seized with cholic pains, with a sensation of weight about the loins and sacrum ; an enema was exhibited, which brought away some liquid fæces, and soon after a discharge of bloody fluids, amounting to more than three chamber-pots full in less than two hours. She was dreadfully reduced in consequence, but the pains subsided, and after some time she regained her former strength.

A young woman, an out-district patient of the same hospital, was affected with pain in the head and loins, symptoms of general fever, with tenesmus and sympathetic irritation of the bladder. In this state she continued for some days, when the hæmorrhoidal discharge to which she had been subject returned, and more than a pint of blood was voided for near a fortnight. The pain of the head and loins, with the other symptoms, disappeared with the recur-

rence of the discharge, and were succeeded by a small feeble pulse, œdema of the face and extremities, oppression at the region of the stomach, and great prostration of strength. The discharge was eventually stopped by the vigorous use of spirituous and astringent injections, with such other means as are generally employed when affections of this nature are continued from debility.

As these discharges sometimes almost equal, or even exceed the supposed volume of pure blood usually contained in the body, it is evident that they must consist of a mixture of blood and other fluids; but it is also highly probable, that in cases where the hæmorrhoidal flux has been long suppressed, particularly in persons of a plethoric habit, that the blood may accumulate, and be subsequently discharged in considerable quantities, without any intermixture with other fluids.

The general symptoms in such cases are of an inflammatory nature, and the vessels from which the discharge proceeds must be considered in a state of preternatural excitement; but if the discharge does not

cease when the symptoms that preceded it have disappeared, or is not checked by proper remedies, it is necessarily followed by great prostration of strength, with relaxation of the exhalent vessels, and it then becomes a disease of debility, and the cause of its further continuance. Patients, in such cases, often become cachetic, and die eventually from general dropsy.

SECTION IV.

Periodical Return of the Hæmorrhoidal Discharge.

ONE of the most singular occurrences, connected with this evacuation, is its liability to recur at stated periods, bearing in this respect a striking resemblance to the menstrual discharge in females. I have known more than one instance where they have alternated, and in which the cessation of the menstrual evacuation has been succeeded, and replaced, as it were, by periodical discharges of blood from the rectum.

A lady, who is now under my care for

chronic ophthalmia, was imprudently advised to check the menstrual discharge, at one time rather abundant, by cold astringent solutions. These had more than the desired effect, for the catamenia did not return at the usual period, and she has since been subject to periodical discharges of blood from the anus.

It is not difficult to assign a reason for this phenomenon, although it may, in reality, be more plausible than correct. In constitutions where the balance of action is not regularly maintained, and there are few, comparatively speaking, that enjoy perfect health, the general disposition will exert its influence, by producing at one time a preternatural degree of excitement, at another time weakness and irritability, with a tendency to disordered action in some part. Thus, for example, there are some who are subject to attacks of headach, others to irregular action of the bowels, dyspeptic complaints, &c. &c., and not unfrequently after the cessation of the menses this disposition to superfluous or disordered action, which, in many, had been previously centered in the

uterine vessels, is directed to other parts, producing cancer of the breast, internal visceral disease, and occasionally discharges of blood from the nose, stomach, the rectum, or other parts. Now it is reasonable to suppose, that, in respect to the sanguiferous system, this disposition will have greater influence where the vessels are most dependent, where the absence of valves in vessels so situate is favourable to accumulation of fluids ; and this again is aided by other causes, as want of proper exercise, constrained positions of the body, obstinate costiveness, visceral disease, the natural enlargement of the womb during the process of gestation, effusions of serum, which take from the support of the abdominal muscles, or any thing, in fact, that will prevent the free and equable return of the blood through the branches of the vena porta.

This state of the constitution has not, I think, been sufficiently attended to by practitioners in their views of disease ; probably because the facts connected with it have been mixed up and associated with the long exploded doctrines of the humoral

pathology; but it may be otherwise explained, on principles consistent with the known laws of the animal economy.

When once a disordered action has commenced in a part, especially where it is favoured by peculiarity of structure, the predisposition, in the part itself, to a recurrence of the same affection at a future period is increased, and, the same causes still operating, the affection at length becomes habitual, and necessary to the maintenance of the general health. Hence it is, that the hæmorrhoidal flux has always been considered a wholesome evacuation, and in fact is so, under some circumstances, and to a certain extent; but, like every other opinion, that has become general, and has some foundation in truth, it has been much abused, and cannot, in many instances, be sufficiently deprecated.

In almost all cases, therefore, where hæmorrhoidal diseases have been produced by constitutional causes, especially where they have existed for a considerable length of time, their influence is not unfrequently beneficial, and to check them suddenly, or even sometimes with more caution, might

be productive of dangerous, or even fatal consequences ; but when they are the result of causes chiefly or entirely local ; without much predisposition in the constitution, no such danger need be apprehended ; and to encourage and submit to an affection, which at all times is both inconvenient and troublesome, and in its aggravated form replete with dangerous consequences, is a sorry equivalent for the bare possibility of escaping some imaginary disease.

SECTION V.

On Hemorrhoidal Tumours.

THERE are two kinds of hæmorrhoidal tumours, differing very materially, both in their appearance and structure. The first that I shall speak of are by much the most common, and constitute what are commonly termed piles. They are first seen in the form of small fleshy tubercles, generally of a brownish or pale red colour, and situate within the anus, or descending from the rectum. On examining them with the finger,

they are found to have a somewhat solid and spongy feel, and, when cut into, present a surface more or less compact, and bloody, from which blood oozes, leaving the texture pale, and more relaxed.

When these tumours are more external they are paler, and generally, also, more elastic and transparent ; appearances which arise from the nature of the skin that covers them, and the serum with which their internal tissue is often infiltrated. These are sooner produced, and disappear more rapidly than the former.

These tumours very often contain a central cavity, filled with fluid, or coagulated blood, which is of a brighter or darker red, according to the length of time it has been effused. The lining of the cyst is either smooth or granulated ; and by the assistance of the microscope in the dead subject, after having forced into the arteries by which they are supplied with blood some fine and coloured injection, a few minute vessels may be traced, through which the fluid gradually exudes into the above-mentioned cavity, but there is evi-

dently no connection whatever with any of the larger vessels.

This cavity is usually small, not exceeding the size of a pea, but it is sometimes large enough to contain several drachms of blood.

More generally, however, there is no regular cyst, but the substance of the tumour is infiltrated with blood, which eventually becomes dark and coagulated. This blood does not appear to be the result of common extravasation, since it is not generally diffused, as in ecchymosis, but confined in separate patches of different shades, presenting a variegated aspect when the tumour is cut into; on closer examination it appears as if it were contained in dilated vessels, which traverse the tissue in the direction of the long axis of the rectum, so that, if the tumid part be divided longitudinally, they present numerous dark streaks through the substance, but, if the section be made transversely, small, roundish specks only appear.

The manner in which the common hæmorrhoidal tumour forms is in general

pretty uniform. The patient is first made sensible of its development by a peculiar pricking, stinging sensation, generally within or around the margin of the anus ; and, on applying the finger to the part, it is felt slightly elevated, as if some newly-formed substance were forcing its way to the surface.

The increase of these tumours, when once they have become in some degree permanent, does not take place in every direction ; they elongate rather than expand, the body being usually of a conical form, and larger than the neck, which arises probably from their relative position with the surrounding parts. Sometimes more or less blood is exhaled from their surface ; on other occasions a serous fluid only is exhaled, or they remain nearly dry ; but in either case they generally disappear in a short time, and return again at an uncertain or regular period, increasing in size, and becoming firmer in texture with each repetition.

The discharge of blood takes place in two ways. First, It is exhaled from the surface, as in other cases, when it proceeds from the mucous coat of the rectum. Se-

condly, When either a false or natural effort is made, and the tumours are forced down, and grasped by the sphincters, a small quantity of pure florid blood is forced out in a fine stream from one or more points; and, on examining attentively the part from which it issues, several small orifices may be discovered on the body of the tumour, which is now considerably softer than before.

After some portion of blood is evacuated, or the local determination of fluids to the parts has ceased, the tumours collapse, leaving as many pendulous flaps, formed of the distended cutis. If the tumours have been small, or of recent formation, these flaps are either scarcely observable, or they disappear in a short time; but, under opposite circumstances, they are more conspicuous, remain stationary, and, where the tumours were external, form a projecting and indented margin to the anus.

When, however, they have been strangulated for some time by the pressure of the sphincters; when they have been repeatedly gorged with fluids, or their usual mode of dispersion is prevented by other

causes, either local or constitutional, these tumours, acquiring more solidity, become permanent, varying but little in size at different times, and forming a source of almost constant pain and inconvenience, in being protruded, inflamed, ulcerated, or, what is very common, by inducing a troublesome and distressing prolapsus of the anus.

This permanent state of the tumours is owing partly to the development of the capillary vessels, gradually obliterating the interstices; and, in part, to the effused blood coagulating, and becoming organized; and hence the production of the condylomatous tumours, and the foundation of that irregular mass, which is found around the anus in those who have been long subject to hæmorrhoids, commonly termed the hæmorrhoidal excrescence, all of which are permanently solid, and can only be removed by the knife or the ligature.

Occasionally these tumours attain an enormous size, arising chiefly from a large quantity of blood being effused into the central cavity, and in some degree also to

the great increase in the thickness of the cuticular envelopment. Schmucker states, that he was called to a gentleman, who had some hæmorrhoidal tumours, of which one was as large as the fist : he extirpated them with the knife, and his patient speedily recovered*. Serum is also sometimes effused in considerable quantity through the tissue of the tumours ; but I am not aware that it is ever collected together, as in the other case, and indeed, whenever the increase is both rapid and great, we may conclude, that the bulk of the tumour is owing to an accumulation of fluid or coagulated blood in the centre.

Such are the general character and structure of those swellings, commonly called piles, and which the generality of practitioners consider, though erroneously, to be nothing more than dilated veins.

In referring to the opinions of medical writers it will be found, that, until very

* Vor ohngefahr einem Jahre wurde ich zu einen vornehmen hiesigen Cavalier gerufen, welcher 3 solche groze beulen, wovon inetim umfange die Grôse einer gebalten Faust betrug hatte.—*Vermischte Chirurgische Schriften.*

lately, all hæmorrhoidal swellings were supposed to proceed from a præternatural enlargement of the veins at the anus, or extremity of the rectum. This opinion, founded, in some degree, upon ancient authorities, and afterwards supported, though with some modification, by Valsalva, Morgagni, and others, is still very general, and may be found expressed in many of the latest works of the present time. "Piles, or hæmorrhoids," says Mr. C. Bell, "are produced by a distention of the veins of the anus, and of the gut near the extremity. In a short time the distended veins are enveloped with a fleshy covering. The distention of the vessels causes a thickening of their coats, and the injury being still continued, there is a deposit of coagulable lymph around them; besides, there is sometimes an extravasation of blood, which becomes organized. Thus the hæmorrhoidal tumour becomes a firm, fleshy excrescence, with the extremity of the vein concealed within. That vein, however, is burst from time to time, and discharges blood; for when, by the continuance of the costive state of the bowels, the patient is forced to

strain at stool, the blood is spurted out to some distance by the bursting of the extremity of the vein."

Sir Everard Home has viewed the structure of hæmorrhoidal tumours in the same light, and attributes the change in their nature and appearance to the length of time they have existed. "Their contents coagulate, and become solid: their coats increase in thickness, and they resemble pendulous tumours in other situations in the body*." Dr. Baillie also attributed the common hæmorrhoidal swellings to a dilatation of the veins, and has given a plate to illustrate this state of parts, a state which he considered general, but which exists only in a few instances†.

Wiseman, the father of surgery in this country, and whose excellent work contains much practical information on this subject, speaks of piles by the term varices hæmorrhoidales, and states, that they will admit of the following essential differences:—"First, When the vein only swells, then either it swells with-

* Home on Ulcers.

† Morbid Anatomy.

out the bleeding, which we call hæmorrhoides cæsas, or blind hæmorrhoids ; or, secondly, Upon swelling, it opens and bleeds, which we call hæmorrhoides apertas.

“ Secondly, When other parts swell with the vein, other tumours arise, as phlegmons, scirrhi, cancers, &c., all which are seated in the muscles of the anus, or of the adjacent parts.

“ Thirdly, When new bodies are generated, they, according to their figure and substance, are called by several names, as ficus, condylomata, warts, &c., which are all excretions upon the veins so swelled*.”

It is wholly unnecessary, however, to make further quotations from the works of authors, whose opinions in this respect are familiar to almost every practitioner ; the preceding are sufficient to show the point of view in which hæmorrhoidal diseases have been generally considered ; and how confidently erroneous opinions, when supported by high authorities, are often retained and promulgated.

Le Dran was, I believe, the first who de-

* Wiseman's Chirurgical Treatises.

monstrated, that the structure of the common piles was spongy, or cellular ; Richter also denied, that the veins are generally interested in the production of these tumours, which he attributed to an extravasation of blood beneath the skin of the anus*.

Cullen also states, that they are formed by an effusion of blood in the cellular tissue† ; and Mr. Abernethy remarks, that the hæmorrhoidal tumours he has been in the habit of removing with the knife or ligature were mere fleshy substances.

The precise nature, however, of these tumours has been more fully investigated and described by Mr. Chaussier and De Larroque, whose accurate researches in this respect have been attended with corresponding results, and assisted in expelling those doubts, which many surgeons entertain respecting the propriety of their

* Man glaubt gemeinlich, daz diete knoten oder Beutel, varicose ausdehnungen der blutadern des mastdarms sind : diese mögen sie denn auch wohl zuweilen seyn, immer sind sie es nicht. Zuverlässig entstehen sie zuweilen, und wahrscheinlich in den meisten Fällen von einer Bluterguzung unter die innere haut allein, und nicht zugleich die Blutadern bildet den Beutel.—*Anfangsgründe der Wundarztneykunst*, vol. vi.

† Manuscript Lectures.

removal. By these authors they are divided into two species; the cellular or spongy, and the encysted.

“If,” says the latter writer, “we divide one of these tubercles in the centre, we find a homogeneous parenchyma, very often of a reddish colour, but which sometimes becomes rather white, when it is washed in water, and particularly when macerated. If, previous to washing it, we press the tissue, pure bloody serum, or else a very limpid serous fluid, is forced out, as from a sponge.”

“It should be remarked, that even in cases where there are varicose veins, this cellular parenchyma is never wanting; so true it is, that to its development the formation of hæmorrhoidal tumours must be attributed. In general, wherever veins are discovered, they are placed between the exterior and this organized tissue, and are lost in very minute ramifications. This general disposition of the veins is an additional proof that these hæmorrhoidal tumours do not proceed from varices, for in that case they would be found distributed in the body of the tumours, and not upon their surface.”

From having witnessed several distressing cases of hæmorrhoidal disease, and especially one in which a gentleman, of industrious habits and intelligent mind, had, in consequence, lost more than five years of a valuable life, I was, a long time since, induced to pay a very particular attention to the nature of these tumours. I examined them when removed from the living subject, and when found in the corpse; and although in the latter both the arteries and veins were repeatedly injected, to facilitate the inspection of their structure, it appeared, that, with very few exceptions, they were composed of a spongy tissue, more or less dense or vascular, according to the duration of the complaint.

In this respect, therefore, the result of my own observations, which have been previously stated, coincide, in a great measure, with that of the authors to which I have just alluded: but there is still one circumstance that has been overlooked, and which is well worthy of notice, namely, the different appearance of these tumours in the living subject and in the corpse; a change which has, no doubt, given rise to

hasty and false conclusions. In examinations after death we almost invariably find, that where tumours exist within the anus or extremity of the rectum, they are found either to contain distended veins, or a condensed cellular tissue, but have rarely, unless where death has been produced suddenly, that humid, spongy substance, which is often observed during life, and which proceeds from the infiltration of fluids, and the distended state of the capillary vessels. The cause of this is, I think, sufficiently obvious. Granting, that in the generality of such cases there is an increased action, and greater development in the capillary vessels of the part, it follows, that, in most cases, the degree of swelling must be almost wholly, or in part, owing to the accession of blood and white fluids to the part. Now, as this accumulation of fluids is the consequence of vitality, it must necessarily diminish with, or be altogether reduced by long protracted disease and death; and this is precisely the case with regard to the tumours that have already been described.

In the dead subject, then, these tumours,

which, during the hæmorrhoidal paroxysm, were fully distended, are found more or less collapsed, and the veins, which, prior to death, constituted but a small part of the swelling, and ramified chiefly between the body and envelopment, now occupy the centre, and are, both from their colour and size, the first objects that arrest the attention, when the latter part is removed for the purpose of investigating their nature. Hence it is, that, even in cases where the above-mentioned swellings were formed during life by a congestion in the capillary vessels, the veins on dissection are often found enlarged, forming, together with the fine skin of the anus, or the villous coat of the rectum, the chief parts of the tumour.

In other cases, where these tumours have been of long standing, a new substance is formed, the interstices are filled up from repeated accessions of inflammation, by which the parietes of the minute vessels are strengthened and elongated, and new matter deposited. Under these circumstances, the volume of the tumours, not being very materially increased by the ac-

cession of circulating fluids, continues nearly stationary after the phenomena of vitality have ceased.

With regard to the manner in which the blood is deposited, I have already remarked, that it does not resemble ecchymosis in other parts, either from blows or from disease, but is disposed in regular and isolated striæ patches. This circumstance is noticed by the intelligent author of the article hæmorrhoids in the *Dictionnaire des Sciences Medicales*, who, at variance in this respect with the opinions of other writers on the same subject, states, “ that the blood suddenly effused in the cellular tissue, by the rupture of a vessel, instead of being accumulated in a mass, would be distributed through the cells of the surrounding tissue, and extend along the surface ; for, if the cellular tissue could not retain the blood when enclosed in the vessels it surrounds, how could it prevent it from spreading when the vessel is ruptured ? Besides, the blood effused in the cellular membrane would either be absorbed, or would produce an abscess, which is not the case. It appears to me

more natural, therefore, and more conformable to the common laws of vitality, that in some point of the capillary vessels a dilatation without rupture is produced, by which a small cyst is formed at the expense of the parietes of the vessel, ‘*tanquam ex capitulis quibusdam.*’ This explains how it happens that the cyst and the small vessel, which supplies it with blood, is not obliterated by inflammation, which, in all probability, would be the case if the blood were poured immediately into the cellular tissue.

“The appearance which the internal surface, at the extremity of the gut, often presents, after death, in those who have been subject to hæmorrhoids, is pretty faithfully represented in fig. 1. The parts from which this sketch was taken were removed from the body of a young woman, dead from typhus fever, and who had previously applied to me respecting some hæmorrhoidal tumours about the verge of the anus. There are no varicose veins, but the morbid vascularity near the extremity of the gut, the numerous coagula lower down, and the pendulous flaps of

skin around the anus, which had formerly been distended into rounded tumours, are sufficiently obvious."

SECTION VI.

Hæmorrhoidal Varices.

THESE tumours are very rare, compared with those already described, and differ so materially in many respects, that were it not they are sometimes combined, and somewhat analagous in point of situation and causes, they could not be classed together with any degree of propriety. In general they may be known by their progress, appearance, &c., and the distinction, in reference to the surgical treatment, is of the utmost importance.

This state of the veins is seldom ascertained until it has made some progress; for the distention is effected in a slow and gradual manner, without any of those sympathetic affections, which are more or less conspicuous in the development of the common hæmorrhoidal tumours. There is not that disposition to enlarge at certain

periods ; and although they may sometimes inflame, this state is the immediate effect of mechanical injury ; it never takes place spontaneously.

With respect to their physical properties, it may be said, that they are generally of a dark or bluish colour, soft and elastic to the touch, resembling, in this respect, the ripe grape ; and when compressed by the finger they become sensibly less, but return to their former state as soon as the pressure is removed.

The form is also very different from that of the true hæmorrhoidal tumour ; being broader at the base, rounder, and sometimes distributed in irregular and ill-defined clusters, like similar affections of the *venæ saphenæ* ; they show no disposition whatever to bleed, unless ruptured or cut into, and when once formed they increase gradually, or remain nearly stationary through life.

No judgment can be formed by the position, since these, as well as the common hæmorrhoidal tumours, are usually found at the very extremity of the rectum ; but it may be presumed, that the tumours

are of this nature when several being crowded together in this part yield readily to the finger, and may be traced to some extent up the rectum ; for the true hæmorrhoidal tumour is generally external, and almost invariably quite within reach of the finger.

Ludwig states, that he has seen hæmorrhoidal swellings extend as high up as the colon*, and Petit, I believe, has made the same remark. Chance, some years ago, favoured me with a view of the rectum under similar circumstances. The subject was an old man, who had died from a disease of the prostate gland, and who, for a series of years, had suffered much inconvenience from what had been termed piles. The appearance of the rectum was very irregular, from the enormous distention of the hæmorrhoidal veins, forming large tumours, or rather swellings in some parts, and producing in other parts an undulating appearance of the mucous membrane. On puncturing the largest of these swellings, which was situate immediately above the sphincter, and equal in size to a pigeon's egg, a quantity of coagulated

* *Adversaria Medica Practica.*

blood was forced out by pressure ; and water, which was injected through the aperture with the common syringe, passed readily through the whole chain of tumours, which, during life, must have filled up nearly the whole of the rectum.

Morgagni states, that in dissecting the body of a man, who had been subject to piles, he discovered the hæmorrhoidal veins very much distended, but, from the description, it is most probable, that, in this instance, he was deceived with regard to the true nature of the disease, since none but the smallest vessels opened upon the coagulum. “ And how much these veins may be dilated I observed in a man of a good habit of body, and who died at Bologna in the year 1706, of a wound under the axilla, and whose body I dissected. The extremity of the rectum in this man appeared to have been subject to piles, as it was internally unequal, with various kinds of veins ; and, as I looked upon the largest of them very attentively, I was surprised to find that none but the smallest vessels communicated with it, though it was distended with a great quantity of gru-

mous blood, so as to make it evident that some very small vein had been distended to a considerable size*."

But a much more accurate and satisfactory description of this affection is given by Richerand, from examining the parts about the rectum in a dead subject. "Whilst inspecting the body of a female, who had formerly been subject to hæmorrhoids, I observed some tumours towards the anus, and some prominences of a deep red in the mucous membrane. On carefully elevating this membrane, we found beneath it, tumours filled with clotted blood. The interior of these small tumours was continuous with those portions of the vessels which were of the usual size, as was discovered by introducing the probe. These vessels, which had all the appearance of veins, presented alternately a state of distention, and their natural calibre. They were continued in every direction, forming a true vascular plexus. These small tumours were more or less near to each other, adhering by means of a cellular tissue, which was very fine, and easily divided. It appeared to

* Morgagni, Letter xxxii, vol. ii.

me, therefore, that these hæmorrhoidal tumours were only a collection of varices, or partial dilatations of different portions*.” Valsalva had also observed the internal hæmorrhoidal veins very much dilated throughout the rectum, and at the extremity of the colon, accompanied with induration of the liver and spleen†.

This disposition of the hæmorrhoidal veins to become enlarged, as demonstrated by dissection, shows how necessary it is to ascertain the true nature of all tumours about the rectum or anus previous to employing the knife for their removal, since the hæmorrhage must necessarily be always dangerous, or may even be fatal. Fatal cases have also been recorded from a rupture of the parietes of these vessels ; and the degree of hæmorrhage may be computed when we consider, that, according to some authors, these swellings have been found nearly as large as the fist.

It is most probable, that, in the case of fatal hæmorrhage related by Petit, the tumours were of the varicose kind. They

* Nosograph. Philosoph. tom. ii.

† De Fabrica Corporis Humani.

were protruded from within, and, after being extirpated, the skin around the upper part was drawn up within the anus. Death took place within a few hours, and the rectum was found full of dark blood.

As long as the hæmorrhoidal varices continue in the state already described, they are readily known by attending to the circumstances, which, as far as my own observations would allow, I have endeavoured to point out ; and any mistake could only proceed from gross ignorance, or worse neglect ; but as these tumours often arise from the same causes as the preceding, and occupy precisely the same situation as many of the former, it is natural to conclude, that in some cases they may exist together. Now the inspection of dead bodies proves that this is the case ; that the hæmorrhoidal veins being rendered varicose, their extremities are either afterwards imbedded in that kind of spongy substance, which has been stated to form the bulk of the common hæmorrhoidal tumours of long standing ; or that the cellular tumour being formed, the veins become dilated in consequence.

In the former case, which, however, is very rare, the tumours are almost invariably situate about the verge of the anus, or immediately within the grasp of the sphincter, and if the finger be introduced high up within the rectum, the true varices may perhaps be discovered. If these are felt, we may then conclude, that varices have existed from the first, and the same precautions, in respect to puncturing or extirpating them, are requisite, as where the case is of a more simple nature ; but if, from examination and attention to the history and progress of the complaint, there is reason to conclude that the extremities only of the hæmorrhoidal veins are dilated, and that this dilatation is chiefly a consequence of mechanical causes, as the constriction, &c., of the sphincter acting upon the other tumours, no danger need be apprehended.

In the latter case, too, the distended veins, forming, in size and colour, a distinct and beautiful contrast, may often be traced through the fine skin about the verge of the anus ; but, in by much the greater number of these, it will be found, if occasion offer for accurate inspection, that the

dilatation is merely local, produced by the causes already alluded to, and that the substance of the swelling is chiefly referable to another source.

SECTION VII.

Inflammation, &c., of the Hæmorrhoidal Tumours.

IN proportion to the recurrence of the hæmorrhoidal paroxysm, the tumours that are formed generally increase in size, and such as were originally within the extremity of the gut are often forced down, and appear at the anus. Sometimes they continue in this position, contracting adhesions which impede their reduction, or acquire such an enormous size, that if returned they act as foreign bodies to the rectum, and are immediately protruded; but more frequently they are only seen externally when the patient is at stool, or is desired to make an artificial effort.

By the pressure of the sphincters, partly also by the mechanical injury in the pass-

ing of indurated fæces, and a disposition in the tumours to vascular action, inflammation is often produced, attended, in many instances, with the most violent and excruciating pains, and not unfrequently with suppuration, or even sloughing of their substance.

The pain is generally of the acute throbbing kind, accompanied at intervals by a sensation, as if the parts were punctured by some sharp instrument, extending deep into the rectum. These symptoms are much aggravated during the expulsion of the fæces, when the sufferings of the patient often beggar description. There is also more or less of sympathetic fever; and if the inflammation extends far up along the mucous surface of the intestine, the bowels are moved with difficulty, and the tongue has generally a deep red appearance, with the papillæ somewhat more elevated than usual.

The extreme violence of the symptoms however in such cases cannot be better illustrated than by mentioning the outlines of a case, in which high inflammation of some

hæmorrhoidal tumours was succeeded by sloughing and suppuration.

Mrs. —, aged 22, after having for some time great inconvenience from the presence of some hæmorrhoidal tumours within the rectum, was attacked at the usual period of their enlargement with acute throbbing pain in the rectum, quick bounding pulse, retention of urine, and other symptoms of local and general irritation. A physician being called in, leeches to the anus, purgatives, &c., were prescribed, but the symptoms still continued to increase. At this time I saw her; her countenance was suffused, and distorted from pain, and although a woman of strong mind and great fortitude in general, she could not, in the present instance, avoid expressing her sufferings by loud and continued shrieks, particularly when the bowels were moved. The slightest motion of the body was productive of the most exquisite torture; and such was the sensibility of the inflamed parts, that an attempt to arrange the bed-clothes, or a light tread over the floor, added considerably to her sufferings.

From the account of the nurse it appeared, that two dark-looking tumours had appeared at the anus, but at this time they were not visible; and the extreme sensibility of the parts rendered it quite impossible to make any satisfactory examination. A large quantity of blood was taken from the arm, and at the end of two days the violence of the pain had so far abated as to allow me to ascertain the state of the rectum. On carefully introducing my finger I could distinctly feel some loose soft bodies, partly detached from the mucous surface, and a few days after these were expelled without the slightest hæmorrhage. Three of these bodies, both in form and colour, very much resembled the common leech when partly distended, and appeared to consist of coagulated blood, inclosed by a dark membrane, which was too much disorganized to admit of any opinion being formed respecting its nature; another was of a rounder form, and appeared to have contained pus.

When the life of the tumour is not destroyed by the violence of the inflam-

mation, the surface often ulcerates, or suppuration takes place, and matter is lodged in its substance. In the former case there is always considerable pain, particularly when the bowels are emptied, a troublesome tenesmus, with a discharge of a sanious dirty pus, or an ichorous matter from the anus: in the latter case, the tenderness does not wholly abate until the contained matter has penetrated the surface of the tumour, when the aperture generally heals rapidly. It sometimes happens also, that the thickened envelopment of the tumour opposes so much resistance, that the contained pus is forced backwards, insinuates itself through the cellular membrane, and points near the anus. This may show the necessity of opening any of these tumours, which are supposed to contain pus, for the internal wound soon heals when the process of suppuration is confined to the tumour, whereas in the latter case the operation for fistula in ano is generally required.

These remarks apply almost exclusively to the common hæmorrhoidal tumours, for the varicose swellings of the same part

yield too readily to suffer materially from the pressure of the sphincters. They oppose also much less resistance to the passage of the excrement, and are not disposed to spontaneous inflammation.

SECTION VII.

On the Causes of Hæmorrhoids.

A GREAT variety of causes generally concur to produce hæmorrhoids ; some of these are evidently pre-disposing, others have a more immediate and direct operation.

Amongst the former may be classed the peculiar situation of the hæmorrhoidal veins ; hereditary disposition ; a disordered state of the digestive organs, age, sex, and climate.

The principal exciting causes of hæmorrhoids are a torpid state of the bowels, fasting, sedentary habits, violent passions of the mind, irritation from worms in the rectum, from drastic medicines, excessive venery*, &c.

* It is extremely difficult to trace satisfactorily the causes of any disease whatever, and their mode of ope-

The situation of the blood vessels of the rectum in the most dependent part of the largest visceral cavity; the absence of valves in the veins, and their receiving but little support from the loose cellular membrane surrounding the rectum, disposes them in a particular manner to become gorged with fluids from the ration; particularly when, as in respect to hæmorrhoids, the causes are almost innumerable, and the production of the disease is more or less influenced by every shadow of change in the constitution. The late Mr. Hayden, of Sloane Street, has remarked, in this respect, that the necessity for the concurrence of several causes, before particular diseases can be produced, is not sufficiently attended to by the generality of medical men; "they content themselves by recollecting, that two kinds of causes, the predisposing and the exciting, are necessary for the production of every disease; but few have observed, that the generality of diseases do not arise until several sets of predisposing causes at least concur in influencing the system. It is often in this case difficult to trace all the concurrent causes; and even when that has been done, it is not always easy to class them accurately as predisposing, or exciting causes. How frequently does it happen, that very unimportant causes seem to produce the most severe diseases? It will be found, however, that such causes only arise because several distinct predisposing causes accidentally concur to render the body so susceptible of falling into the disease in question, that a very slight exciting cause is sufficient to produce it."

slightest causes. Hence we find, that the enlargement of the gravid uterus, accumulation of fæces in the large intestines, visceral disease, or, in fact, any thing that will produce an unusual degree of pressure within the abdomen, has a more or less evident effect upon the vessels of the rectum and anus. These causes have a powerful influence when the hæmorrhoidal discharge is already established, and may, therefore, be allowed to produce it in the first instance.

Many writers have supposed, that a disposition to hæmorrhoidal diseases is often hereditary, and daily observation certainly proves, that many families are much more subject to them than others. There can be no doubt, indeed, that a similarity of conformation, transmitted from father to son, by favouring the operation of the existing causes, may contribute indirectly to produce hæmorrhoids ; but whether there is a general predisposition, independent of structure, I cannot pretend to assert.

It is usually said, that the conformation most favourable to the production of hæmorrhoidal diseases is that in which the

veinous system is more particularly developed; an opinion that has no foundation in truth with respect to the common hæmorrhoidal tumours, but which is sufficiently correct if applied to the formation of varices.

A disordered state of the digestive organs may predispose to the formation of different hæmorrhoidal affections, by producing that state of the constitution which seems to require the presence of a drain, if I may be allowed the expression, or a disordered action in some part of the body. The existence of this state I have had frequent occasion to remark, and the opinions of Mr. Abernethy, where, in his valuable work on local diseases, he alludes to various anomalous affections produced and kept up by this cause, show how frequent it is. The following case illustrates this fact in a very striking manner:—

A gentleman, of a delicate constitution, and who had impaired his health by irregular living, was affected with periodical attacks of pain in the head and face. He applied to a physician in the city, who prescribed something that gave him consi-

derable relief. Soon after he was attacked with pains in the abdomen and diarrhæa, which continued to return at intervals for some months. At this time an ulcer formed near the ankle, from a slight scratch he had given himself when asleep. In proportion as the ulcer enlarged, the preceding affections ceased; and, by adhering strictly to a prescribed diet, and varying the dressings, it at length healed. Pustules soon after appeared on different parts of the body, and these in turn gave place to a discharge of blood from the anus, with the usual symptoms of weight, tension, &c.: since then he has been subject to hæmorrhoidal tumours, which appear to supersede the formation of other diseases, as, in other respects, he has continued to enjoy a tolerable state of health.

The recurrence of diseased action, in cases similar to the preceding, would be attributed, by Mr. Abernethy, purely to a disordered state of the digestive organs; but, although this opinion may often be correct, it is more consistent with experience, and the known laws of the animal economy, to refer it to a general or con-

stitutional affection. Independent, however, of the influence which a disordered state of the digestive functions may have upon the general health, and through that medium on the formation of hæmorrhoids, there are other circumstances connected with it, that tend, in a very particular manner, to the same effect. The constant passage of undigested and irritating aliment over the mucous surface of the large intestines, the frequent accumulations, and consequent purging, that is produced either naturally, or by the exhibition of medicines, act most powerfully where a predisposition already exists to the formation of hæmorrhoids.

It has been very generally maintained, particularly by the disciples of the celebrated Stahl, that the male sex is much more frequently affected with hæmorrhoidal diseases than the female. Cullen, and other eminent professors, were of a different opinion, at least with respect to the inhabitants of this country; but whatever may be the case in this respect, there are certainly two periods of life, at which females are more liable to these affections

than the other sex, namely, during pregnancy, and at the cessation of the menses. In the latter case the frequency of hæmorrhoids may be attributed to the change that has taken place from the cessation of an important function ; in the former case to causes that act mechanically, and whose operation is sufficiently evident. “ If,” says the above-mentioned writer, “ the blood be accumulated in the veins, from any interruption of its proper course, that interruption must resist the free passage of the blood from the arteries into the veins. This again must produce some congestion in the extremities of the red arteries, and, therefore, some increased action in them, which must be determined with more than usual force, both upon the extremities of the arteries, and upon the exhalents proceeding from them, and this force may occasion an effusion of blood, either by anastomosis or rupture.”

Those, who conceive that hæmorrhoids are more common to females, attribute the difference to the menstrual discharge, which is said to carry off any temporary accumulation of fluids in the sanguiferous sys-

tem* ; but this explanation, like all others that would tend to limit the resources of nature within the bounds of our own deficient comprehension, is probably too mechanical to be correct.

If we give credit to the writings of many authors, we are led to conclude, that hæmorrhoidal diseases are much more common in some countries than in others, and that this is owing to the influence of climate. It is evident that the nature and temperature of the atmosphere may have considerable influence, in combination with other causes, but I think it bears no comparison to the circumstances with which it is connected, namely, the kind of the food of which the inhabitants of different nations partake, and the peculiar habits to which they are subjected. It has been re-

* Les hommes sont plus exposés aux hæmorrhoids que les femmes, parceque chez eux, il n'est aucun organe qui puisse prendre pour lui le sang qui est en excès. Chez les femmes au contraire, la matrice qui est voisine aux gros intestines recevant le sang que les veines hæmorrhoidales ne peuvent admettre, et le versant tous les mois, l'anus non seulement se trouve débarrassé, mais encore tout le systeme venal du mesentere. — *Encyclopedie Methodique*.

marked by Boerhaave, that these diseases are more frequent in the eastern nations than elsewhere, and the truth of this remark I had an ample opportunity of ascertaining during a residence of some months in Greece and Turkey.

The great frequency of hæmorrhoidal diseases amongst the Turks may be traced to the indolent habit of sitting during almost the whole day on warm soft cushions ; to the peculiarity of their diet, which, in addition to their general habits, often produces an indolent and torpid state of the bowels ; and perhaps, also, to an excessive indulgence in venery.

Schulzius states, that nearly all the inhabitants of Poland were affected with hæmorrhoids ; but whatever may have been the case in this respect, my own observations lead me to conclude, that at present they are scarcely more subject to these diseases than the other inhabitants of Europe.

The quantity and quality of aliments taken into the stomach may act as predisposing or exciting causes of hæmorrhoidal diseases, and are so far connected with their

production, that I would venture to affirm, the great majority may be attributed to irregularities of this nature. Why are these affections so common in the higher circles of society, compared with those in a more humble sphere; so much so, indeed, that we rarely meet with cases of hæmorrhoidal tumours, &c., in hospitals, whereas such cases are very common in private practice? It is not because there is that wide difference in exercise and general habits, since circumstances of this nature are not uncommonly reversed; but because with the latter more food is not generally taken than is sufficient to satisfy the demands of nature, and it is, besides, of the most simple kind; whilst with the former the digestive organs are often kept in a state of unnatural excitement or disorder by the habitual indulgence at the table; there is, as it were, a constant warfare between the powers of nature and the superabundance or poisonous nature of the ingesta.

The frequent use of spices, strong wines, spirits, and other stimulating liquors, by determining the blood in greater abundance to the mucous surface of the intes-

tines, are gradual, but frequent and effective causes of hæmorrhoids. Independent of their immediate application in passing through the alimentary canal, they appear to act instantaneously in many cases, by the sympathy that exists between the stomach and the rectum. A friend of mine, of a full habit of body, and who has been long subject to hæmorrhoids, assures me, that the first attack was in consequence of having partaken liberally of hot punch, and that he can almost immediately produce a return of the same discharge by a similar indulgence.

A young man, of a delicate and irritable constitution, was, from a similar cause, affected with a degree of strangury, and a peculiar and painful sensation about the rectum and neck of the bladder, like the passing of numberless sharp points through the parts. This sensation continued for some hours, and was more than once succeeded by a flow of blood from the anus.

Somewhat similar in their mode of operation to high-seasoned food, heating liquors, &c., are purgatives, more especially those which act chiefly upon the

lower part of the alimentary canal, as aloes, colocynth, &c. The irritating effects of aloes are such, that a moderate dose will almost invariably produce a return of the hæmorrhoidal discharge when it has been suppressed ; and I have often had occasion to remark, that such as have been in the habit of using it for a length of time are always either more or less subject to hæmorrhoids.

Next to aloes ; colocynth, and then rhubarb, amongst the common purgative medicines, have the greatest influence upon the vessels of the rectum. Given in large doses, they not only produce an increased determination of blood to the hæmorrhoidal vessels, but, by producing a striving action of the rectum, give rise to stricture, and the formation of tumours, forcing its internal folds within the grasp of the internal sphincter muscle. On this account it is necessary to be careful in prescribing purgative medicines for those who suffer from hæmorrhoidal diseases, and, for the same reason, any thing which irritates the rectum more immediately, such as stimulating clysters, the nestling of ascarides in

the gut, and the suppositories, that are occasionally employed for different purposes, must, in many cases, be injurious.

It is commonly remarked, that persons affected with hæmorrhoidal diseases are generally of a costive habit, and hence an indolent state of the bowels has been considered as a principal cause of their production. There can be no doubt, that the circulation of the blood in the capillary system of the intestines is very materially aided by the peristaltic motion, and that whenever this action is less than natural, it may give rise to local irritation and congestion in various ways. By long retention, also, the fæces not only become altered, in respect to their chymical properties, so as to produce considerable irritation, but acquire also a degree of hardness, in consequence of which the free current of the blood is interrupted, and the inner coat of the rectum forced downwards when they are discharged.

From my own observations, however, I am disposed to think, that a costive state of the bowels is by no means so frequent a cause of hæmorrhoids as is generally sup-

posed; in many cases the action of the bowels has been uniformly regular, or more active than is usual; besides, in attributing too much to the operation of this cause, we lose sight of the true nature of the tumours, &c., which are evidently as much associated with the state of the constitution as phlegmon, or any other inflammatory affection.

This state of the bowels is natural to some persons, and any attempt to counteract it is productive of debility. Sometimes it arises from the diet not being sufficiently stimulating, and hence a torpid state of the bowels, with hæmorrhoids, often occur, when those who, having been accustomed to good fare, are put upon a low diet, or when water is substituted for wine, or any other stimulating beverage.

A low diet, however, may produce the same effect in another way, if the quantity as well as the quality of the food be materially diminished. It necessarily lessens that distention of the alimentary tube, which appears to be required for a vigorous peristaltic action, and, by reducing the cavity of the abdomen, takes, in some de-

gree, from the pressure of its parietes. In Italy, and other catholic countries, where, from motives of penance, many individuals, at certain periods, or sometimes for a continuance, submit to a very poor and scanty diet, this fact is often exemplified. I have known one instance in which, from a similar cause, the bowels were not moved more than once in seven or eight days, and this state had continued for some time. Morgagni illustrates this fact by referring to the life of Sarpi, who, when a young man, having taken little food, and drank nothing for several days, was affected with obstinate costiveness, which produced piles, and a troublesome prolapsus of the anus.

To the causes already noticed may be added a great variety of others; excessive venery, violent exercise, particularly on horseback, a sedentary life, sudden variations of temperature, local irritation of any kind, and affinity with other affections in the same part, or in those more remotely situate. To enter more particularly, however, into a statement of these causes, to show in what manner hæmorrhoidal dis-

eases are produced by some, or aggravated by others, would much exceed the limits of this chapter, the chief object of which is to consider these complaints in reference to their surgical treatment, without comprising the almost innumerable phenomena, to which they often give rise in the functions of the animal economy. I shall, therefore, content myself with merely remarking, that many of those causes, which, in excess, produce or dispose to hæmorrhoidal diseases, may, if applied with moderation and judgment, contribute very materially to their prevention and cure.

SECTION IX.

General Treatment of Hæmorrhoids.

THAT hæmorrhoidal diseases are generally salutary, and, in some degree, often necessary to the maintenance of the general health, is an opinion that has prevailed for centuries, and received at different periods the sanction and support of the

ablest writers. Amongst the number of these was the celebrated German, Stahl, who enhanced the value of this opinion by his fame, and carried it to a great extent, both in theory and practice. Other writers, the number of which, however, is comparatively insignificant, have regarded these diseases in a very different light, attributing to them a variety of affections, with which they are probably in no way connected.

There can be very little doubt, that these contradictory conclusions have proceeded from a partial consideration of facts, from having viewed these affections under peculiar circumstances, and not in a general light. So long as there is merely an occasional and moderate flow of blood from the anus, it is not to be supposed that any pernicious effects can be the result, setting aside the temporary relief it affords, and the general advantages that are supposed to proceed from it ; but when, in the course of time, or perhaps more immediately, this determination of blood to the vessels of the rectum is accompanied with a copious exhalation of sanguineous or serous

fluids, or with the formation of tumours, and these are more or less associated with other affections, producing pain and inconvenience, when the constitution appears to suffer in any way, the patient is prevented from taking exercise, or from attending to his usual occupation, it then becomes a fruitful source of inconvenience, or even danger, and should no longer be trifled with. "In this respect," says Dr. Cullen, "I am clearly of opinion, that hæmorrhoids may take place in consequence of the general state of the system, or, what is still more frequent, by repetition, they may become connected with that state, and in either case cannot be suppressed without great caution. I must beg leave, notwithstanding, to maintain, that the first is a rare case, that generally the disease appears as an affection purely topical, and that the allowing it to become habitual is never proper. It is a nasty disagreeable disease, ready to go to excess, and to be thereby very hurtful, as well as fatal. I am, therefore, of opinion, that not only the first approaches of the

disease are to be guarded against, but even that when it has taken place for some time, from whatever cause it may have proceeded, the flux is always to be moderated, and the necessity of it suppressed."

These remarks, founded upon long experience, are, no doubt, deserving of every attention, and their truth, in a general point of view, will, I think, be universally admitted. I cannot, however, avoid remarking, that my own observations, such as they have been, are in opposition to the opinion that hæmorrhoidal diseases generally appear as affections purely topical. In the majority of cases I have not been able to trace their origin to any local cause, such as costiveness, &c., whilst many concurrent circumstances lead me to consider them as associated with a peculiarity of constitution, or the state of the general health. Whatever may be adduced, either for or against the opinion, that these diseases are often constitutional, it must be admitted, that they not unfrequently, and in a short time become so far connected with the general system, that

any attempt to effect a cure suddenly by local means, is frequently productive of the most dangerous consequences.

A gentleman, in whom the discharge and swelling of the tumours were in some degree periodical, being under the necessity of going to some distance from town, endeavoured to check the attack at its commencement by applying cloths, dipped in cold water, to the anus. The local excitement was, in consequence, subdued, but was succeeded by violent pains in the stomach, vomiting, and general fever.

Mr. Howship states, that a gentleman, who had a periodical discharge of blood from some hæmorrhoidal swellings, was induced by the advice of a quack, contrary to the opinion of his surgeon, to apply a strong vitriolic wash. This also cured the discharge; but he died within three days, from an attack of some gouty affection of the stomach. Apoplexy has also been found to succeed similar acts of imprudence; and sometimes different cutaneous eruptions will alternate with the afflux of blood to the rectum.

The oftener the hæmorrhoidal attack is renewed the more liable it will be to recur, and the greater will be the risk of endeavouring to effect a sudden cure. On this account it becomes doubly requisite to lessen, in the first instance, the determination of blood to the part, by removing the exciting causes as early as possible, with such general and topical remedies as have been found most useful for this purpose. In fulfilling these indications, it is scarcely requisite to say, that much must necessarily depend upon the judgment, which must be regulated by the circumstances of the case; for instance, it would be imprudent to interfere when the hæmorrhoidal attack has succeeded to diseased action in some more important part of the body; since it is sufficiently obvious, that the one may supersede the necessity of the other, and, in acute diseases particularly, may be considered critical. Indeed the exemption of those subject to hæmorrhoids from a variety of diseases, a fact noticed by Hippocrates*, and by almost all writers on the

* Lib. de Hemor.

practice of physic, depends upon the same principle of the economy, and may be regarded amongst those numberless cases in which nature displays the extent and mode of her operations, furnishing also by this medium the surest rules for the application of remedies.

As the disposition to hæmorrhoids, when promoted by circumstances, often continues for life, and the paroxysms are liable to be increased in number, or aggravated by numerous and very trifling causes, it becomes a heavy tax and inconvenience for the patient to have recourse, on every exigency, to medical opinion. For these reasons, it is in some degree incumbent on the practitioner to furnish his patient with such general rules as may tend to lessen the predisposition, and moderate the violence of the attacks without risk. These should relate to the ordinary actions of the day, to diet, the state of the bowels, the circumstances under which topical applications are most useful, &c. &c.

Attention to diet is the first and most important consideration in many cases ; and if the patient is not advanced in years, en-

joys a moderate state of health, and will submit to what is thought requisite, I will venture to say, that he may pretty confidently expect a perfect cure, with little foreign assistance.

In all local diseases that depend more immediately upon an inordinate excitement, and afflux of blood to any part, attention to the quantity and quality of the diet is recommended on general principles, and its operation is too obvious to require repeating; but in cases of hæmorrhoidal affections it has a much more decided and immediate operation. In the first place, there is a very strong sympathy between the stomach and large intestines, particularly the rectum; they are also intimately allied by continuity of surface, and any effect upon the stomach is propagated through the whole of the alimentary tube. This may be noticed daily, when, after a full meal, the action of the bowels is for a time increased.

It is not possible to give general directions respecting diet, that are applicable to every case, as much will depend upon

peculiarity of constitution, the state of the general health, &c. ; but in general, that which consists of a mixture of animal and vegetable food, which contains sufficient nutriment in a moderate compass, is easily digested, and not too stimulating, is the best. In this respect, the patient must have recourse to that which he has found by experience to agree with him, and which, if possible, without the aid of medicine, will maintain the bowels in a state of proper action. Milk has been recommended, and where it agrees it certainly forms an excellent diet, but it is apt to confine the bowels, and form very hardened fæces, and the necessity, in such cases, of giving laxatives, must counterbalance the virtues it may possess. I am at present, however, acquainted with an elderly lady, who, for many years, has suffered from hæmorrhoids, and an excessively torpid state of the bowels, and in whom milk acts as a purgative. She is in the habit of taking a glass-full warm from the cow every second morning, and prefers it to purgative medicines, as its operation is sufficiently power-

ful, without being accompanied with any griping pain or nausea.

Long habit may render a stimulating diet necessary where it was not originally required, at least so far as relates to the state of the bowels. If in such cases any customary stimulant be suppressed, the peristaltic motion of the intestines becomes too weak to propel forwards the fæculent matter already in a state to be expelled; the fluid parts, in consequence, are rapidly absorbed, and the pressure of the hardened residue necessarily produces some degree of congestion in the vessels of the rectum and anus. Hence, hæmorrhoidal tumours often appear suddenly under such circumstances, without any constitutional affection, and disappear as quickly when the cause is removed.

I have previously mentioned that a torpid state of the bowels appears to be natural to some individuals, and that in such cases, to counteract it is difficult or pernicious. The motions are not much more copious in consequence, for the

abundance of matter given off by the internal surface of the intestines, and which forms with many a considerable part of the excrement, is often thrown off by the skin in copious perspirations.

Lieutaud has had occasion to make a similar remark to the above: "It is not uncommon," he states, "to meet with persons who pass five or six days without any evacuation from the bowels: there are some even, who remain ten or twelve days without any inconvenience; however, this only happens to such as lead a very inactive life. It is true that sometimes those, who live like other men, have also a confined belly; we have known a female who had only one motion in fifteen days, or three weeks; mention is also made of a priest, who, enjoying good health in other respects, passed twenty days without a motion, and evacuated then nothing but balls, like goat's dung."

Those who suffer from hæmorrhoidal diseases are often in the habit of taking purgatives, either to obviate costiveness, or to lessen the heat of the body, as it is vulgarly termed. No habit, however, can be more

pernicious, particularly when these are of the resinous kind, which is generally the case, as they are more readily formed into pills. By purging, the contents of the bowels, being expelled before they have undergone the natural change, act upon the mucous membrane of the large intestines like many foreign substances, to whose mode of excitement it is not habituated. At the anus, where there is more animal sensibility, this irritation is shown in the burning sensation that accompanies the expulsion of the fæces under such circumstances, and sometimes produces a degree of tenderness almost amounting to excoriation.

Another habit, which is also very pernicious to those who are affected with hæmorrhoids, is that of continually taking hot liquids. These gradually relax the vigorous tone of the stomach and bowels, render the whole system much more sensitive, and, therefore, more liable to be acted upon by change of temperature, and many other causes to which we are constantly exposed. They should, therefore, be taken very sparingly, and where the previous habits of the

patient have not rendered this temporary stimulus in some degree necessary, and the circumstances of the case may require a particular attention, it is much better that they should be altogether withdrawn. I have had repeated opportunities of witnessing the good effects of a moderated diet and cool drinks, but those who have been accustomed to take large quantities of hot tea, coffee, &c., and depend upon them for that pleasurable state of mind which is natural to some without their influence, can seldom be prevailed upon to forego their use.

What I have said respecting hot liquids refers also to the frequent use of hot stimulating injections, a practice which is less necessary to notice, because it is not common in this country. The same objections, however, do not obtain to cold washes and injections, which, if used with prudence, are always of the greatest service whenever hæmorrhoidal diseases are not owing to a torpid state of the circulation. Indeed, injections of cold water have been so strongly recommended by Schmucker and some other celebrated continental writers,

that they are now in pretty general use, and the immediate relief and ultimate advantage they afford, is sufficiently proved to require any particular observations in this respect.

It is not only in cases where there is merely an increased action and fulness in the capillary vessels of the rectum, either with or without a serous or sanguineous discharge, that cold water is so useful, but also where there are tumours of considerable size, and which, from being repeatedly gorged with fluids, have become nearly stationary.

When the internal tunic of the rectum is much relaxed, and the discharge of blood or serous fluid is too great, or too long continued, it may be advisable to employ injections of a more astringent nature, as infusions of green tea, decoctions of oak bark, solutions of the sulphate of zinc, sulphuric acid in water, &c., but these should not be used without necessity, and always with caution.

Amongst the remedies that are generally given in hæmorrhoidal diseases, supertartrate of potash is certainly one of the most

efficacious. It may be given for a length of time, either alone, or in combination with sulphur in the dose of a tea-spoonful twice a day. Independent of its moderate action upon the bowels, this salt appears to possess virtues peculiar to itself, and where its use is not contra-indicated by a morbid irritability of the mucous tunic of the stomach, which is often aggravated by any thing that contains a superabundance of acid, it will be found of great advantage, particularly if the diet be strictly attended to at the same time.

Ward's paste, cubebs, and other remedies of a similar nature, have been found very beneficial in many cases, and have been much recommended in consequence; but it is pretty clear that their action is somewhat at variance with the general mode of treatment already described; and that it is only in cases where hæmorrhoidal diseases are of long standing, where they proceed from debility, or a sluggish state of the circulation, that these remedies can be employed with advantage. The intelligent practitioner will have no difficulty in making the necessary distinction, and

neither employ nor recommend any particular treatment generally, which is only applicable to peculiar cases.

When the hæmorrhoidal attack has been suddenly suppressed, either by topical applications, or by other means, and the constitution does not appear to feel the shock, we cannot do better than to leave the case to nature ; for it does not follow that metastasis, though a frequent consequence, should necessarily supervene. I have known some instances, and have heard of several others, in which hæmorrhoidal diseases of long standing have been almost suddenly cured by accidental occurrences, or by the random prescriptions of ignorant empirics, and yet no unpleasant consequences occurred. I allude to those cases in which the afflux of blood to the rectum, producing either a discharge or swellings, appeared to be the result of a general disposition, operating upon a single part ; and not to those in which the continuance of the complaint, and all the symptoms, proceed from the operation of local or mechanical causes ; for many of such tumours as are removed by surgical means, al-

though originally produced by general indisposition, must often be considered as local diseases, resulting from the natural structure of the adjacent parts. Thus, for instance, most hæmorrhoidal swellings would continue nearly stationary, or at least would increase only at particular periods, and from general causes, were it not for the pressure of the sphincters, and the mechanical irritation arising from the passing of the fæces; but from the constant operation of these or other causes, they eventually become solid and organized bodies, no more connected with the state of the constitution than analogous affections in other parts of the body.

In cases, however, in which the suppression of the attack is followed by violent pains in the abdomen, by hæmorrhage from the lungs or stomach, or, in fact, by any affection that appears to be associated with it, it is generally advisable, not only to employ such means as the urgency of the case may require, but, if possible, to produce a revulsion to the vessels of the rectum. Warm stimulating fluids should be injected into the rectum, and the pa-

tient should sit over the steam of hot water. If these means fail, leeches should then be applied around the anus, or recourse may be had to electricity for the same purpose. The latter method is strongly recommended by Desault, who states that he has derived great advantage from it, both for himself and others*.

SECTION X.

On the Local Treatment of Hæmorrhoidal Tumours.

IN reference to the particular treatment of these tumours, the first and most important point is to be fully satisfied of their structure; for, without this, great danger

* Mais une remède qu'on ne doit pas négliger pour rappeler cette évacuation nécessaire, c'est l'électricité. Ce moyen curatif, administré au bains est un des plus efficaces pour rappeler toutes les évacuations supprimées. On peut y joindre quelquefois l'électricité par étincelles; mais j'ai été sur beaucoup des malades, et sur moi même, un grand avantage de l'électricité par bains pour les hémorroïdes. On en trouve un exemple dans les ouvrages de Sigaud Delafond sur l'électricité médicale, et surtout lorsque le flux hémorrhoidal masque un flux hépatique. — *Cours Theoretique et Pratique de Clinique Externe par Ph. J. Desault.*

may follow upon such operations as are undertaken for their removal. The local means of cure may be included in, First, The application of particular substances; Secondly, Compression; Thirdly, Operations with the knife or ligature.

When the tumours included in the first division, and which constitute nearly the whole of such as are commonly called piles, are attended to at the commencement, they may often be removed by topical applications, combined with such general means as I have endeavoured to point out in the preceding section. The advantage derived from the use of ointments appears, in a great measure, to proceed from their excluding the air, and increasing the exhalation from the surface; for, as I have often remarked, that the most simple applications of this nature are almost equally efficacious in alleviating the pain, and reducing the size of the tumours, it would be difficult to attribute their virtues solely to their more active ingredients. Strong solutions of the sulphate of zinc, decoctions of oak bark, with sulphuric acid, and similar lotions, if

applied constantly, and quite cold, are powerful repellents. These applications, however, are much more efficacious, when employed in conjunction with pressure. If the tumours are external, a compress of a conical form, steeped in the solution, may be applied and retained by a temporary bandage, or by the pressure of the fingers, whilst the patient remains in a horizontal position. When the compress becomes warm and dry, it should be again moistened and re-applied, until it is supposed that the local excitement has, in a great measure, subsided. But there is another and more simple method, which I have heard some of the French practitioners recommend, of preventing these swellings from taking place externally, and which is more useful, because it can be employed more immediately, and the degree of pressure regulated by the degree of opposition, and the sensibility of the part. I allude to compressing between the fingers the point at which, from the slight degree of fulness, and the peculiar prickling sensation, it is supposed a tumour is about to form. By either of these means the progress of the tumours

may always be checked either more or less at their onset, and the irritation which they occasion being obviated, the attack is rendered much milder than it otherwise would have been.

In arresting the formation or increase of these tumours, at the commencement, two objects are gained; they are prevented from becoming permanently larger, and the irritation occasioned by the distention, which necessarily increases the afflux of blood to the surrounding parts, is wholly or in part removed; for, even in cases in which the attack proceeds from general causes, the chief pain and inconvenience arise from the peculiar structure of the parts, and not from the nature of the affection.

When the tumours are more internal, pressure cannot be employed in the same manner; but the rectum bougie, or what is much better, because it is more yielding, and is always at hand, is the common bed candle, which should be gently introduced within the anus. In this case, the opposition of the internal sphincter is such, that the incipient swellings are moderately com-

pressed; but when these are situate still higher, I know of no form in which pressure can be employed with any advantage.

It is wholly unnecessary to enumerate the various applications which have been recommended by authors, or employed by empirics for the cure of hæmorrhoidal swellings. Many of them evidently owe their virtues to the cold water which serves as their vehicle, others to isolated circumstances, and some to superstitious association*. In Italy I have seen the internal part of gourds and other fruit, employed as a topical application. This practice may have arisen in consequence of the former remedy having been mentioned by Morgagni, who states, "that he has seen Albertini alleviate the violent pain of the tumid hæmorrhoids, by applying the internal part of gourds, or by injecting water in which they had been boiled†."

Although hæmorrhoidal tumours are

* Amulets, and other species of charms, formerly in great repute for the cure of many diseases, and still made use of occasionally, particularly in the East.

† Lib. xxx.

disposed to inflame spontaneously, yet when the pain and tumefaction are excessive, they are usually, owing to their position, being either forced down within the grasp of the sphincters, as previously noticed, or liable, if more external, to be compressed and irritated in various ways. In the former case our first object should be to replace the tumours by passing the finger, well oiled, gently within the anus, so as to force them more within the rectum. The patient should remain in a horizontal position, and the bowels be gently moved with castor oil, or some mild aperient. By these means the symptoms generally abate, but should this not be the case, and the inflammation and pain be very severe, we must have recourse to local, or even general blood letting, &c., and afterwards to cold injections. It often happens, however, that the parts are so excessively tender, that injections cannot be employed without causing the most excruciating pain, and, under such circumstances, it is advisable to postpone their use, until, by other means, the extreme vio-

lence of the inflammation has somewhat abated.

Very frequently the tumours cannot be returned within the rectum, either because they are too tender to admit of being handled, or because there is some mechanical hindrance. They then continue to swell, one or more acquire a livid colour, resembling a dark grape, and in some cases the circulation is so far interrupted that mortification takes place, in the same manner as if a ligature had been applied, forming what has been termed the natural cure for piles.

The pressure of the sphincters being, as I have already stated, the main cause of the tumefaction and pain, the best method, when we cannot remove the cause, is to lessen the effect, by producing, as speedily as possible, a disgorgement of the tumours. Surgeons, however, are not agreed with regard to the means most serviceable for this purpose ; but it has been long a common practice, either to apply leeches to the tumours, or to puncture them with the common lancet.

Schmucker*, who, in his excellent surgical work, has given a distinct chapter on the use of leeches; and Mr. Ware, who gave much of his attention to hæmorrhoids, recommend the former method; Petit and others gave the preference to the latter. "If," says the first of these writers, "the tumours are not larger than a garden bean, or a small nut, leeches have the happiest effects, for, in general, they are opened by the leech, freed from their thick blood, and collapse." But when these have acquired a considerable size, he objects to this practice. "Should the tumours, however, be very large, it is unnecessary to employ leeches; and yet I have seen them prescribed when the tumours were of the size of a large apple. A surgeon that proposes them under such circumstances cannot open the tumour, and can have no knowledge of their structure and nature; for the larger the tumour the thicker and stronger will be the skin

* Ich übergehe den nuzen der Blutigel bey hæmorrhoidalbeulen, weil er mehr als zu bekannt ist. — *Ver-mischte Chirurgische Schriften*, B. i.

that covers it; and I have often seen it as thick as the little finger."

The author of the article hæmorrhoids * strongly objects to the method of applying leeches to these tumours, or around the anus, with a view to disgorge them of their blood. He states, that in general the effect is quite the contrary; the flux is almost always very much increased, as well as the consequences that arise from it; and that it is better to apply leeches in proportion to the violence of the inflammation at a more distant part, where the irritation caused by the bite can have no effect; and yet sufficiently near to empty the vessels of the part affected.

The application of leeches on or near to the tumours is objected to by Richter and other eminent continental surgeons; and even Wiseman recommends that they should only be employed when the discharge has been suppressed †. My own

† If the patient hath been accustomed to a flux of the hæmorrhoids, and they are suppressed, then leeches may be applied, that the blood may have its discharge

* *Dictionnaire des Sciences Medicales.*

observations have induced me to form a similar opinion, chiefly because when hæmorrhoidal tumours are excessively inflamed the leech bite gives great pain, and also because, as an application immediately to the part, we have a remedy often sufficiently powerful in cold washes and cold injections, whilst blood may be drawn from the loins, or from above the sacrum, by cupping.

It generally happens that the pain is caused chiefly by one of the tumours only, which, as Mr. Ware has observed, is often smaller, and not unfrequently in the centre of the others. In such cases a temporary relief is afforded by puncturing this tumour with a lancet, so as to unload its distended vessels, or evacuate the effused blood.

It sometimes happens, that, in consequence of inflammation, several hæmorrhoidal tumours within the anus or rectum become united at their sides, so that that way; but, unless in the cases aforesaid, leeches ought not to be used, and then also cautiously, they rather drawing the humours to the part, than carrying them off, and so are frequently the cause of piles, and all the mischief that attends them.—*Chirurgical Treatises*, vol. i.

a portion of the cavity of the rectum is nearly obliterated, to the extent of two or three inches. I had some time ago an opportunity of seeing a case of this kind in one of the Italian hospitals. It was cured by the frequent use of warm emollient clysters, injected with care, and by pressure from a short rectum bougie. The whole of the bougie was introduced twice a-day, and, after remaining some time, withdrawn by the tape attached to one extremity.

To such cases as the preceding, Mr. Dupuytrin, of the Hotel Dieu, at Paris, is in the habit of applying the actual cautery. A hollow instrument, perforated at the sides, is introduced within the rectum, and so contrived, that, on separating the handles, a portion of the tumid surface is forced through the perforations. A cylindrical piece of iron, red hot, is then rapidly introduced, and immediately withdrawn, with a view to produce sloughing and suppuration.

I have already noticed, that after hæmorrhoidal tumours have existed for a long time, they become more or less perma-

nently solid, elongate, and often descend below the external sphincter. This descent usually takes place when at stool, and the strangulation of their substance is often attended with great suffering. Various methods have been employed, particularly by the French and German surgeons, to prevent the descent of the tumours. Bodies of various forms, composed of elastic gum, &c., have been introduced within the anus, and retained there by a compress and bandage; but these, as well as all such means, have been found very inconvenient and painful, and answer but imperfectly the purpose for which they are employed. They are very apt to become displaced, or the internal sphincter, habituated to the pressure, relaxes, so that a portion of the swelling is forced down, and compressed between that muscle and the side of the instrument. The only plan I believe to be of service in cases of this nature is to compress the anus upwards, in the manner recommended by Professor Chaussier. This is done by placing together layers of wet lint, until the surface of the compress is nearly on a level with

the nates, its apex directed to the anus. An astringent solution may be used at the same time, by moistening the lint with it instead of water.

When, however, hæmorrhoidal swellings are large, painful, and retained with difficulty within the rectum, when they become ulcerated, are disposed to bleed frequently, and continue nearly stationary in respect to size, proving a source of great inconvenience, or even danger, and rendering the usual occupations of life almost impracticable, the only plan that remains, after having tried the means already mentioned, is, to remove them as speedily as possible, either by the knife or ligature.

The ligature has long been in use for removing hæmorrhoidal tumours. It is less terrible to the patient, and on this account often preferred to the knife; but its application is not unfrequently followed by disagreeable, or even by dangerous consequences. Petit has related a case in which the application of the ligature proved fatal, and which deterred him from having recourse to the same means in future, and similar instances

have been brought forward by others. The symptoms that supervene, when the inflammation or irritation are unusually violent, resemble those which accompany strangulated hernia, pain and tenderness of the abdomen, nausea and vomiting, &c. &c. In addition to these, there is often retention, or rather suppression of urine; not unfrequently convulsions, or even tetanus may also take place in consequence, and the tenderness about the anus and nates is generally such, that the patient cannot endure the slightest motion even of the bed-clothes.

Le Dran objects strongly to the ligature in these cases. Besides the extreme and almost insupportable pain caused by the ligature, it is possible, he states, that the inflammation extending along the rectum may reach the other intestines, and give rise to those effects which take place in hernia from strangulation of the intestine. It is, therefore, better to cut them off successively*.

Mr. Abernethy, who, for many years,

* Consult. per Le Dran.

has been in the habit of cutting off hæmorrhoidal tumours, also objects to the application of the ligature on the same principle. " Yet it has appeared to me, that tying hæmorrhoidal excrescences is productive of all that temporary distress which is observable in what I have termed their natural cure; and as there is a general disorder in the functions of the alimentary canal in all such cases, the irritation occasioned by the ligature aggravates this habitual disorder, and produces sometimes very alarming symptoms*.

The following remark of Mr. Copeland's shows, that, after long experience, he has been induced to form nearly a similar opinion in this respect. " But I am sorry to say, that although I have repeatedly succeeded to the utmost of my wishes, in curing the disease, by the application of a ligature, this success has not been so uniform as to establish it in my mind, as an operation always to be recommended. In one instance the patient very narrowly escaped death; in another, very serious

* Abernethy's Surgical Works.

symptoms were produced, and in a third the operation nearly proved fatal. I have also heard of one or two instances where the life of the patient was destroyed by freely tying off the hæmorrhoidal excrescence*.”

Independent, however, of the great pain and danger, which attend this mode of operating, there are, I think, other reasons that render it less generally desirable. It does not always succeed in removing the tumour, unless where it can be applied with great facility ; producing, in this case, ulceration, and laying the foundation of fistula in ano.

Notwithstanding these disadvantages, however, the ligature is still employed, and recommended by many surgeons, without sufficiently discriminating between those cases in which it may be used with little risk, and others wherein there is greater probability of danger. Mr. Howship remarks, that “many patients are not able to overcome the alarm they feel at the idea of cutting, none of which apply to the

* Copeland on the Rectum.

mere tying of a tumour. As relates to the surgeon, a stronger reason presents itself in the superior safety of the ligature, compared with the knife. The hemorrhage, after excision, is sometimes very alarming, and has repeatedly proved fatal. In both modes of operating, the removal of the disease is effected with equal certainty, provided the operation is properly performed. It is supposed, also, that the ligature should be preferred, because it is followed by a greater degree of inflammation, producing an effusion of lymph, which is afterwards only partially absorbed; and that, in consequence, the parts previously relaxed become more firmly consolidated."

I am far, however, from thinking with Mr. Howship, that of the two modes of operating, that of the ligature is the safest, or that fatal hemorrhage has frequently supervened from the use of the knife; nor do I think, that in cases in which the envelopment of the tumour is excessively hard and thick, the disease can be removed so readily by the former as by the latter method.

I have not quoted the preceding remarks, that they may serve in any way as a guide to the best mode of practice in extirpating hæmorrhoidal tumours, because they are too undecided, and applied too generally to answer this purpose; but, containing the opinions of those who have had considerable experience in such cases, they may serve to show how vacillating and contradictory must be the practice of the generality of surgeons in the same respect.

Now, with regard to the operation by excision, the chief, and indeed the only objection appears to consist in the probability of hemorrhage, an objection, which, I think, is very scantily supported by facts. For a very long period, many of the most eminent surgeons of Europe have been in the habit of cutting off hæmorrhoidal tumours, and yet, as far as I can recollect, there are but two or three well authenticated cases of fatal bleeding under such circumstances; one of these is related by Petit*, another by Gottlieb†, and it is more than probable, that in these cases,

* Œuv. Posth.

† Comment. de rebus in Scient. Natur. tom. vii, &c.

as well as in many others that have been attended with alarming hemorrhage, the tumours were varices, and should not have been opened under any circumstances.

With what feeling of security surgeons were formerly in the habit of employing the knife in such cases may be seen by referring to a case related by Wiseman. The tumours are described as very large and numerous, and, although considered as excrescences, were, I have little doubt, of the same nature as common piles. Describing the operation for their removal he says, "I began with those nearest the verge of the anus, clipping them off close from their roots, one after another, as fast as I could, not minding the bleeding, till I had freed my way to those within the anus. Then with a sponge, dipped in oxycrate, I washed off the blood, and with some small actual cauteries dried the roots of them. That done, I oiled my finger, and passed it into the anus, to make way to the next; and whilst I held my finger beyond it, close to the root, my servant the meantime pulling the ficus towards him, I passed the scissors under it towards the

end of my finger; then tied them, and passing on, cut them off, my finger within directing me in the work. I tried the speculum ani, and by the help of my finger within, and a speculum at the entrance of the verge, I cleared the anus of them, and cauterized their roots. Then I fell to work with the rest, snipping or cutting them off," &c. &c.

Schmucker describes an operation, which shows how safely the common hæmorrhoidal tumours, even when of an enormous size, may be extirpated by the knife. "About a year ago, I was called to one of my own countrymen of distinction, who had three large tumours, one of which was equal in size to the fist. The bowels had not been moved for more than three days, during which time he had not slept, and had suffered the greatest torment. I ordered him to lay down upon the table, the assistant to hold apart the nates, and the patient to force down, as if at stool, so as to spread out the tumours. I then opened the largest, and found the skin half an inch in thickness, and the cavity itself was so large, that I could

bury the whole of my finger within. A quantity of thick dark blood flowed out, and when, in consequence, the flaps were drawn together, I cut them off with the curved scissors, and removed the other two in a similar manner. Two tumours now appeared from within the rectum: these, of which the largest was about the size of a walnut, I also removed with the scissors. The whole of the blood lost amounted to eight ounces. I applied compresses, dipped in cold water, ordered a dose of Glauber's salts, and, as the operation took place towards evening, and the patient had not slept for three nights, I had him put to bed. The following morning he informed me with great delight, that he had not only slept well, but that his bowels had also been moved. The rectum was injected with cold water; litharge ointment spread upon a small piece of lint was applied to the open wound, and in a few days it was entirely healed*."

In reference also to the surgical treatment of common piles, Mr. Abernethy

* Vermischte Chirurgische Schriften; Historische Abhandlung vom medicinis: Gebrauch der Blutigel.

makes the following remark :—“ It is now twenty years since I first began to remove them freely with the knife or scissors, and I have never met with any circumstances to deter me ; whilst the relief of suffering, which the operation has afforded to some, and the scarcely to be expected and complete cure which it has effected in many, has been highly gratifying*.”

In endeavouring to show how little we have generally to dread the supervention of hæmorrhage in extirpating common piles with the knife, I do not, therefore, mean to condemn the use of the ligature altogether, since I am convinced there are some cases, in which it is absolutely requisite, and others wherein it may be employed with little or no risk. It is found by experience, that the pain and irritation of the ligature are always infinitely greater, when any part of the fine skin about the anus forms the envelopment, and is, therefore, included ; but when the basis of the tumour is attached higher up to the mu-

* Surgical Works, vol. ii.

cous coat of the rectum, and it can be firmly compressed by the ligature, alarming symptoms rarely or never supervene. Indeed these facts, which might have been expected from the different modes of vitality in these parts, are so well known, and so obvious, that I think few regular surgeons would ever apply a ligature to any tumour whatever, arising immediately from the verge of the anus, and covered by the fine skin of that part.

Operations.

The mode of operating for the removal of hæmorrhoidal tumours, must depend, in some degree, upon their position, size, and form. When they are nearly isolated, little or no difficulty can attend their removal; but when they are more extensively connected with the surrounding parts, or form an irregular mass around the margin of the anus, some previous consideration is required to effect their removal with nicety and advantage.

Having placed the patient upon his knees and elbows, and previously cleared the rectum by injecting into it some warm

water, let him strain, so as to force the tumours downwards, whilst an assistant holds aside the nates. When, by these means, the tumours are more exposed, the surgeon is to grasp that which he intends to remove first between his finger and thumb, and draw it gently forwards, or a hook, if requisite, may be employed for that purpose; and having exposed the whole of the tumour, it is then to be separated close to its base, with the probe-pointed bistoury, or the common scalpel. If there are more they may be removed in the same way, but this is not always necessary, as the smaller ones often disappear altogether when the others have been extirpated.

If the tumours form an irregular and projecting mass around the anus, it is better to include the whole in two ligatures, tied at opposite points. The ends of the two ligatures should then be gently pulled, so as to draw the whole mass a little forwards, and the whole included by the ligatures separated with the bistoury or scalpel. The position of the patient will withdraw the surrounding skin, and in the

latter case effectually prevent too much of it from being removed with the tumour.

Sometimes also it is necessary to employ the scissors, but they should not, I think, be used unless when the tumours are very small, or it is inconvenient to use the knife, because, from the contusion which they undergo in this case, the wound is necessarily more disposed to suppurate. When the same operation is to be performed upon a tumour completely within the rectum, the wooden gorget, or director to guide the incision, and prevent the sides of the gut from being wounded. The improved speculum ani will, in this case, be found useful to ascertain the situation of the tumour, and enable the operator to place the director in the proper position. When this is done, the common bistoury must be introduced along the inside of the fore finger, carried over the neck of the tumour, and the division effected by drawing it forwards firmly along the director.

In applying the ligature, the patient must be placed in the same position as in the former case, and, if possible, the whole

of the tumour that is to be removed exposed in the manner already mentioned. If the tumour is large, or very broad at the base, a double ligature should be passed through it near to its basis by means of a curved needle; but under other circumstances a single ligature will answer every purpose. In either case, however, great care should be taken that the ligature is applied with sufficient force to prevent any partial communication between the parts it is intended to separate; and, as the degree of irritation must be, in some degree, proportionate to the quantum of substance compressed by the ligature, it is not advisable to operate upon several at the same time.

Previous to performing either of these operations, it is necessary, on the one hand, that the bowels are sufficiently unloaded, and, on the other hand, that the medicines which have been given for this purpose have ceased to operate. After the operation is completed, an opiate should be given to allay irritation, and to diminish the peristaltic motion until the rectum is in a better state to receive and expel the con-

tents of the bowels. This plan of treatment, however, is less necessary after the application of the ligature than when the knife has been employed, because, in the one case, our object is to produce a speedy cicatrization, whereas, in the other, suppuration is a necessary result; and, besides, the greater probability of danger from inflammation may require that the action of the bowels be not too much suppressed.

For some days the diet should be as scanty as possible, and the antiphlogistic regimen in other respects strictly enjoined. By these means, together with the application of wet cloths to the anus, and general blood letting, if particularly indicated, the inflammation, that in a greater or less degree always supervenes, may, in general, be sufficiently moderated; but, in the contrary case, particularly if there is an anxious expression of countenance, with restlessness, convulsive twitchings, and other prominent symptoms of excessive nervous irritation, the ligatures should be divided, and the tumours removed with the knife. In one instance, I have seen the effects

of the ligature prove fatal even after this plan of dividing them was effected.

To obviate the disagreeable consequences, and combine the advantages of both the preceding modes of treatment, it was formerly advised to apply the ligature in the first place, and at the end of a certain time to cut off the whole of the tumour with the ligature that included it, a mode of operating that has been adopted, with some variation, by modern surgeons.

Sir Everard Home, who had often had occasion to remark the violent effects of applying the ligature in the usual manner, so great, as he expresses it, that many surgeons decline performing the operation; and patients would rather suffer from the disease than have recourse to such means of relief, recommends that the tumour be taken up with a double ligature, and the intermediate portion be afterwards divided. In this mode of operating he states, that the subsequent symptoms are much less violent; but it is very evident that it is founded upon a wrong principle, for if the ligature be tied sufficiently tight, all communication with the substance of the

tumour is necessarily cut off, and no advantage whatever can therefore be gained.

An operation nearly similar is recommended by Mr. Charles Bell, namely, to tie the tumour at its base, and cut off the convexity with the scissors. The following description of the operation is given by this gentleman :—“The patient resting on his knees, the surgeon holds aside the nates. The surgeon, taking hold of the tumour betwixt his finger and thumb, draws it down, so as to expose the base of it. Now let him pass the hair-lip pin across the base of the tumour, take off the steel point from the silver pin, over the pin, and consequently fully over the tumour : he is now to draw his ligature ; he is to draw as much as the patient can bear, without excessive pain : with one motion of the long curved scissors he is to remove the tumour which is thus included in the ligature.

“The object of the first part of this operation is to restrain the bleeding, and to keep the membranes in contact, that they may adhere, and be consolidated. The advantage of the method is the ease

with which it is done, and that the pin may be withdrawn on the first rising of the pain and tension. In the succeeding morning, or in the evening of the same day in which the operation is performed, the pin may be withdrawn if there come pain and tension on the part, for its purpose is answered. But this will not in general be necessary; the pin and the ligature may be permitted to remain until the parts go through the whole process of inflammation. The effect of this operation with the knife or scissors, thus performed, is the adhesion and consolidation of the loose membrane, and the obliteration of the vein which bleeds."

Although this method of operating comes recommended from so respectable a quarter, yet I cannot admit that it possesses all the advantages attributed to it. The effect of inflammation in producing a consolidation of the surrounding parts is certainly a desirable event in cases wherein there is a considerable relaxation of the villous coat of the rectum, or of the skin of the anus; but this advantage is gained in whatever way the ligature be applied; it is, of course,

in no way connected with the partial separation of the tumour by the knife or scissors. But the necessity of the operation, as a general one, is founded upon an erroneous principle, since, as it has been noticed in the preceding pages, hæmorrhoidal tumours, with very few exceptions, are of a cellular structure, and the fear of dangerous hemorrhage is unnecessary; and, in cases in which a congeries of minute veins, or a few dilated branches, really form the bulk or basis of the tumour, this is often too much extended to admit of the ligature being applied with advantage, and should not in general be punctured or cut into. The method, also, of cutting off the convexity of the tumour does not, I think, render the probability of inflammation less, since, as I have already remarked, in respect to the preceding operation, if the ligature be properly applied, the vitality of the tumour is as much destroyed as if it were really separated: the pain, inflammation, &c., arise from the pressure of the ligature at the basis, and not, as the partial separation of the tumour would imply, from the imperfect communication and

consequent sympathy that must exist between its substance and the parts beyond the ligature. Besides, when the tumours are so placed that the fine skin of the anus forms their principal envelopment, the ligature, in any form, is scarcely admissible.

A contracted state of the anus or rectum is not uncommon, after large tumours have been extirpated from these parts, if the case be left entirely to nature. It is the necessary consequence of the process of cicatrization, when the corium of any part is removed. This affection, however, is easily cured, or still more readily prevented by using a bougie of elastic gum, which should be first introduced daily, as soon as the wound is healed, and left off gradually.

To prevent this contraction from taking place, it has been recommended to leave a portion of the basis of the tumour, at least when the knife is employed to remove it*.

* Verengerung des darms hat man nicht zu fürchten, wenn man jederzeit von dem Beutel so viel läßt als nothig ist de wunde ganz zu bedecken.—*Richter Anfangsgrunde der Wundartzneykunst.*

This precaution may, perhaps, be necessary in some cases ; but it will, I believe, be found that the bleeding is generally more troublesome in consequence.

With a similar view, and partly to avoid hæmorrhage, it has also been advised, in cases where the tumours are large, to divide the outer skin to the basis crosswise, to separate the flaps, and cut away the inner portion ; or to include the inner portion of the tumours, thus laid bare, by a ligature. I have no hesitation, however, in saying, that these modes of operating are altogether unnecessary, and often quite impracticable. If the tumours are of the varicose kind, the skin could not be divided in the manner alluded to without the utmost risk, even if it were practicable ; and, in the contrary case, no advantage whatever can be gained in respect to restraining the hæmorrhage, by including the internal portion of the tumour, since this plan is founded upon the erroneous supposition of securing the dilated vein within ; besides, in many cases, the thickened envelopment often constitutes nearly the

whole of the tumour, particularly where a large quantity of coagulum is contained within; and where the substance of the tumour is chiefly cellular, the envelopment adheres firmly, and is, as it were, amalgamated with it.

As the extirpation of hemorrhoidal tumours, either by the knife or ligature, seldom fails to cure the occasional or almost continued discharges of blood or mucus, it should never be effected without taking into consideration the probable consequences of stopping any disordered action, that, from long continuance, has become habitual; and employing such means as may tend to prevent or counteract them.

CHAPTER II.

ON STRICTURES OF THE RECTUM.

SECTION I.

General Remarks on Stricture.

OF the precise nature and treatment of morbid contractions of the rectum, very little comparatively was known, until within the last twenty or thirty years. During that period, some surgeons have been induced to give a considerable portion of their attention to these affections; and much correct and salutary information has, in consequence, been gained; but, as the generality of chronic affections present, at least in appearance, less scope for the exercise of operative talent, if I may be allowed the expression, they are necessarily followed up with much less avidity, and consequently with less advantage. It is,

therefore, highly probable, that further inquiry and experience may still afford much additional relief in many cases of strictures of the rectum, that, in our present state of knowledge, are somewhat unmanageable; and this is the more desirable, since, in whatever light we view these affections, they must certainly, if neglected, be considered amongst the most fatal and distressing to which human nature is liable.

A diffidence on the part of the patient to make known the seat of his complaint, and the very strong analogy that exists between the symptoms consequent to a contracted state of the rectum, and such as accompany many other affections of the alimentary canal, are the principal reasons why the surgeon has seldom an opportunity of tracing the progress of the disease from the commencement. Hence it is not so surprising that they should have been so generally overlooked, and that Dr. Sherwin, who has been chiefly instrumental in calling the attention of the surgeons of this country to strictures of this part, should have seen them in an advanced stage, and have considered them as invari-

ably fatal. The successful issue, however, of some cases of contracted rectum that had fallen to the care of Mr. Desault, induced many surgeons, Mr. White in particular, to attempt the cure of similar affections, and their mode of treatment, somewhat different, though founded upon the same principle, was happily attended with corresponding success in a variety of cases, that would otherwise have proved fatal.

The diffidence of surgeons respecting the treatment of strictures of the rectum, and their want of inclination to interfere in such cases, arose chiefly from the erroneous opinion that they were uniformly cancerous, and necessarily progressive; but it is no longer requisite to combat an opinion that is borne down by multiplied experience. Setting apart the result of Mr. White's experience, to whom the profession is much indebted, that of almost any other surgeon in extensive practice shows, that many strictures of the rectum are, in their nature, quite harmless, injurious only inasmuch as they present a mechanical obstruction, or disorder the functions of the alimentary canal, and fatal only

from neglect. In many cases also there is great thickening and induration, without the least tendency to cancer, at least the latter disease has not supervened, even after an interval of many years*.

Strictures of the rectum do not appear to be confined to any particular age, though I believe they are much less frequent during infancy, at least those in which the coats of the gut are more or less changed, thickened, and permanently contracted. They are said to be more common in the male than in the other sex ;

* At the present time I have under my care an elderly man, who has suffered from an indurated stricture of the rectum for more than eleven years ; and Dr. Harrison, of Holles Street, Cavendish Square, informs me, that he has known two individuals, who, at the time he last saw them, had laboured under a similar disease, the one for upwards of fifteen, the other for more than forty years. The gut, in both these cases, had been prevented from closing, and the bowels kept in a comfortable state, by the habitual use of the bougie. Now, if either of the strictures had any thing of a cancerous nature, the virulence of this disease would have been excited by the irritation of the bougie, or ulceration would have taken place, in the usual progress of the complaint, at a much earlier period.

but the difference in this respect, if there be any, is scarcely worthy of notice.

For the reasons I have already mentioned, the existence of any contraction of the rectum is rarely ascertained until it has made some progress, and even then the accompanying symptoms, almost without exception, proceed more from the consequent derangement in the functions of the alimentary canal than from the change of structure in the seat of the disease. Indeed these symptoms vary so much in different individuals, and are so often associated with different sympathetic phenomena, that even in cases where the attention of the medical attendant is not otherwise directed, it is often impossible to arrive at any decisive conclusion, without first having recourse to a careful examination*.

* A fatal case, in which stricture of the rectum was mistaken for intus-susception, by several of the medical attendants, one or two of which are at the pinnacle of professional eminence, occurred very lately, and has been noticed in some of our periodical works. Similar mistakes are not very uncommon: they serve at once to show, that the general symptoms of strictures of the rec-

There is, perhaps, no disease in which the symptoms arising from derangement of other parts are more predominant over such as are local, than in those which form the subject of this chapter; and there can be no doubt, that, in many cases of iliac passion, and obstinate constipation, arising from this source, death takes place without the slightest suspicion of the cause.

In other cases, especially when the disease is of a malignant nature, it is not unfrequently confounded with scirrhus of the uterus. I have known one instance in which a patient of one of our hospitals, and who had a carcinomatous stricture of the rectum, remained more than six months under the care of an eminent surgeon, without the true nature of his complaint being discovered.

tum are often very deceptive, and that the attention of practitioners in general has not yet been sufficiently directed to a proper consideration of them.

SECTION II.

*On the different Forms of Stricture ; their Situation,
Extent, &c.*

STRICTURES of the rectum differ very materially, according to their nature, and the period at which they are examined. Sometimes the inner membrane projects into the gut, forming a kind of perforated septum ; the surface is smooth, without induration, and if the point of the finger be introduced through the aperture, it is found to yield very considerably to the pressure ; from which we are led to conclude, that it is owing solely to a spasmodic affection of the transverse muscular fibres of the part. Although this form of stricture is not uncommon, yet it has never, I believe, been found on dissection. The reason of this is evident ; as long as it remains in the state described, the fæces continue to pass in considerable quantity, but the constant irritation to which it is necessarily exposed, soon produces a degree of thickening and irregularity, and before death can take

place from obstruction, no traces of its former appearance are discoverable.

Sometimes this contraction of the circular fibres takes place to a greater extent, in which case the stricture, being less yielding, and often formed in a short time, death supervenes before there is any very material induration, or the natural appearance of the internal tunic is much changed. I recollect being present at the dissection of the body of a female, that had died from some unknown cause of obstruction. The extremity of the colon was enormously distended, and below, at its sigmoid flexure, the cavity of the gut was nearly obliterated to an inch and a half in extent. It appeared to have been but recently formed, for the villous membrane, excepting that it was corrugated, had quite the natural feel and appearance, and even the muscular coat was not materially changed, as is usually found in other cases of stricture.

Hoffman states, that an elderly man, who had imprudently suppressed the hæmorrhoidal discharge, was seized with violent pains in the bowels, and such a contracted state of the rectum, that it was not pos-

sible to force up any thing in the shape of a clyster. On examining the body after death, the whole of the rectum, and some portion of the colon, were found contracted to the size of the finger. A few analogous cases, which likewise proved fatal, have been related by other writers; in these the patients were almost suddenly affected with violent pains in the abdomen, and the contraction appeared to have been formed but a short time previous to death.

In some cases the contraction is chiefly owing to a thickened and indurated state of the mucous membrane, arising from inflammation, or some chronic alteration of texture. When inflammation does not proceed to any great extent, coagulable lymph is deposited between the coats of the rectum, or upon its internal surface: this becoming organized, produces a permanent thickening, with a proportionate diminution of the cavity of the gut, and a gradual contraction of the muscular tunic. Indeed, whenever the mucous membrane of the intestines is constantly irritated at any particular part, which, in the present

instance, must necessarily be the case, from the mechanical effects of the fæces upon the part which projects within; or when it puts on any chronic action; there is always more or less disposition in the muscular coat to contract gradually upon it. Hence, whenever strictures of the rectum have existed for any considerable time, the mucous, cellular, and muscular coats become more or less affected, so that, on dissection, it is often impossible to determine in which the disease originally commenced.

Mr. Charles Bell, who attributes this form of stricture to inflammation, gives the following description of the manner in which it is produced:—"This kind of stricture, which we must call the simple stricture of the rectum, is a consequence of inflammation in the gut, excited by frequent ineffectual efforts to propel the fæces in a collapsed state of the bowels. The sphincter, in this condition, does not relax, nor does the intestine itself act. The whole propelling power is in the abdominal muscles. The rectum, urged down by the pressure from above, forms a fold of the

inner coat, just above the inner sphincter. By repetition, inflammation, and adhesion of the outer sides of the fold take place; and, by these means, losing its softness and yielding nature, it becomes a permanent septum, standing nearly across the gut. It will be removed with difficulty, in proportion to the time that has elapsed from its formation."

If the gut be examined after an attack of inflammation, and before the parts have recovered from its more immediate effects, the manner in which this form of contraction is produced will be more easily conceived. The internal membrane is found protruded into the cavity of the gut, in the form of irregular folds, which, if the inflammation be not wholly subsided, have a soft and pulpy feel, as if distended by a fluid. These folds are sometimes incrustated with coagulable lymph, and occasionally they are partially connected together by organized shreds of the same substance. In some cases, however, the form of the internal membrane is not materially changed by the effect of inflammation, but it is more or less covered with a false membrane, or

is ulcerated in different parts. In the former case the inner surface of the gut has a roughish, uneven, or granulated feel, very unlike that velvety smoothness which it possesses in its natural state.

It is evident that this form of structure must be almost wholly confined to the lower part of the bowel, immediately above the upper edge of the internal sphincter muscle, at which part the internal membrane, naturally lax and redundant, is easily thrown into folds by repeated straining at stool, or by the infiltration of fluids, as I have already mentioned.

The cavity of the rectum is occasionally found almost obliterated by the formation of hard painful tubercles. This disease bears some resemblance to the first stage of malignant stricture, at least as it appears in some cases, but it is evidently quite of a different nature, as it is easily cured by compression. I have seen three cases of it, but could not trace its formation to any particular cause. They yielded readily to compression.

Morgagni states, that, in a dissection made by Valsalva, the rectum was found

studded with tubercles, and gives the following description of the disease :—“ At six or seven fingers’ breadth above the anus, it began to be pretty hard and thick, and swell out everywhere from the surface, internally, into bodies, which, in their figure and size, resembled very large beans. They were all smooth in their surfaces, but of a solid and compact substance. The hardness and thickening of the intestine, and the bulk of these bodies, which were more nearly similar to conglobate glands, than to any other bodies, and in their colour also, as well as in their size and figure, were proportionally increased as you came nearer to the lower part of the canal. Yet the lower part of the intestine, as far as it could be covered with the breadth of a finger, was sound ; and from the very extremity of the anus hung two excrescences, at the same time that the cutis was slightly ulcerated about the anus.”

The cases of contracted rectum, described by M. Desault, and the successful treatment of which, by compression, induced Mr. White, and others, to apply the same principle of treatment more ge-

nerally than had been previously done, were also of a tubercular nature. This affection is considered by some as consequent to the venereal disease, but I am induced to think that this opinion is merely supported by conjecture.

Carcinoma is another, and not very uncommon cause of obstruction in the rectum. In this case the disease does not admit of a cure; it is necessarily progressive, and consequently fatal. Very generally it commences at one side of the gut, just above the upper part of the internal sphincter, and if an examination be made at this stage of the disease, a smooth but hard and knotty projection is discovered. By degrees, the disease, which, at first, was probably confined to the glandular structure of the internal membrane, extends around the gut, changing the structure of the subjacent parts, and the obstruction is still further increased by the gradual and permanent contraction of the transverse muscular fibres.

Carcinomatous stricture, however, is not confined to the lower part of the rectum; it is often found higher up, more especially

at the sigmoid flexure of the colon. The appearance, also, of the disease at its commencement, is often exactly similar to that of the common indurated stricture, from which, however, it may sometimes be distinguished by circumstances that will afterwards be noticed. It is not improbable, indeed, that cancerous ulceration may, on some occasions, supervene to that indurated state of the parts which is often attendant upon common stricture; but that the nature of this induration differs materially, although apparently similar, as far as a judgment can be formed by partial examination, is shown, by the pressure of the bougie being generally useful in the one case, and inadmissible in the other; and this difference might probably be discovered in the intimate structure, if, under such circumstances, a minute examination could be effected.

A case is related by Ruysch, in which the contracted state of the gut, the great thickening, and almost bony induration of its parietes were very remarkable*; and, in

* *Intestinum rectum in universum ita incrassatum deprehendi, ut pollicis crassitiem ferè superaret, et ita in-*

conclusion, he remarks, that very few were acquainted with the disease. A well marked case of carcinomatous stricture of the rectum is also recorded in vol. x of the Edinburgh Medical and Surgical Journal. After noticing the state of the abdominal viscera, which presented nothing particular, the following interesting and very accurate description of the appearance of the disease is given. It will serve better than any thing I can state from memory, to show what are frequently the ravages of this dreadful disease before death terminates the sufferings of the patient:—"The commencement of the sigmoid flexure of the colon was perfectly sound, but as abruptly as possible became completely scirrhous. Almost a circular ring of hardness

duratum, ut anceps hærerem, an carnosum an verò cartilagosum esset dicendum. Cavitas quoque dicti intestini straminis latitudinem haud superabat, et quod notandum, tam firmiter erat connatum ossi sacro, ut cultelli cuspis ad separationem minimè sufficeret, sed cuneo, ferro malleoque ligneo eandem peragere coactus fuerim; imò mirum dictu! cum summo labore ea disjunxi. Hæc omnia Balsamo nostro præparata à nobis reservantur in dicti ægris memoriam, et historiæ raritatem.—
An. Obs. 95, vol. i.

embraced it as thick as a little finger, narrowing the calibre of the bowel to one-fourth of the natural size. But, in order the more completely to examine the pelvic contents, I advised, with my ingenious coadjutor, to saw off the front of the pelvis, and take all completely out. Upon this being effected, and the intestine traced from the sigmoid flexure, the most enlarged part from disease was at the commencement of the rectum, where the patient was accustomed to consider the second stricture as existent. The scirrosity descended hence to near the verge of the anus. The bowel was about four times its natural thickness, of a firm texture, and dark greenish aspect, having a great number of various sized cavities, or cellulæ, some as large as would have admitted the end of a large bougie, others would have been filled by a pin's head: they were but shallow.

“ There were a few nipple-like excrescences, of a deep red colour, and a number of ligamentous bridles running in various directions. A small quantity of creamy fæces lodged in the intestine; its bore admitted a little finger, but would not

allow of being stretched. Two small fistulous sinuses ran for two and a half inches up the right side of the gut; the whole bowel resembled boiled leather. The urethra, from its commencement to the membranous part, was healthy; at this spot an opening was formed between it and the rectum, which would admit a goose quill: upon pressing the inside of the intestine, fæces issued upon the surface of the urethra; there was much confusion of parts in the junction and aperture. This part of the urethra had an inflammatory appearance, which was traced to the neck of the bladder; but neither here, nor in any other portion of the canal, prostrate gland, or cervix vesicæ, was there any evidence of the parts having taken on a scirrhus action. The bladder contained about two ounces of the fætid mucous matter it had been accustomed to discharge, and, although its parietes did not feel thickened more than ordinary, yet its internal coat was much diseased; it had the appearance of having a thick coat of varnish laid on, of the colour of port wine lees, with reddish small tubercular papulous-like emi-

nences here and there. The left ureter entered abruptly into the bladder, with an orifice which would admit the end of a little finger; the orifice of the right ureter could not be found. The intense purple or red colour became a little less as it approached the sphincter, where it disappeared: the fundus of the bladder was not extensively adherent to the rectum. On removing the pelvic contents, the last of the lumbar vertebræ was observed to project very unusually forward, so as to diminish materially the natural diameter of the cavity. This bone not only projected thus, but at its junction with the sacrum it formed a sharp spinous edge. The intervertebral cartilages were very large, and softer than ordinary."

In all cases of carcinomatous stricture, there is always, when the disease has existed for some length of time, more or less induration and confusion of structure, particularly observable in what was originally the muscular tunic; and in cases of this nature, where I have had an opportunity of examining the intimate structure attentively, there was evidently more of

the gristly, and less of the fibrous or cellular bands, than is usually found in carcinoma affecting other parts of the body. Sometimes, as in the preceding instance, it extends over a great part of the gut, but more frequently it is confined to a small part only. In the former case the diseased action is often carried in every direction along the adjacent cellular tissue, which in this, as well as in all other cases of disease, attended with change of structure, forms the readiest medium of contamination; and hence, the surface of the os sacrum, or even that of the lumbar vertebræ may become involved in the extent of the disease: indeed, the posterior part of the rectum is sometimes so firmly connected with the sacrum, that it cannot be separated without difficulty even with the aid of the knife.

A considerable obliteration of the cavity of the rectum may proceed from an inflammation or ulceration, and subsequent adhesion of hæmorrhoidal tumours. If this occur when these tumours are only of recent formation, these afterwards collapsing, an irregular projection of the in-

ternal membrane remains, similar in appearance to that form of stricture which arises from an infiltration of coagulable lymph within its relaxed folds, when forced down by repeated efforts during a constipated state of the bowels, or when the gut has suffered from inflammation. But when the inner surface of the rectum and anus is studded with hæmorrhoidal tumours, which, from age, have become permanently solid; and that, in consequence of inflammation, they afterwards unite together, the disease then resembles the tubercular form of stricture already noticed, except that the contraction is still more irregular. The nature of the case, under such circumstances, may be known by the statement of the patient, which is perhaps strengthened by the appearance of piles about the anus. Very little correct inference, however, can be drawn from the latter medium, as external piles are very common in all cases of contracted rectum.

A contracted state of the rectum is said to arise occasionally from the effects of the venereal disease. I am inclined to think, however, that this opinion has been taken

up without sufficient grounds, for I have not seen or heard of any well authenticated case in which the contraction, being attributed to this cause, yielded to the use of mercury. A disease affecting the fine skin of the anus, and which sometimes extends up into the rectum, may, with more show of reason, be attributed to this source; but the disease to which I allude, and which will be afterwards noticed, has not, I believe, been observed to commence in an isolated manner within the rectum.

SECTION III.

On the Symptoms of Strictures of the Rectum.

THE symptoms which accompany strictures of the rectum naturally divide themselves into two kinds, namely, those which are incident to a change of structure in the part, and such as proceed from obstruction. The former of these are generally very obscure (except in the latter stage of malignant stricture), and often scarcely perceptible to the patient. The

latter are always more or less violent, according to the degree of contraction, but still these are often variable, and very similar to the symptoms which are connected with other affections of the alimentary canal; and if the attention of the practitioner be not alive to the probability of stricture, as a source from which they may proceed, the true nature of the disease will, in general, be overlooked, and the life of the patient often sacrificed in consequence. Even the patient himself is sometimes incredulous respecting the existence of stricture being the cause of his sufferings. A short time since an elderly man consulted me respecting a disordered state of his bowels, accompanied with a copious discharge from the rectum of aropy mucus, generally clear and transparent, but sometimes tinged with blood. Suspecting the nature of his disease, I examined the rectum, and at the upper part discovered a firm and rather irregular stricture, by which the calibre of the gut was reduced to one-third its natural size. Having suffered much from dysentery during a hard service in the late war, he was

more willing to consider his symptoms as the remains of that disease than dependent upon a contracted state of the rectum ; at all events, he was not satisfied with my opinion, and I saw nothing more of him.

Mr. Charles Bell, in the same respect, states, that having occasion to puncture the bladder by the rectum, he found his finger obstructed by a stricture, yet the patient did not know of its existence ; that at another time he was about to perform the operation for fistula in ano on a gentleman, and found a stricture so narrow, that it would not receive the point of the little finger ; but that neither before nor since the stricture was discovered has the patient been willing to admit that his symptoms arose from this cause.

From what has been stated in the preceding section, respecting the different forms of stricture, it is evident, that some little variation of the symptoms may proceed from this source ; but as the principal ailments in all such cases arise solely from obstruction to the free passage of the excrement, they must necessarily have more or less of the same character, and

which is discoverable by a moderate share of attention. From my own observations in this respect, and from what has been stated by others, the general symptoms arising from a contraction of the rectum are what might be anticipated from such a cause, and although often variable in respect to their degree of violence or duration, yet they usually appear, and succeed each other in the following order.

The patient is first affected with a torpid state of the bowels, to which he has, perhaps, never before been accustomed, and for which he is unable to assign any satisfactory reason ; but this is not attended with much inconvenience ; his strength and appetite often continue good, and a considerable time, frequently elapses before he is induced to make any more particular inquiries into the nature of his complaint. In some cases there is a degree of morbid sensibility or uneasiness, almost amounting to pain, about the loins or os sacrum, with an abundant discharge of mucus from the anus, by which the attention of the patient is perhaps directed more to the source of his complaint, and at an earlier period than

he otherwise would have done ; but on other occasions there is either no peculiar sensation about the rectum, or, if present, it is so slight that it altogether escapes his notice, and no discharge of mucus is observed, unless with the fæces.

To obviate the confined state of the bowels recourse is generally had to purgative medicines, the necessity for which is increased in proportion to the frequency with which they are employed, and the progress of the contraction ; but so long as by these means evacuations are procured with some degree of regularity, or the contents of the bowels can be forced below the stricture without much straining, no material derangement of the digestive organs may be produced, and recourse to medical opinion is still put off to a later period. In proportion, however, as the disease advances, the fæces are accumulated in greater quantity, and the patient begins to suffer from slight cholic pains, oppression at the stomach, flatulency, eructations, swellings of the abdomen, with a feeling of distention and tightness in the direction of the colon ; his motions are

very scanty, and produced with considerable straining. These symptoms are occasionally removed or moderated for a short time by a diarrhea, the usual means by which, in cases of this nature, as well as in those of obstinate costiveness, arising from other causes, the alimentary canal is relieved of its superabundant contents. The patient now begins to feel still greater difficulty at stool, where he is often compelled to remain for a considerable time, or return very frequently, so that a great part of the day (usually the morning) is spent in ineffectual efforts to produce a sufficient evacuation from the bowels, a sensation still continuing, as if something still remained to be discharged. He is now sensible that some unusual cause of obstruction exists, and on examining the state of the evacuations, he finds that they are not only very scanty, but that, instead of being round, as during health, they have either a triangular form, or they are flattened like tape. By degrees the occasional attacks of cholic become more frequent and violent, the tumefaction of the abdomen increases, and there is sometimes consi-

derable tenderness upon pressure, with general symptoms of fever, indicating a degree of inflammation. Sympathetic pains are also felt more or less in the head, groins, and lower extremities; and there is not unfrequently difficult micturition, with retention, or even suppression of urine. In some cases there is a sensible intermission of the pulse, with palpitations of the heart, and a disposition to syncope; symptoms which, in some instances, may be attributed to the pressure of the distended colon upon the inferior vena cava, or the abdominal aorta.

Purgatives, which had previously been of so much service in relieving the distention, &c., sometimes produce very alarming symptoms at a more advanced stage of the disease, unless administered with caution; and, if ulceration has taken place, the passage of the liquid fæces through the strictured part is attended with very great suffering, particularly if it be of a cancerous nature. Still, however, as in the former case, they are employed by the patient; but the fæces not being wholly discharged, a gradual, but immense accumulation even-

tually takes place, and either inflammation, attended with continued vomiting, and an everted motion of the alimentary canal, supervenes, and closes the scene, or the patient dies more gradually, oppressed in mind, and worn out by continued suffering.

The symptoms, which more especially characterise strictures of the rectum, and which, at the commencement, cannot so readily be mistaken for the effects of indigestion merely, or other causes, are the following :—First, An unusual distention of the colon, so that, on placing the hand upon the abdomen, it may be felt loaded with wind and scybalæ, which, being intermixed by external pressure, or by the natural action of the gut, produce a kind of rumbling sound. Sometimes this distention is obvious to the patient, from an increase of sensibility in the part, giving rise to the sensation of a tight bandage over the abdomen. Secondly, The pain, which, in many cases, when the disease has made some progress, is felt more or less about the junction of the last vertebra with the os sacrum, extending sometimes

downwards as far as the feet, and chiefly in the direction of the large nervous trunks. Thirdly, The tenesmus, which is not accompanied with much irritation, or continued after a sufficient evacuation has been produced, as in cases where it appears more suddenly, and proceeds from an inflammation or ulceration of the internal membrane of the rectum, but unless in the ulcerative stage of malignant stricture, amounts to little more than a teasing desire, without the power to discharge the matter accumulated above the stricture. In this case the force of the abdominal muscles is not directed upon the orifice of the rectum, but upon the distended gut above the stricture; there is, in consequence, less pain immediately about the anus, and less disposition to prolapsus. Fourthly, The scanty motions, and their irregular or figured appearance. The latter effect, however, is not always present throughout the disease; for if the contraction be at the upper part of the rectum the motions may be of the usual size and appearance; a circumstance which is owing, either to the excrement being forced through

the stricture in too small a quantity to stimulate the rectum at the moment, or to the lower portion of the gut having lost the power of contracting unless when fully distended.

All the preceding remarks, on the general symptoms arising from a contracted state of the rectum, are more or less applicable to every form of stricture ; but when the disease is of a cancerous nature, some other affections are superadded to those already noticed, by which it may often be distinguished. Unfortunately, however, these discriminative marks do not appear until the diseased action has made some progress : hence the bougie is sometimes employed to the detriment of the patient ; for although it can be generally applied with advantage in the more simple cases of stricture, in this its effect is uniformly pernicious.

In carcinomatous stricture there is generally, unless at the very commencement of the disease, more or less of a burning sensation, or acute shooting pains at the seat of the disease. All the sympathetic phenomena are more conspicuous, at least

such as can be traced more immediately to the seat of the disease ; the patient consequently suffers more from pain in the back, with bearing down if a female ; and the retention of urine, from the state of the muscles about the urethra and neck of the bladder, is much more frequent and distressing in this than in the other forms of stricture ; he cannot sit down, and becomes excessively anxious and restless. Frequently, also, it is not very long before the commencement of the ulcerative stage is denoted by a foetid ichorous discharge from the anus ; and when the ulceration is extensive very abundant hemorrhage may take place in consequence, or matter, forming in the vicinity of the stricture, penetrates in various directions, producing sinuses that communicate with the vagina in the female, and with the neck of the bladder and the membranous part of the urethra in the other sex. In both cases the wind and fæces, being in part discharged by these outlets, increase the sufferings of the patient, more particularly in passing along the urethra, which is necessarily inflamed, and highly irritable.

Sometimes when, in consequence of ulceration, the internal membrane, and, indeed, a great portion of the substance of the stricture is destroyed, the alvine discharges are passed without much effort, but not without intense suffering, which I have heard the patient compare to the rushing of boiling vitriol over a raw and irritable surface. This state cannot continue long; the pulse sinks, and the patient dies from exhaustion: but, in many cases, the gut remains nearly closed to the last; the abdomen becomes enormously distended, chiefly with flatus; the breathing is laboured; the countenance is expressive of the utmost anxiety and distress; inflammation, with hiccough, and an inverted action of the intestines supervene, by which death, as in other cases, is produced more suddenly.

In describing the symptoms of this disease, Dr. Sherwin states, that “the first complaint the patient makes is of a looseness; that his general health continues good, and his appetite but little impaired; reiterated scanty evacuations, amounting in the whole to a sufficient quantity to keep the stomach easy, preserve a sort of ba-

lance in the intestinal canal ; but by degrees the cavity of the gut becomes less permeable. Opiates and testaceous powders have perhaps been had recourse to, and the frequent needing to stool abates. The patient and his friends flatter themselves he is getting well ; but he soon falls off in his appetite for food. The absence of stools is for some time attributed to this cause, till the lower part of the abdomen, by degrees, acquires a remarkable prominence, attended with uncommon rumbling of wind in the belly, like the gurgling of water in a bottle. These two last circumstances, perhaps, afford pathognomic signs of the disease ; especially if accompanied with frequent but scanty discharges of thin dark-coloured slimy fæces, often not more than a tea-spoonful, and seldom exceeding, at one discharge, a larger quantity than a table-spoonful. By degrees a total suppression of stools takes place ; the tumour of the abdomen increases, the uncommon rumbling of wind becomes more audible, so as to engage the attention of the friends and visitants of the patient. The distention gradually increases till the stomach is

oppressed, and a vomiting comes on. The vomiting is not very frequent at first ; but, by degrees, every thing swallowed is brought up. Severe pains are felt from distention in various parts of the abdomen, and a true iliac passion, of the chronic kind, comes on, and continues as long as the patient lives, unless he is accidentally relieved by a free discharge of thin fæces, which will sometimes unexpectedly give respite to his sufferings. In consequence of which, the appetite for food will again return ; the patient will appear to be getting well ; but the anxious solicitude of his friends, at this period, will urge him to get down a considerable quantity of generous nourishment, till a repetition of the same scene takes place, and the unhappy man is alternately tantalized and worn out, either with a stoppage or a purging." At this period he states, that "the complaint has often been mistaken for enteritis, or an iliac passion of the acute kind, and the powerful means which have been employed for the relief of the patient have added very considerably to his sufferings during his latter moments."

Without detracting, in the slightest de-

gree, from the acknowledged merit of the author just mentioned, I may be allowed to remark, that the description, which he has given of the symptoms of scirrhus rectum, is evidently drawn from accurate observation of cases which were not of a similar nature ; and that, however excellent this description may be as a general one, including the symptoms that occur in all cases of obstruction from stricture, it is not so strictly applicable to that form only in which the disease is decidedly of a cancerous nature.

SECTION IV.

On the Remote and Exciting Causes of Strictures of the Rectum.

THE exciting and remote causes of strictures of the alimentary canal are often sufficiently obvious, but in many cases they are very obscure, or altogether hidden from our notice, at least the disease appears without the intervention of any obvious cause whatever. That inflammation in any part of the intestines may induce a spasmodic contraction of the muscular fibres of that part

will not be questioned, and hence, although in some cases it is the immediate cause of stricture, as where a fold of the rectum, near its lower extremity, being infiltrated with fluids, is forced into the cavity in the form of an irregular ring ; or coagulable lymph being thrown out, a new substance is formed from the surface, yet it must often be considered as the main exciting cause of stricture under other circumstances.

On the other hand, it is not improbable that partial contractions may remain after attacks of cholic, or many other violent affections of the intestines, and afterwards become the seat of permanent stricture. In examining the bodies of those who have died suddenly from cholic, from the operation of poisons, from dysentery, &c., especially with children, I have occasionally found partial contractions of the alimentary canal, particularly about the termination of the ileum, the colon, and the upper part of the rectum ; and I can readily conceive, that, under some circumstances, one or more of these parts might never regain their former state of elasti-

city or distention, and at a subsequent period, from a gradual change of structure, and a proportionate contraction of the muscular fibres, cause such a narrowing of the canal as to prevent the regular passage of the contents, and produce eventually a fatal obstruction.

The same state of the alimentary canal may also be produced more gradually by causes that are less violent in their nature, though, perhaps, not less certain in their operation. Hence we find, that the presence of acrimonious matters in the intestines, as undigested food, disordered secretions, &c., will, in the course of time, produce a chronic inflammation of the villous tunic, ulceration, or such a degree of irritation as to give rise to a gradual change of structure, and, consequently, different forms of stricture*. I say consequently,

* In perusing a work on indigestion, lately published, by Dr. A. W. Philip, I find, that spasmodic stricture of the rectum, as a consequence of long continued irritation, from a disordered action of the digestive organs, is alluded to by the intelligent author. He remarks, that, "after this state of irritation has continued to recur for a great length of time, a degree of permanent spasmodic stricture appears to take place in the rec-

because wherever there is a change of structure from some chronic action, it is usually accompanied with some degree of contraction, which, from the natural function of the alimentary canal, must necessarily be eventually increased.

In some instances, as in that noticed by the late Dr. Baillie, who has given a drawing to illustrate the fact, a partial obliteration of the canal may exist as a congenital affection, without any alteration of structure; and whether it will subsequently prove an annoyance to the patient must depend solely upon accidental circumstances, or his general mode of living.

In all the preceding cases then, where the contraction remains stationary, there may be said to exist a predisposition to stricture in particular parts of the alimentary canal, and the manner in which the further contraction and disorganization is tum. This I have known happen to such a degree as to give a tape-like appearance to the alvine discharges for many months, without intermission, and suggest the idea of organic stricture, till an examination of the part proved its real nature. A temporary contraction of the rectum, occasionally giving this appearance to the discharge, is not an uncommon symptom."

completed, may be explained as follows :—

Whenever the muscular fibre, in any part of the body, is exercised beyond a certain point, the consequence is, that it will afterwards remain for a time sensibly shorter ; this is seen in the long muscles, when, after lifting up, or carrying a heavy weight, the fore-arm cannot, on the following day, be fully extended, from the shortening of the fibres of the biceps muscle ; the same effect also takes place with respect to the hollow muscles, and a reduction of their calibre is the necessary consequence.

This state of the muscular fibre is in general only of temporary continuance, because, in respect to the voluntary muscles, violent exertion has its bounds, and the pain, &c., consequent to any injury they may have sustained, precludes unnecessary motion ; but this is not the case with regard to the alimentary canal, particularly about the termination of the colon and upper part of the rectum. Here the parts are not only almost in constant motion, but any partial reduction in the calibre of the gut produces the necessity for still greater action. The alvine discharges must pass,

whatever may be the state of the mucous tunic, and it is obvious, that if these are acrimonious, or much indurated, the consequent violence and injury must be chiefly felt by that part which is already narrower than the rest; hence it is, perhaps, that stricture is most common at the sigmoid flexure of the colon, where the gut, in its natural state, becomes sensibly less.

In glancing over a late edition of Mr. White's book on stricture, since this treatise was written, I find, that, amongst other excellent observations on these diseases, that gentleman has been led to conclude, that an original straightness at the sigmoid flexure of the colon is not only a frequent predisposing cause of stricture, but that the habitual costiveness, from which some individuals suffer, may often be ascribed to the same cause. The opinion is interesting, and may, perhaps, not be unacceptable in the words of the author:—"I have already observed, as a circumstance well known to practitioners, that a great number of persons are subject to habitual costiveness, and that from a very early period of life; which habit, in my opinion,

medical men are too apt to consider as a cause, rather than an effect ; for it appears obvious to me, that a constipated state of the bowels has been too indiscriminately referred to a torpid, or inactive state of the intestinal canal ; arising (as it has been generally supposed) from a deficiency of the natural secretions, but more particularly the biliary. In old people, in delicate and debilitated constitutions, but more particularly where purgative medicines have been long and injudiciously administered, there may be some reason for adopting this opinion. But there appears no just ground whatever for concluding, that, in a vigorous and otherwise healthy person, and perhaps very young too (which is often the case), habitual costiveness should, under these circumstances, occur from mere local torpor or inactivity ; especially if the natural stimulus of the bowels (the bile) should not be interrupted in its passage through the intestines ; the absence of which alone could rationally account for such a state.

“ In those cases of obstinate costiveness, which are known so often to baffle the attempts of medical men to overcome,

is it not surprising, that the existence of a mechanical impediment should not strike the mind of the practitioner, when he has so frequent occasion to lament the inefficacy of the means he employs, and that his own efforts prove as unavailing as those of his medical brethren, to whom the patient had previously applied? Although it would be absurd to suppose, that every case of habitual costiveness proceeded from mechanical obstruction of the passage, yet, from various conversations I have had with different sensible persons (some medical) who have laboured under stricture of the rectum, I am much inclined to think, that the most frequent predisposing cause is the gut being somewhat narrower about the termination of the sigmoid flexure of the colon than it ought to be for the purpose of allowing a free and easy passage to the fæces. I was led to adopt this opinion, in consequence of patients so often stating to me, that, so long as they could remember, they never had a natural motion without experiencing more or less difficulty. From whence it would appear obvious, that if the passage should

be preternaturally small, it must necessarily form an impediment to the free discharge of the *fæces*; and thus a foundation will be laid for a greater degree of contraction, which will be more particularly noticed hereafter.

If the alimentary canal, more especially that part which constitutes the colon and rectum, were generally laid open in examinations after death, it is very probable, I think, that the correctness of the preceding opinion would be further strengthened. In the *Sepulchretum* of Bonetus there is a short account of an individual, who, during life, had discharged scarcely any thing but liquid *fæces*, and those by the aid of medicines. On examining the body after death, a contraction was discovered in the great intestines; and judging from the history of the case, this contraction was probably congenital*.

* *Mirum quod cuidam per totam pene vitam contingit. Alvus nil pene reddebat nisi liquidum, aut sollicitata pharmacis; nesciebatur quid id esset referendum. Aperto cadavere repertum est in medio unius crassi intestini, annulus crassus et durus, qui medium pene intestini partem occupabat: sic crassiora excrementa non poterent transmitti. — Lib. iii*

The same author has also recorded an instance of fatal obstruction of the bowels, attended with violent pains in the abdomen, &c.: on examining the body after death, the rectum was found folded upon itself, and firmly compressed by a membranous ring, arising from a process of the peritoneum*: and, in the Philosophical Transactions, there is an interesting account of habitual obstruction, which subsequent examination proved to have been caused by a similar folding of the lower portion of the colon, the parts in contact having become firmly adherent.

From what has been already stated it will appear, that the foundation for stricture of the alimentary canal may exist ab origine, or be produced by a variety of causes; that these causes may act so far only as to induce a very moderate degree

* Aperto cadvere intestini omnia, tam tenuia quem crassa, fæcibus turgentia reperta sunt. Intestinum vero rectum reduplicatum inventum, præterea membraneus annulus arcte id constringebat, enatus è proximo peritonæi processu, in scrotum abeunte; hinc adstrictionis alvi causa et remeantium sursum fæcum. — Lib. iii.

of contraction, which, under favourable circumstances, may never increase, forming, as it were, a predisposition to the formation of stricture at some future period; or that, being more powerful, or long continued, the diseased action may, in consequence, proceed on without intermission. In general, however, it is pretty evident, that whatever may have originally produced the contraction, its subsequent increase, and the alteration of structure with which it is usually accompanied, are completed by the irritation which the forcing of the excrement through the contracted part must necessarily occasion; a fact, which, in cases where it is suspected that a contraction may exist beyond the reach of art to relieve, will point out the utility of adopting such means with respect to diet, &c., as may tend to lessen the injury from this cause, by obviating any disposition to costiveness.

In cases of strictures of the rectum, it not unfrequently happens, that when any sharp indigestible substance is accidentally swallowed, it threads the intestines with facility, until it arrives at the seat of the

contraction, where it is stopped, and becomes imbedded in the coats of the intestine. If the stricture be low down, the irritation of this foreign body may produce abscess near the anus, and be discharged with the matter externally, in which case the surgeon may be deceived into the belief that the true cause of the disease is removed. There can be no doubt, that although sharp indigestible substances, as the bones of fish, &c., in passing through the intestines, are very liable to become arrested, and fixed at the seat of stricture, yet, in some instances, they may penetrate the intestine in its natural state, and thus become the cause of stricture. Some years ago I was present when the body of a female was examined, who was conceived to have died from intussusception. A stricture, with ulceration of the internal membrane, was found at the lower portion of the colon; and, at the same part, a crooked pin was extracted from between the thickened coats of that gut. The symptoms arising from obstruction had not existed, or at least been so conspicuous as to excite the particular attention of the pa-

tient until a short time previous to death ; and, from other circumstances connected with the history of the case, it appeared pretty evident, that the contraction had been rapidly produced by the pin having accidentally penetrated the intestine. Plum-stones also, and other hard substances, have been found imbedded in the villous membrane of the intestines, and connected with stricture of the part, which proved fatal.

SECTION V.

On the Mode of Examining the Rectum, and on the Treatment of Strictures.

WHENEVER the symptoms lead to a suspicion, that there is a contraction in some part of the rectum, it is absolutely necessary, in the first place, to ascertain if this be really the case, as well as its nature, if possible, situation, extent, &c. This can only be done by a scientific and careful examination of the gut ; which is the more requisite, because nearly the same train of symptoms may proceed from a variety of causes, which will be afterwards noticed ;

and if purgatives be exhibited, or the bougie employed without this precaution, the patient may be exposed to considerable risk, and the cause of his suffering increased instead of remedied, by the means that are carelessly adopted for its removal. For this purpose, the rectum being cleared out by a common clyster, and the patient placed upon his side, or, what is better, resting upon his knees and elbows, the finger of the surgeon should be smeared with common cerate, and carefully introduced within the gut. If no contraction be discovered, it may be presumed that one exists higher up, and a common plaster bougie, rendered somewhat pliant by warmth, and slightly bent near the end, so as to accord, in some degree, with the natural curvature of the passage, must be anointed in a similar manner, and gradually passed onwards, if no obstacle intervene, within the sigmoid flexure of the colon. This operation requires some caution and judgment on the part of the surgeon, for if it is not performed with delicacy, the parietes of the gut may possibly be injured, or the upper axis of the pelvis

being overlooked, the point of the bougie may be directed against the projecting part of the sacrum, and give rise to the idea of a stricture, when none in reality exists. At the same time, also, it is useful to bear in mind, that a similar mistake may possibly occur when the upper part of the gut, being distended with fæces, is forced down, and in some degree turned upon itself; or the cavity may be almost obliterated by the pressure of tumours, as in cases of enlarged ovaria, retroversion of the uterus, &c. I have seen the bougie employed for a length of time, in a case where a biliary concretion, having imbedded itself in the parietes of the rectum, caused a projection of the internal membrane; ulceration was eventually produced, by which an exit was given to the substance: and I have heard of a similar practice having been pursued where there was no other mechanical cause of obstruction, but what arose from an unusual projection of the sacrum. Mr. Charles Bell also mentions, that in one instance, which came under his own observation, the tumour formed by the fundus of the uterus, having fallen back into the

hollow of the sacrum, was mistaken for, and treated as a stricture of the rectum. "I was called," he states, "to give my opinion of the condition of a lady, after she had been three years under the use of bougies. She was very ingenious, and with her pencil she explained every thing she felt, and all that she had been ordered to do. But I urged the necessity of examination, and the possibility of there being some mistake; and, in fact, I found that the obstruction of the rectum arose from the fundus of the uterus having fallen into the hollow of the sacrum. Against this had the bougie been pushed regularly for years, and happily without further bad consequences than the expensive attendance of a surgeon."

In examining the gut, it is better, in the first instance, to make use of a full-sized bougie, on the same principle as it is employed in ascertaining the situation of stricture in the urethra. If this meet with opposition, it should be withdrawn, and one of a somewhat softer texture, and adapted to the diameter of the gut at the strictured part, or a tent, formed of linen,

and some stiff cerate, should be substituted. The latter plan is, in general, only applicable to those irregular projections of the internal membrane, which are the immediate consequence of inflammation, and are almost invariably found at the lower part of the gut; the former may be employed in almost any case, but it is indispensable whenever the stricture is of some extent, of a firm nature, and situate near to the sigmoid flexure of the colon.

To ascertain more correctly the exact situation, extent, and other circumstances connected with strictures of the rectum, the examination may be made with an ivory ball affixed to the end of a silver wire, similar to the instrument used by Mr. Charles Bell, in what he has termed sounding the urethra. This instrument has certainly one advantage over the bougie, that not being compressed when the ball has passed the contracted part, the shaft is not grasped by it, but remains free; and, consequently, the existence of another stricture, and the state of the gut above may be more readily ascertained; besides, spasm, I believe, never exists to that extent in cases of stric-

ture of the rectum as to render it difficult to withdraw the ball, a circumstance that is sometimes attended with great inconvenience, and even danger, in regard to similar affections of the urethra.

In cases where the stricture is just above the upper margin of the internal sphincter, some information of the state of the parts may be gained by employing the speculum ani; but whenever there is organic stricture near to the anus, this instrument should be employed with caution, as any sudden distention of the parts is always very injurious. I have seen the injudicious use of the speculum ani, in cases of stricture disease, followed by shivering, sickness, and inflammation of the intestines, which had nearly terminated fatally; all of which were owing to the instrument being introduced farther than was necessary for the purpose of examination.

With regard to the bougie, various kinds are made use of, for the purpose of dilatation: that which is sufficiently stiff to pass the stricture without bending, and at the same time rather soft and yielding, must undoubtedly be the best in the generality

of cases. It may sometimes be necessary to employ one of firmer nature, whilst, on other occasions, the common tent only can be used; but much in this respect must depend upon the circumstances of the case, and be left to the judgment of the surgeon in attendance. A very good bougie for general purposes may be formed by dipping long pieces of lint or fine linen into a mixture of melted lard and wax; and in preparing them they may be imbued with any medicated substance, either by adding this to the liquid, or by again dipping the bougie in a separate mixture before the rolling is completed. I am inclined to think, that in many cases medicated bougies may be used with great advantage; and that, in depending solely upon the known efficacy of pressure, in cases of stricture, the additional advantage, that may be gained by the use of topical applications, has been too much overlooked.

Tents for the same purpose may be formed of long slips of linen, which being folded, and secured at the end, are smeared

with some ointment, or dipped into a stiff cerate, melted for the occasion, and then introduced by means of a common probe. Those so successfully employed by Mr. Desault were formed of slips of lint, tied into knots, and folded in the middle. They were then smeared with ointment, and passed into the rectum with a forked probe. The following is the method recommended by Mr. Charles Bell, in preparing the tent for those cases of stricture in which the common bougie is not admissible :—“ Take a piece of lint, of a square form, roll it up in the form of a bougie, then tie a cord or strong thread very firmly around one end of it. A probe is now to be passed up the inside of the roll of linen, until its point is stopped by the tying. Where the cloth projects beyond the ligature, it is to be cut and rounded, so as to offer no obstruction when introduced into the rectum. The tent thus formed is to be dipped in liniment or oil, and is ready for use. The probe gives it stiffness, so as to enable it to pass through the stricture; and the probe being withdrawn, the tent lies soft

and pliant in the rectum." This kind of tent is easily made, and will answer the purpose of compression as well as any.

There is another mode of compressing the stricture, and which may be adopted with great advantage in cases where the use of the bougie is attended with symptoms of irritation. A prepared gut, of sufficient length to pass a little beyond the stricture, is introduced within the rectum by means of a metallic or an elastic gum catheter, and afterwards distended with water. As the compression from the dilated gut is equable and moderate, and the dilatation is not effected until the gut has passed the stricture, it is evident, that much less violence can be employed than with either the bougie or common tent; but it is certainly attended with more trouble, requires a much longer time in producing the necessary degree of dilatation, and should, therefore, be resorted to in cases only in which other means are not admissible.

When, by any of the preceding means, it has been ascertained that there is a stricture, there is reason to conclude that it is not of a cancerous nature, and the general

health, independent of the symptoms which arise immediately from this source, is tolerably good, we may conclude, from the result of similar cases, that, with proper management, great relief or a perfect cure may be effected. The patient should be allowed a very spare diet, which should also consist of what is nourishing, and may, in a great measure, be carried off by the skin and kidneys, such as strong soups, &c. Bread and vegetables, in general, should be taken very sparingly, both because they afford less nutriment in a small compass than preparations of animal food, and where the digestion is not good, produce flatulency, which, in all cases of intestinal obstruction, is troublesome and injurious. The common messes of milk and arrow root, which are often taken by invalids, should also be avoided where there is a torpid state of the bowels, as in such case they are apt to form very hardened fæces.

The bowels are to be kept gently and regularly open by taking occasionally some mild aperient; for, as one great cause of the formation and increase of the contraction is local irritation, it is evi-

dent, that the injury done to the parts by the passage of indurated fæces, or the irritation which is produced by purging, a necessary consequence when the bowels are allowed to continue in this state, must very materially counteract the beneficial influence of other remedies, and retard or prevent the cure. It would be useless to recommend any particular remedies for this purpose; each individual must have recourse to such as he has found by experience to agree with him, and to act moderately upon the bowels; but it may be said that aloetic and other resinous purgatives, as they act chiefly upon the rectum, should be avoided.

In cases, however, in which the calibre of the gut is much reduced, it is impossible to prevent large accumulations of fæces from taking place, by which the colon in particular, and the part immediately above the stricture, are very much distended. Lodged in the cells of the colon, the excrement is formed in hard balls, and sometimes remains for a length of time in this state before it is evacuated: irritation is then produced by the distention, or by

the exhibition of purgatives that are taken, by which fluids being poured out abundantly from the villous membrane of the intestines, the fæces are gradually dissolved, and most abundant evacuations sometimes take place. It seldom happens, however, that in such cases the whole of the fæces that have accumulated in the large intestines are discharged; for if the excitement be kept up by purgatives or clysters, very copious evacuations may still be procured. This accumulation, which is painful and oppressive to the patient, and, in every point of view, injurious, may often be prevented or moderated by injecting daily a moderate quantity of tepid water above the stricture. This may be done with an elastic gum catheter, and common syringe; but it is much more easily effected by making use of an elastic gum tube, to which a small bag, supplied with a stop cock, can be adapted; an instrument which I have occasionally employed for other purposes, and will be found very convenient in the present instance.

At the commencement of stricture it may sometimes be advisable to employ

leeches or cupping, if there are symptoms of inflammation within the gut, but this is a rare occurrence ; for although inflammation may, in many cases, lay the foundation of stricture, yet the subsequent contraction is usually the effect of a gradual change of structure from chronic action : on other occasions an alterative course of mercury has been found serviceable in contributing, with other means, to lessen the thickening and induration. These, however, as well as the preceding means, are, of course, only preparatory, or recommended to assist the operation of the bougie ; for it is solely by pressure, except in rare cases, where it may be necessary to employ the knife, that we can hope to effect a cure, when once the coats of the rectum have become thickened, and permanently contracted.

With reference to the length of time the bougie should be allowed to remain within the rectum, it must be regulated solely by the feelings of the patient, or rather by the manner in which the act of dilating the stricture may affect the constitution ; for he may suffer severely from this cause, without being at all aware that his symptoms

can be attributed to it. If the pressure of the bougie, although moderate, cause considerable pain in the situation of the stricture, extending to the groins, the thighs, or other parts ; or if, after the bougie is withdrawn, general uneasiness, tremors, and sickness come on, we may conclude, that, in the present state of the patient at least, it will do more harm than good, and the common tent, or the dilated gut, should be substituted. As these symptoms, however, may proceed from violence in using the bougie, in cases where, if judiciously employed, it might be of essential service, it should not be discontinued, when found to disagree, without first trying one of a smaller size, and taking care to introduce it with delicacy and judgment. Indeed, in employing pressure in any form for the cure of strictures of the rectum, it should always be recollected, that the disease is in general produced, and kept up by local irritation, and that violence of any kind is more likely to increase than remedy the evil. The surgeon should, therefore, be supplied with a number of bougies of different sizes and consistence ;

and the first that is used should be just large enough to produce a very moderate degree of distention. This may be withdrawn after remaining a few minutes, if it produce much pain or uneasiness; the time being gradually increased afterwards, as the part becomes habituated to the pressure. The size of the instrument must also be gradually increased, in proportion as the stricture is distended, until at last one of the largest diameter can be introduced, and retained with ease.

It often happens, that when the bougie is withdrawn the patient has an evacuation which is more copious than usual, owing to its acting as a stimulant, and increasing the peristaltic motion of the intestines. On this account, therefore, it is not always proper to obstruct the passage for several hours together, particularly if it be attended with any feeling of uneasiness or distention in the direction of the colon; besides, the contents of the small intestines being propelled forward, may, in addition to what is already contained in the colon, contribute to increase the unnatural distention of this gut, or of the pouch, which is

usually formed by that part of the intestine which is more immediately above the stricture.

When the stricture consists of a narrow indurated septum within reach of the finger, and the bougie either does not agree, or is a long time in effecting the dilatation, the best and shortest method is to divide it in the direction of the sacrum, with a probe-pointed bistoury. This operation, which Wiseman did not scruple to perform, without, I believe, any precedent from the practice of other surgeons, has been frequently repeated, and is not attended with any danger, either from inflammation or hemorrhage. In performing it, the fore finger of the left hand must be introduced within the rectum, and along this the above-mentioned instrument must be passed with the other hand, until its point is beyond the stricture, when, under the guidance of the finger in ano, the division may be performed in one or more directions; but sometimes it answers the purpose equally, and is safer, to divide the stricture towards the sacrum only, after which the cure is to be completed by keeping the bowels moderately

open, avoiding any thing that may produce unnecessary irritation, and introducing a large-sized bougie daily, until the irregular projections formed by the division of the stricture are nearly reduced to a level with the parietes of the gut. This mode of cure is often the more requisite, because the narrow stricture, within reach of the finger, and formed chiefly by a projection of the internal membrane, is almost the only one in which the knife can be employed, and, at the same time, that in which the common tent and the dilated gut are useless, on the account of the excessive induration; and the bougies of firmer texture often produce so much pain and irritation, that they cannot be continued.

In cases where, in consequence of previous inflammation, the cavity of the rectum is partly obliterated by a thickening and irregular projection of the internal membrane, producing to the finger in ano the sensation of tubercles; or where the same effect is actually owing to the formation of tubercles, which is sometimes the case, and the disease is not of a cancerous nature, pressure may be employed in al-

most any form with equal advantage as in cases of simple indurated stricture, and the dilatations usually effected in a short time. Some very interesting cases of contracted rectum from the latter cause, and which were successfully treated with the tent by Mr. Desault, are recorded in the Parisian Surgical Journal ; but the particulars of them are too generally known to require mentioning here ; I have merely to remark, that the opinion of many surgeons, that this state of the rectum is connected with venereal disease, appears to rest upon mere conjecture ; since it is evident, that, if this were really the case, other means than pressure would be required to effect a perfect cure ; and if, on some occasions, mercurial preparations, or the application of mercurial ointments to the part, by means of the bougie, a practice which I have seen employed in a similar case, have been found to facilitate the cure, it proves nothing in respect to the true nature of the disease, unless it is shown, that, by these means a cure may be effected, without the assistance of pressure.

When the obstruction proceeds from the

agglutination of several hæmorrhoidal tumours, the same mode of treatment may be adopted as in the preceding cases ; indeed, there is perhaps no form of contraction of the rectum, in which a firm and long-continued pressure can be employed with less risk of producing irritation, and with more decided advantage, than that which proceeds from this cause. In the previous chapter I have alluded to a case of this nature, which was cured by introducing daily the whole of a short bougie within the rectum, and allowing it to remain a considerable time. The following case, related by Mr. G. Levacher, is of a similar nature ; together with other interesting facts, it may serve to show the truth of what I have just stated, that a firm pressure is not only admissible in such cases, but advantageous :—“ A female, the mother of a healthy family, had suffered severely by internal and external piles. Several of these tumours were united together ; and, as they were very numerous, they occupied a great portion of the rectum, leaving only a very narrow passage, about four inches in length. This

patient suffered severely at stool, but as injections passed easily above the obstruction, the diluted fæces still preserved some degree of form, showing the width of the contracted bowel. The disease continued to advance, and during six months mercurial preparations were employed without interruption, with a view to soften down the callosities which formed the tumour, and thus to open the passage. The retention of the fæces becoming still worse, I began to fear for the life of my patient. I made trial of tents of prepared sponge, which I formed into bodies of a pyramidal form, and rounded as much as possible ; but I found that they did not swell out equally, and formed inconvenient knots. I also made use of tubes of calf and sheep gut, distended with air, and with tepid water ; but these were difficult to introduce, though they did not give pain. I then had recourse to several other inventions, which did not succeed ; and I now hasten to the point. I got a turner to make me a wooden peg, in the form of a cone, blunt at the point, and of a such a length, that the whole of it could be introduced within the

rectum. It was made quite smooth, and polished. In order to withdraw it easily I attached a ribbon to it, by way of handle, smeared it with ointment, and then introduced it within the gut. It remained there some time without much inconvenience; and the patient took it out, and replaced it herself without difficulty. I then requested the turner to make me a set of these instruments, differing in length, width, and size; the patient and myself made choice of such as appeared most proper for the purpose, and she continued to use them for full two months. The great advantage she received from them was, that the injections entering with less pain, produced a good effect, and in a short time she had no occasion for them. In order to maintain the advantage she had gained, I advised her to continue the use of these suppositories occasionally; and the fear of a relapse induced her to follow my directions. A few months after, she was attacked with a slow fever, accompanied with hemorrhage at stool, at the termination of which she found herself perfectly cured, so that she was not only freed from all induration in the rec-

tum, but also of several excrescences that were situate at the margin of the anus*.'''

When stricture of the rectum is of a cancerous nature, no means that we are acquainted with can arrest its progress, and all that lays within the compass of the medical attendant is to administer consolation to his patient, and endeavour to mitigate his sufferings. Diluent injections, combined with opium, conium, or similar remedies, may afford a temporary relief in the ulcerative stage, by soothing the local irritation, and clearing the rectum of offending matter; but the greatest advantage is derived from carefully introducing a hollow tube of elastic gum, through which the fæces are drawn off by injecting tepid water; and the excruciating pain, which arises from their coming in contact with the ulcerative surface of the gut, is, in a great measure, obviated. Dilating the passage, with any other view than that of keeping it free to give an outlet to the fæces, must necessarily be useless; a soft tent, composed of lint, smeared with some mild fresh oint-

* *Essai sur les tumeurs inflammatoires*, vol. ii.

ment, will, in general, answer this purpose. If there be much pain and inflammation, fomentations may be used ; and leeches, applied in the vicinity of the anus, or over the sacrum, will be found useful. The bowels should be kept moderately open, with castor oil, or some other mild laxative, which, if it is thought necessary, may be combined with the extract of hyoscyamus, cicuta, or opium ; but the latter is, in general, less admissible when taken into the stomach, because it is more liable to counteract the effect of the laxative, and produce a torpid state of the bowels.

These, or similar means, varied, of course, in some degree, according to the nature of the case, are unfortunately all that we can employ in the treatment of this dreadful disease ; and although, in many cases, they may afford very considerable relief, yet such is the state of misery to which the loss of all hope of recovery, and the violence of his sufferings, often reduce the patient, that the final event is often anticipated with a degree of complacency, rarely to be met with in other cases.

I have previously stated, that symptoms very similar to those which arise from

strictures of the rectum may proceed from other causes ; and it may, perhaps, not be considered altogether useless to make a few remarks in this respect before concluding the present chapter.

Concretions of various kinds may become fixed, and obstruct the passage near the sigmoid flexure of the colon, or indurated fæces may accumulate in such quantity in the rectum, that the efforts of the patient are insufficient to discharge them. In both, the obstruction is productive of great suffering, and death may supervene, as in cases of actual stricture.

Obstruction, from the accumulation of indurated fæces in the rectum, is not very uncommon. There is a sensation of weight and fulness in the rectum, extending to the colon, swelling and spasmodic pains of the abdomen, oppression about the hypogastrium, sometimes with vomiting, and even suppression of urine. Frequent, but violent and ineffectual efforts are made at stool, and either nothing is discharged, or only a small quantity of liquid fæces, and little or no relief is consequently afforded. If the cause be not removed, inflammation, with a true iliac passion, may supervene,

and carry off the patient, or death may take place from a rupture of the colon, in consequence of the enormous distention, and the almost convulsive efforts of the patient to produce an evacuation.

The discharge of liquid fæces in such cases has not unfrequently prevented the patient, or even the medical attendant, from suspecting the true nature of the case, until the urgency of the symptoms has indicated the necessity of an examination; but the tumid state of the abdomen, the sensation of pain and pressure about the lower part of the rectum, the scanty evacuations, and the violent efforts that are made to procure them, are alone amply sufficient to distinguish the case from a common diarrhea. This state of the rectum is very analogous, in some respects, to that of the bladder when over-distended; in both there is a partial discharge, whilst the organ still remains distended to the utmost, and, unless assistance be afforded, the consequences may be speedily fatal. If the accumulation be high up in the gut, a kind of valve is formed by the pressure and descent of the distended portion; and

to the finger it produces the sensation of a large tumour, by which the parietes of the gut are pressed together towards the sacrum. This state of the parts, in fact, is nearly similar to that which exists when there is an accumulation of hardened fæces in some cases of stricture. An interesting case of this nature is related by the late Mr. Hey. It was attended with painful efforts at stool, and subsequently by vomiting, swelling of the abdomen, and total obstruction, so that the clysters which were injected were returned immediately. "Upon introducing my finger," he states, "within the rectum, I found it empty; but its highest part was closed, being pressed against the os sacrum by a hard substance, which occupied the superior part of the pelvis. This substance felt like an enlarged uterus; enlarged, I mean, when considered in its unimpregnated state. I made an examination also per vaginam, and was still led to think that the uterus was pressed against the os sacrum." This substance was brought away, though with some difficulty, by clysters, which were directed through a long flexible catheter, in-

troduced within the rectum beyond the obstruction.

The same author also states, that he was called to a young woman, affected with severe pain in the hypogastrium and anus, and on examination a hard substance was found pressing against the sphincter ani. By means of the lithotomy forceps, three balls of a light friable substance were extracted, each of them containing a plum-stone in the centre, and which must have been swallowed six years before.

A fatal case of obstruction, from the accumulation of fæces in the rectum, is related vol. x of the Medical Commentaries. The subject was an elderly gentleman, who, for more than twelve months, had been affected with diarrhea. He had severe griping pains, continued bearing down, and inclination to evacuate the contents of the gut. The day previous to his death, some pounds of indurated fæces were removed by means of a narrow spoon. More still remained; but syncope coming on, the operation was discontinued. In the same volume there is an account of an elderly lady, who suffered from obstruction in the bowels. Four

large balls of excrementitious matter, about the size of a hen's egg, were extracted. The following morning nearly twenty more were discharged, and more or less continued to be passed daily, when a large dose of castor oil being exhibited, eighteen balls of the same bulk were discharged, and she was completely relieved. In another case of similar obstruction, also recorded in this volume, a large calcareous concretion, weighing eight pounds, was expelled, with an emollient clyster. The patient, a lady, had suffered the most excruciating tortures in the hypogastrium, for eighteen months previous to the discharge of this substance.

Many cases of a similar nature are recorded in former periodical works; but it is wholly unnecessary to take particular notice of them here. It may, however, be of some service to remark, that plum-stones have very frequently been found to form the nucleus of intestinal concretions, which, after giving rise for a length of time to severe suffering, have eventually produced a fatal obstruction, as a knowledge of this fact may serve as a precaution to those, who are in the habit of inconsi-

derately swallowing, or allowing their children to swallow, these or similar substances.

Obstruction to the passage of the excrement may also proceed from other causes. Tumours may form in the vicinity, or, it is possible, that stones may force a passage from the perineum into the rectum; but these occurrences are rare, compared with the preceding; one or more examples of which must have fallen to the observation of every surgeon who has seen much practice; and I think it very probable, that many cases of obstinate costiveness, attended with spasmodic pains in the abdomen or enteritis, may proceed from similar causes of obstruction, although not confined solely to the lowest portion of the alimentary canal.

Obstruction from accumulation of fæces in the rectum seldom occurs but in elderly persons of a costive habit of body. I have seen a few examples of it, in one of which it proved fatal. The treatment consists in clearing the gut of a part of its contents, by means of a common scoop, after which a dose of castor oil should be given, and an

injection of warm water employed to dissolve and bring away what remains in the rectum. Strong purgatives should, of course, never be given in the first instance. If the contents consist of biliary concretions, or other similar substances, it may be necessary to introduce the lithotomy forceps, in order to break them down, and extract them ; and when the cause of obstruction is high up in the gut, we must rely chiefly upon warm injections, which, being conveyed beyond the indurated mass, serve at the same time to dissolve this, and to stimulate the intestine to contract, and force it downwards. The round hard masses of excrementitious matter often brought away in such cases, have, no doubt, been formed and retained for a long time in the cells of the colon ; and, as I have previously stated, the excrement is sometimes accumulated to such a degree as to be almost incredible. Two or three brisk purgatives will continue to bring away copious evacuations of solid fæces, when little food has been taken for some time before.

When the symptoms are not urgent, there

is no difficulty in removing any hardened mass whatever from the rectum; for, with proper management, the anus may be gradually dilated until the whole of the hand may be introduced within the rectum. This surprising power of dilatation is strikingly exemplified in cases, some of which are recorded, wherein a foetus of five months*, or even of the full time†, has been expelled through the anus, without this part being ruptured, or in other respects materially injured. The fact is interesting, and may be of great practical advantage in many cases, as it may serve to show to what extent the anus is capable of being dilated, should circumstances render it necessary; but it should be recollected, that, if much violence be used, complete paralysis of the sphincter muscles, independent of other minor affections, may succeed in consequence.

* Duncan's Annals, vol. ii.

† Med. Comment. by A. Duncan, vol. viii.

CHAPTER III.

ON MORBID CONTRACTION OF THE ANUS.

SECTION I.

On the Nature and Symptoms of Contracted Anus.

A CONTRACTED state of the anus is by no means an uncommon complaint; and, like a similar affection of the rectum, it may be connected with organic disease, or proceed from an undue contraction of the muscular fibres, by which it is encircled.

Sometimes the contraction is owing to a thickening and gradual disorganization of the fine skin within the anus, extending from the external margin to the lower part of the rectum. The surface is rough, and partially ulcerated, with an unhealthy discharge; and, in some cases, the thickening of the skin is not only deep, but has almost a cartilaginous hardness. I have seen but

few cases of this disease, and as they did not appear to yield either to internal remedies, or to topical applications, I am inclined to think it is generally incurable. Many surgeons consider this form of contraction to be connected with syphilis, an opinion which, from various circumstances, I am inclined to admit, although it does not yield to any preparation of mercury. The following case of a female, who was recommended to my care by Mr. Alderman, of Upper Seymour Street, for a disease of the anus, illustrates some facts connected with the history of this complaint:—

Mrs.——, aged forty-five, was, about four years ago, afflicted with an unpleasant sensation about the verge of the anus, which was increased on going to stool. As she had formerly been subject to piles, she was willing to attribute her present complaint to this cause, until the contracted state of the anus, from the progress, giving rise to a train of suffering, she applied to a surgeon at the west end of town, who, after inspection, gave it as his opinion that the disease was venereal; and as she had reason to suppose, that she had some time be-

fore suffered in this respect from the irregularities of her husband, she submitted readily to undergo a course of mercury, which was proposed for the cure of it. During the influence of this remedy some cutaneous eruptions, and other symptoms of a suspicious nature, entirely disappeared, but little or no change for the better occurred with respect to the disease itself, whilst the contraction it occasioned appeared, if any thing, rather progressive. About six months after this, I saw her for the first time. She then complained of suffering from severe pain and difficulty when at stool; that her evacuations were numerous, but scanty, irregular, or rather of a ragged appearance on the surface, when there was no purging, and generally smeared with a bloody matter. On examination, I found that the margin and inner membrane of the anus were converted into a hard, extremely irregular, and partially ulcerated excrescence, which extended upwards, and terminated immediately above the upper part of the internal sphincter muscle, where the intestine had a defined and cartilaginous hardness. The

act of introducing the finger caused considerable pain, in consequence of the narrowness and extreme irregularity of the passage, and a slight discharge of blood followed.

As her general health was tolerably good, it would have been useless, under these circumstances, to employ the bougie; and although, from the history of the case, there was reason to suppose that the change of structure was connected with a venereal taint, yet, as the use of mercury had been previously pushed to a considerable extent, it did not appear advisable, nor was she willing, to have recourse again to the same remedy. I therefore gave her some general directions respecting her diet, prescribed moderate doses of castor oil, so as to soften the excrement, and produce a sufficient discharge from the bowels to prevent any accumulation from taking place, and introduced daily a small tent of lint, smeared with mercurial ointment. Under this treatment the complaint appeared to improve, at least the contraction did not increase; the matter, which adhered to the tent, put on a more healthy

aspect, and the evacuations, without causing so much pain, were less frequent, and more abundant. These circumstances, together with a corresponding improvement in the strength and appetite of the patient, induced me to speak more decidedly respecting the successful termination of the complaint than the subsequent experience on this, and two or three other cases of a similar nature, would have authorised. The improvement was only temporary ; for, after some time, the disease began to extend more into the rectum ; the passage became gradually so narrow and irregular, that it was very difficult to introduce even the smallest sized tent, as well as painful to the patient, and the extreme torture she endured from a motion, deterred her from taking solid food of any description. By degrees, however, the abdomen became tumid ; she lost all inclination for food, every thing was rejected by the stomach, and, after suffering for a considerable time, she died, apparently from exhaustion.

The fatal termination of this case may be attributed more to the difficulty with

which parts that are exposed to frequent motion, and unavoidable causes of irritation, regain their healthy state, when the change of structure has proceeded to a certain extent, than to any specific action; although this may have given rise to the disease at the commencement. I have seen three other examples of diseased structure, very similar to the preceding; two of these occurred in prostitutes, and, I believe, they eventually proved fatal. The subject of the third case was a middle aged man, who appeared to have been but imperfectly cured of the venereal disease. The change of structure was chiefly confined to the margin of the anus, when the influence of mercurial preparations, and other means of relief, were first adopted, and he recovered in less than two months.

According to M. Delpech, syphilis is a frequent cause of morbid contraction at the lower portion of the rectum; but judging from the description given by that eminent surgeon, of the appearance and progress of the disease, I am inclined to think, that he has referred to this source some cases that had no connection with it.

“The syphilitic contagion,” he states, “may be directed to the internal surface of the rectum, whence there results an inflammation, analagous to that which constitutes the blennorrhagia, or the primary ulcers of a venereal nature;” but, in spite of the resemblance, observation proves that syphilis rarely takes this course, in the power which it is capable of exercising over the rectum; the contraction arising from this cause is one of the remote consequences, and succeeds after a greater or less interval from those which mark the existence of syphilis in the sexual organs.

After describing the general symptoms, he gives the following account of the course of the disease:—“If we examine attentively the state of the rectum in the different periods of this disease, we find at the commencement a degree of sensibility, which is sometimes very great, a slight fulness of the coats of the intestine, either extending entirely around the organ, or confined to a particular part; but this last symptom is so little obvious, that it may easily escape the examination even of experienced practitioners. Then the

phenomena of the disease are limited to the sensibility, to the pain in the affected part, to an inconvenience more or less striking in evacuating the fæces, and to a mucous, and sometimes bloody exudation from the intestines. The hæmorrhoidal veins, which are distended at the commencement of the disease, add to the uncertainty of this assemblage of symptoms, and often deceive even the best informed practitioners ; in fact, it seldom happens that we do not attribute to hæmorrhoids, which are merely a symptom, all the other phenomena from which, on the contrary, they arise. Sometimes it is only after a very long interval, and when the evacuations become very painful, that we can discover an evident change in the structure of the coats of the intestine. Sometimes one, or several rings of contraction, situate at different heights, form the obstacle to the course of the fæces ; and if the contraction be not very great, the finger may discover the accumulation of fæculent matter above. Sometimes the intestine is lined with a series of tubercles, more or less numerous, either placed one above another,

or collected together at the same part, so as to produce a proportionate obliteration of the cavity. This last case is less troublesome, because the spaces between the tubercles present points, wherein the coats of the gut still preserving their natural state, are capable of being distended, and can, therefore, yield to the passage of the fæces. The tubercles and the parietes of the gut, at the anular contraction, present a singular degree of consistence, and are incapable of distention. It is probable that these partial tumefactions are susceptible of ulceration, but, hitherto, observation has not afforded a great number of examples."

In many cases of contracted anus, there is merely a thickening and consolidation of the fine skin of this part, and of the adjacent cellular membrane, without any disposition either to spasm or to specific structural disease. This at first does not occasion much inconvenience, except during a dry and constipated state of the bowels, when some degree of pain and difficulty is felt in passing a hardened motion; more, perhaps, in consequence of the parts about the orifice of the gut not being so suscep-

tible of dilating as usual, than from any absolute contraction. If the complaint continue for some time, it is usually followed by a slight degree of prolapsus ani, the necessary consequence of the straining at stool, by which the inner membrane is gorged with blood, and, being elongated, is forced down, whilst the fibres of the sphincter muscles being continually excited, as if some foreign body were accidentally lodged in the same part, by degrees become morbidly contracted, and add very considerably to the straitness of the passage.

This form of contraction is, in general, the immediate consequence of chronic inflammation, or of long continued irritation, arising from a variety of causes, and is very often found in those persons who are subject to hæmorrhoids. The inconvenience it occasions, is, as I have stated, very trifling; but if no means whatever are used to remedy the evil it may increase. Fissures, in that case, are often formed from the cracking of the skin during an evacuation; or the excoriation, arising from the same cause, may degenerate into foul ul-

cers or excrescences ; for the mechanical action of the fæces, and the degree of motion, incompatible with the functions of the part, interfere very materially with the process of cicatrization, and, when the constitution is not in a good state, often prevent it altogether.

Sometimes we find the anus morbidly contracted, without any material change of structure, any thickening or induration, at least at the commencement of the complaint ; the contraction arising solely from the state of the sphincter muscles, the fibres of which being over-distended, or ruptured by the passing of hardened fæces, become sensibly contracted in consequence, and are painful when any attempt is made to distend them. This state of the parts has, with careless observers, led to the belief that there is some degree of organic stricture, particularly as, when the inflammation and tenderness are past, the bougie is found to effect a speedy cure. The patient has, for some time past, suffered from costiveness, with a degree of pain and difficulty when at stool ; and, after much pain and exertion, one or more

knobs of indurated fæces, of a flattened form, are passed ; with some degree of uneasiness, he perhaps applies to his medical attendant, who generally concludes that the symptoms are owing to piles, or that there is a stricture of the rectum, and, from motives of delicacy, is induced to prescribe, without having recourse to an examination. Should a brisk purgative be given, the complaint may pass off immediately, and it may excite no further attention ; but, under other circumstances, the bougie being introduced by the patient himself, and the passage gradually dilated in consequence, the patient, and sometimes even the practitioner, moulding their judgment by the very speedy relief afforded from the use of the bougie in this solitary instance, are seduced into a belief, that dilatation in all cases of stricture of these parts is very easily effected. This painful contraction of the anus is not unfrequently the consequence of inattention to the calls of nature on the part of the patient. Many persons, particularly when earnestly engaged in severe and sedentary occupations, are sometimes apt to resist the desire of going to stool

until it suits their convenience, when, in general, it goes off entirely, and is not renewed, perhaps, until the following day. In the mean time, the fluid parts of the excrement are rapidly absorbed, whilst the indurated mass that remains, being accumulated in, and moulded to the more capacious part of the gut immediately above the upper limit of the internal sphincter muscle, cannot be discharged without violent efforts, and great distention of the anus which is followed by a degree of tenderness and contraction.

Occasionally the orifice of the rectum, in consequence of inflammation, becomes rigidly contracted, and coagulable lymph being thrown out upon its surface, becomes organized, and is drawn out into shreds, by which the passage is almost completely obliterated. The commencement of the complaint is marked by severe pain, particularly when at stool, with almost continued and distressing tenesmus ; but sometimes it is of a more chronic nature. Sometimes, from the same cause, or from spasm, the immediate consequence of metastasis, there is a continued contraction, as in the cases

recorded by Hoffman, G. C. Schmidt, and other writers, the muscular fibres of the anus and rectum being chiefly affected, whilst, on other occasions, there has been little contraction, but considerable derangement in consequence of the thickening, and from effusion of lymph over the inner membrane. In this state of the parts, fatal obstruction, either from the formation of adhesions, or muscular contraction, may take place within a short time ; and whenever obstruction in the bowels has been preceded by tenesmus and pain in the rectum, this should be examined before any purgative remedies are exhibited. An interesting case of fatal obstruction, which appears to have occurred almost suddenly, is recorded by Bonetus. The cause of the symptoms, which were painfully severe, was not discovered until after death, when, on examination, the orifice of the rectum was found contracted, and so bound together by ligamentous bands, that nothing could be passed in either direction*.

* Sphincterem ani conniventem, ejusque totalem coactum pharmacopæo exitiosum annotavit D. Lentilius noster, cui adjicio sequens non absimile D. — ipse

But by far the most severe state of contracted anus, so far, at least, as relates to the extreme pain with which it is accompanied, is that which proceeds from a spasmodic action of the sphincter muscles. It is of this complaint that I wish more particularly to treat in this chapter, because practitioners in general differ materially, or rather they appear to have formed no definite notion respecting its nature and causes, whilst by some it has been passed over almost unnoticed, in consequence, probably (as the complaint is by no means a common one), of no well-marked cases having fallen to their observation.

medens obstructioni ventris, abutitur pilulis Franco furtensibus aloëticis minoribus, et inde occlusâ porta inferiori penitus retinetur colluvies stercorea. Hinc venter ut solvatur, omnis locatur opera; sed frustrâ. Bibitur et singultus cum vomitu excrementorum sequitur, ventre in dies crescente majorem in modum. Pharmaca continuantur vigili curâ; sed ea respuit omnino, et ejaculantem ægrotum interfecit ileus. Dissecto ventre tumido, stercorei halitus fugabant. Ventriculus et intestina, flatibus et excrementa fluidis extremè reperiabantur distenta, gangrænosa, nonnullis in locis exesa. Rectum fibris quasi tot filii decussatim erat constrictum, ut neque sursum, neque deorsum, quicquam transire potuerit.—*Bonet. Anatom. Pract. lib. iii.*

In the few cases which I have seen of this complaint, unconnected with hæmorrhoids, it appeared to have commenced with some degree of smarting pain, and feeling of resistance at the orifice of the gut during an evacuation. After some time the difficulty of voiding the fæces become much worse, and every motion was succeeded by a violent and almost insufferable pain about the anus and lower part of the rectum, particularly if the bowels were at all constipated. On examination, the stools were found exceedingly small, flattened, and, instead of being forced out perpendicularly, appeared to have taken a curved or spiral direction. The state of the fæces, however, was not always uniform, even in the same case, inasmuch as they were sometimes considerably larger than they had been previously, whilst, on other occasions, they were as fine as the smallest tape : in the former case they were often emitted with a degree of rapidity and violence, but, in the latter, very slowly, and with great exertion. These circumstances, in conjunction with others, show the difference between this form of contraction, and

that of organic stricture, in which the evacuations are always nearly of equal size, and similar figure; unless when the disease is situate high up in the rectum, and the contraction is very great, when, as it has been previously noticed, the excrement being passed in scanty portions through the contraction, does not stimulate the gut to contract upon it, until it has accumulated.

In general, the pain comes on soon after the patient has had a motion, continues for a short time, and does not return until the following day, or still later, if the bowels are not moved in the interim; but in very irritable habits it may be produced by the slightest causes, as in the disengagement of wind, a more than usual exertion, passions of the mind, or by any cause whatever that produces a local or general excitement. Sometimes it is so severe, that it is more intolerable than the pains of labour; and, in one instance, I have seen it give rise to loud expressions of agony from the most determined fortitude.

In some cases the paroxysms of pain

do not always succeed the alvine discharges, but assume a periodical character, returning every day, usually in the evening, and apparently without the intervention of those causes which precede it on other occasions ; the interim being spent in that delicious calm, which usually follows upon violent suffering, and which may be termed, not inaptly, the very luxury of sensation, whilst in other cases there is always more or less aching pain, numbness, and uneasiness ; and the paroxysms are quite irregular in their occurrence.

The degree of contraction is not always in proportion to the suffering of the patient ; but when in this complaint the sphincters are rigidly contracted, intense pain is almost the necessary consequence of any thing that irritates the anus, or produces dilatation suddenly. If in this state the finger be introduced within the anus, the external sphincter muscle is found to encircle the orifice like a thick unyielding ring ; and higher up the parietes of the gut feel more than usually firm and solid, when pressed against by the point of the finger, from a similar development and contrac-

tion of the muscular fibres of the internal sphincter; whilst in some cases, where there is much vascular excitement, the contraction has been found to extend along the whole of the rectum.

A plain and well marked case of contracted anus, from a spasmodic action of the sphincter muscles, related by the late Dr. Baillie, is recorded in the fifth volume of the London Medical Transactions. After describing the symptoms and progress of the complaint, in which there is nothing very remarkable, he makes the following practical remarks:—“This case is very different in its nature from the usual stricture of the rectum, and it is of considerable importance that it should be distinguished from it in practice. In the one case the prognostic would be favourable, and in the other case, it would in general be very much the contrary*. Upon a slight degree

* Dr. Baillie always formed a very unfavourable prognostic in cases of organic stricture of the rectum; in which respect he did not differ from many other eminent characters, who, being in the habit of investigating the ravages of organic disease, in examining the bodies of those to whom it had proved fatal, were naturally enough disposed to overlook what might have been the

of attention, the two cases might be confounded, but when accurately examined, they may at all times be clearly distinguished from each other. In both cases the fæces will be found to be flattened in their shape, small in their size, and in some degree serpentine, or twisted ; but the other symptoms will be found to be very different. In the common stricture of the rectum, the situation of the stricture is generally two or three inches above the outer sphincter, and there is a sound capacious portion of the bowel between the stricture and this sphincter. At the seat of the stricture, the coats of the rectum are felt to be more or less thickened, and not uncommonly, in the

state of the same parts in the primary stage, and to form, in consequence, opinions unfavourable to the powers of art in such cases. He remarks, that strictures of the rectum are almost constantly produced by a thickening of its coats, in consequence of which, the cavity of the bowel, at the seat of the stricture, becomes gradually more and more contracted. In the progress of this disease, ulceration very commonly takes place on the inner surface of the bowel, and the patient is ultimately destroyed, as the ulcer has no tendency to heal, and no medicines, which have been hitherto employed, are capable of communicating any healing disposition to it.

cavity of the stricture, there is a hard irregular ulcer. Although this disease has, in its early stages, little influence upon the constitution, yet, when it has made a farther progress, the powers of the constitution become very much weakened; great emaciation generally takes place, and the patient is destroyed. In the other species of stricture, produced by a contraction of the sphincters of the anus, the contraction is found upon examination to be at the anus, or the very lower extremity of the rectum, the inner membrane of the rectum is discovered to be sound, and the general health is not impaired."

Richerand in his *Nosographie Chirurgicale*, makes the following brief remarks relative to the same complaint:—"An inability to propel the fæces through the inferior portion of the rectum, may not only proceed from a mechanical obstacle, as from a membrane closing the anus; or from organic disease, as a cancerous affection of the rectum; it may also be owing to some affection of the vital powers of the part. The contractility of the sphincters is sometimes so much excited, that being

spasmodically contracted, they prevent the transit of the excrement, even when this is perfectly fluid. Females and men of a nervous constitution are chiefly exposed to this accident. It is the more distressing that the gas, having no vent, tension of the abdomen with pain soon come on, and the constipation continuing, inflammation of the intestines may supervene, and prove speedily fatal, in consequence of the facility with which it is propagated to all the viscera covered by the peritoneum."

In some individuals there appears to be a very strong disposition to this complaint, as a very trivial cause, the passing of a hardened motion, or a slight degree of irritation from other causes, will produce a paroxysm of painful spasm at any time; but it goes off, and does not recur, unless after a long interval, or when the same cause is repeated. I have known instances of this, in which the patient, a gentleman of a delicate irritable constitution and sedentary habits, has almost from infancy been affected with a peculiar pain about the anus whenever he passes a hardened motion. He stated, that the pain differed

from any sensation he had ever experienced, and although it usually did not continue more than a minute or two, yet that it was sometimes so violent as to produce syncope. In other respects he had always enjoyed a tolerable state of health.

Mr. Copeland, who has noticed this affection, is of opinion, that a predisposition to it exists in some individuals, in consequence of a preternatural size of the sphincter muscles. Mr. C. states, that he has very frequently met with cases, in which "very obstinate costiveness occurred, with a long train of minor and consequent complaints, as well as some of a more active and painful character, though there could be no actual stricture discovered on examination; but that in all cases he has remarked, that the sphincter muscle was either unusually strong in its action, or unusually extensive and broad, embracing the extremity of the gut in many instances for two or three inches."

This opinion of Mr. Copeland's accords in some degree with the observations of Professor Boyer, with regard to this complaint; at least the predisposition to it in a

very striking degree is noticed by this writer, although it is not attributed to the above mentioned cause. "It is my opinion," he states, "that it may be congenital, for I have seen two individuals in whom it commenced, if I may be allowed the expression, with their existence. Owing to the softness of the excrement, in early life, it is expelled with ease and little pain; but as the patient becomes older, the evacuations become firmer and more abundant, and the pains about the anus more severe, both during and after the evacuation of the *faeces*, the difficulty of which is increased daily."

It is very probable, that in some cases, as in the one which I have previously noticed, a morbid sensibility of the sphincter muscles may exist, and consequently predispose to the occurrence of this complaint in its most violent form, from causes that are not sufficiently prominent to attract a particular notice; but it does not, I think, follow as a necessary result, that because these merely are somewhat larger than usual, they should be more susceptible of being acted upon by any of

those numberless causes, which tend to produce morbid contraction, or a painful excitement of the nerves of this part. It is true, that on introducing the finger within the anus in such cases, the external sphincter in particular is so much altered in respect to size, that it has more the feel of a thick cartilaginous ring than a band of soft fleshy fibres, and that this sometimes extends as far as the upper limit of the internal sphincter; but it should be remembered, that in consequence of irritation, or violent action, it may in this instance become so far developed as to increase very materially the size, as well as the solidity of the whole muscle, and give rise to the opinion, that it was originally much larger than usual, when this in reality was not the case.

Although this complaint sometimes occurs without any evident cause, and in persons who are apparently in good health; yet, from what I have seen of it myself, and from what has been related by others, I am inclined to think, that in the generality of cases it is the immediate consequence of local irritation from fissure, hæmorrhoidal tumours, and similar causes, or of violence

from over-distention in the passing of indurated fæces, particularly when combined with a low and irritable state of the constitution. On the other hand, when the paroxysms of pain and spasm occur periodically, without the intervention of the above circumstances, and the inner membrane of the anus as well as the adjacent parts are free from disease, the complaint can only be considered as depending upon the state of the general health, favoured by a peculiar predisposition, or perhaps by original malformation.

Sometimes it is consequent to, or sympathetic of, diseased action higher up in the gut; and hence it is very often found combined with the different forms of stricture of the rectum. I have also known a person suffer severely from this cause during the inflammatory stage of gonorrhea, and experience immediate relief when the irritation abated in consequence of a discharge of blood from the urethra.

SECTION II.

*On the Treatment of Morbid Contractions of
the Anus.*

THE general as well as the local treatment of these affections must of course differ, according to the immediate cause or the nature of the contraction. In cases of contracted anus connected with thickening and induration, the immediate consequence of inflammation, the cure must depend upon correcting the torpid state of the bowels, which in the generality of these cases has been the remote cause of the complaint. Leeches and fomentations must also be employed, if there still exist any considerable degree of inflammation about the orifice of the gut, a circumstance which is almost invariably attended with pain when at stool, frequent tenesmus, and sometimes with retention of urine, or other sympathetic affections of the urethra and bladder. When there are excrescences or hæmorrhoidal tumours within the margin of the anus, they should be removed with the knife, as they act like foreign bodies in

producing a continued irritation, and consequent disposition in the sphincter muscles to contract upon them, and thus not only add to the inconvenience attendant upon the original complaint, but retard or prevent the cure. Fissures are not unfrequently connected with this state of the anus, and we may be led to conclude, that this is the case, whenever there is considerable pain and smarting from the contact of the fæces; but, unless great attention be paid on examination, they will not be discovered, as they are nearly of the same colour as the surrounding skin, and are usually concealed between the wrinkles which it forms around the margin of the anus. Fissures, in such cases, generally require a separate consideration, for although they may be consequent to the indurated state of the skin and subjacent parts, and may, therefore, be expected to heal when these parts have regained their former state of elasticity, yet, in general, this is not the case; for they are not only little disposed to heal, from a variety of obvious causes, but almost invariably increase the evil that has produced them. In addi-

tion, then, to the preceding means of cure, if fissures exist, they should be touched with the sulphate of copper, or a strong solution of the nitrate of silver, and a tent, composed of lint, smeared with some fresh simple ointment, should be introduced within the anus, the inner membrane and fissures being previously well cleaned from any unhealthy secretion or other matter. When nothing remains but a degree of thickening and induration, the cure may be completed by a judicious use of the bougie.

When the contraction is accompanied with a change of structure, similar to that which I have noticed in the preceding section, and there is reason to suppose that it is consequent to the venereal disease, the treatment must depend upon preceding circumstances. If we find that mercury has already been judiciously administered, and to the extent usually necessary to subdue the taint which the constitution has received, it will answer no useful purpose to have recourse a second time to the influence of this remedy in any considerable degree. Indeed, judging from the experience of many eminent surgeons on this subject, and from what I

have myself seen of this form of contraction, it appears probable, that it is owing more to a change in the healthy action of the vessels of the part, following more remotely in the train of causation, either in consequence of the previous influence of the venereal virus upon the constitution, or of the means that have been employed to overcome its effects, than to any direct action of this virus, curable by mercury upon the affected part; for I am not aware, that any one case, of those in which the contraction has been attributed to a venereal taint, has yielded to the influence of the above mentioned remedy, without the co-operation of topical applications; and if under such circumstances the cure has been more readily accomplished, the deduction is still very inconclusive, since this is only what might have been expected in almost any other affection of the anus or rectum, connected with induration and change of structure, although the patient may never have been affected with the venereal disease in any form. The cure may be attempted by the use of general and local means nearly similar to those

which are employed in cases of a more simple nature; but experience shows, that when the disorganization has reached a certain extent, there is but little hope of success.

With regard to the mode of treatment in cases of spasmodic contraction of the sphincter muscles, it is very uncertain in the result, unless when it is evidently connected with inflammation: nothing that is decidedly advantageous and generally applicable can be gleaned from past experience; and amongst the very few who have noticed this complaint a considerable difference of opinion still exists. As it is frequently connected with fissures of the inner membrane of the anus, it has been supposed by some practitioners, that these are the cause, whilst others have considered them to be a consequence of the contraction, and have been influenced accordingly, with regard to the means of cure most likely to be attended with success. Professor Boyer, who has written particularly on this subject, seems at first to have adopted the former of these opinions, and conceiving that relief might be afforded by

dividing the sphincter muscles, he made trial of this plan in several cases, in all of which, it is stated, the patients were radically cured.

The following is the manner in which the professor recommends the operation to be performed. The patient is placed upon the table, as in operating for fistula in ano: the fore finger of the left hand, anointed with cerate, is passed into the rectum. A bistoury is then introduced along the finger, the point of the instrument being directed to the right or left, according to the situation of the fissure; and with one incision the membranes of the gut, the sphincter muscles, cellular tissue, and external skin, are to be divided. When the fissure is situate in a direction opposite to the preceding it is not included in the division. After the operation, a large bougie is to be introduced, plugs of lint with compresses applied, and the whole secured with the common bandage.

With respect to this operation, I have merely to remark, that although a very severe mode of cure, yet such are often the sufferings of the patient in the cases for which it is proposed, that when all other

means have failed, it cannot reasonably be objected to, if there are sufficient grounds for supposing that it will be attended with success; but as I believe that this complaint is sometimes connected with the general health, and in one instance have seen this severe operation performed with little or no relief to the patient; I am very much disposed to doubt the propriety of it in many cases, and to suppose that it will not be found so generally efficacious as the fortunate experience of Professor Boyer may lead many to believe. In the first place, the necessity in the operation of including the fissure in the division seems to imply, either that the contraction is consequent to the fissure, or that the violent paroxysms of pain are produced solely by the efforts to dilate the sphincters, when morbidly contracted; an opinion that arises from the circumstances of the pain following the evacuation of the fæces. In some cases, however, the paroxysms of pain and contraction occur periodically, and in others, the sufferings of the patient are much less violent, but more continued, particularly when the complaint proceeds

from sympathy with other parts; yet both these cases may exist without the presence of fissure.

From this view of the complaint it would appear, that the distention of the anus, in evacuating the fæces, is amongst the number of those causes that aggravate the morbid sensibility already existent in the sphincter muscles, and that in dividing these we merely contribute to the cure in removing one accidental source of irritation, whilst the disposition to the complaint, and other causes by which it has been produced, or at least is kept up, still remain.

Although this form of contracted anus is often connected with fissures, yet as it sometimes exists separately, it is evident that these, when present, cannot with any degree of certainty be considered as the cause, and that we cannot conclude the complaint will disappear, if these are cured. In cases of piles, excrescences, and other affections of the anus, connected with thickening and disordered state of the internal membrane, fissures are very common, owing, I conceive, to the greater disposition to the cracking and excoriation of this part in passing

hardened fæces, and the difficulty with which cicatrization is effected, where the adjacent parts are liable to frequent motion; and we may, therefore, expect to find them with much more reason, whenever the sphincters, as in the present lamentable complaint, are so rigidly contracted, that the inner membrane of the anus must necessarily become thickened, and often excoriated, from a similar cause; still, however, they may have existed previously, and have given rise, either separately or in conjunction with other causes of irritation, to this painful affection of the sphincter muscles; and whenever, therefore, from the urgency of the symptoms, the operation is determined upon, the instrument should always be carried through the principal fissure, unless it is situate at the anterior part of the anus; for even admitting that it is a secondary affection, still, as the constant irritation it must necessarily produce may tend to increase the original complaint, the operation, if unsuccessful, would not be wholly useless.

Various internal remedies and topical applications have been employed in this

complaint, but in general without any material advantage; for if any thing has been found useful in one case, it has failed in another, probably either from a want of attention to circumstances, or to the capricious nature of the complaint, which has often been known to disappear spontaneously, when every, the most powerful means of cure had been most assiduously employed.

As this complaint usually occurs in persons of a weak and irritable habit of body, whose health has suffered from anxiety of mind, and sometimes without any sufficient local cause, it may, in many instances, be considered as a species of *tic douloureux*; and it is not improbable, that under such circumstances, when the general health is somewhat improved, and the over-excitement of the system in some degree subdued by such remedies as will tend to restore the healthy action of the digestive organs, great advantage may be derived from large doses of the carbonate of iron, or the sulphate of quinine, remedies which have been employed of late with so much success in many analogous affections of other parts. It is almost unnecessary,

however, to state, that this practice can only be recommended in those cases in which there is no appearance of local inflammation, and which in common parlance are usually denominated nervous; nor do I adventure these remarks but as the result of conjecture, unsupported by the test of experience, for I have hitherto had no opportunity of seeing this mode of treatment employed by others, and my own practice has not yet furnished a case that appeared to me sufficiently favourable to make trial of it.

When the accompanying symptoms have more of an inflammatory character, and the anus in a short time has become so rigidly contracted, that there is almost a total obstruction to the passage of the fæces, even when the bowels are relaxed, a dozen or more leeches should be applied at a little distance around the anus, and the bleeding afterwards encouraged by fomentations, which should be applied for some time with assiduity; or general blood letting may be necessary, if the state of the constitution will admit of it. If these means fail in producing the necessary degree of relaxation;

if in consequence of the accumulation of wind and fæces in the intestines, the abdomen becomes hard and tumid, and inflammation with cold perspirations and a vomiting of fæculent matter supervene, there is no time to be lost; a cutting instrument should be introduced along a grooved staff, and the parieties of the anus completely divided in the direction of the sacrum. I have seen this operation performed in one instance under similar circumstances: an immense quantity of gas and dark coloured highly offensive liquid fæces were expelled, with a degree of violence: immediately after the division the distressing symptoms abated, and the patient recovered. Should the contraction extend along the rectum, an event that may take place in cases of contracted anus from inflammation, and which in two or three instances has been discovered on dissection, the incision, although with some risk to the patient, should commence at some distance from the anus, since this would be the only means of preventing the complaint from terminating fatally.

The application of cold water, either by

means of a large syringe or in any other way, is a remedy from which the most soothing relief may in general be derived during the violence of the paroxysms, especially when, as is frequently the case, this excessive sensibility of the parts is connected with hæmorrhoidal disease. In one instance, I have seen it effect a cure without the aid of other means, and where there was no other attendant complaint. S. J., a middle aged man much reduced in circumstances, and who had suffered severely from ill treatment and anxiety of mind, began to experience some degree of difficulty in evacuating the fæces, succeeded by pain, particularly when the bowels were at all confined. At first the intervals of ease were very long, and the pain never occurred but during, and for a short time after, a motion; but by degrees it was more easily brought on by other causes, and became so severe, that he compared it to that of a red hot iron forced into the anus; in consequence of which he was eventually so much reduced in body and mind, as to be under the necessity of abandoning his occupation. On examining the

anus, it was found rigidly contracted, and so acute was the pain caused by introducing the finger for this purpose, that it produced a kind of general spasm, similar to what is observed when, in cases of tetanus, the head and trunk are thrown back convulsively by a spasmodic contraction of the extensor muscles. A variety of remedies were tried without any good effect, and the complaint was eventually removed by immersing the nates in cold water, and dashing it forcibly against them. This individual was a patient of the Manchester Infirmary, and recourse was had to the application of cold water, in consequence of the great relief it is stated to have afforded in a case somewhat analagous, published in the *Gazette de Sante* of 1813.

I have previously stated, that a spasmodic contraction of the sphincter muscles is often connected with strictures of the rectum, and have no doubt, that where the former complaint exists, the latter would generally be discovered, if a proper examination were made. The knowledge of this fact will serve to point out the absolute necessity of examining the state of the rec-

tum, not only by introducing the finger, but also by passing a tolerable sized bougie through the whole length of the gut; since, whenever a narrowing is discovered higher up, it may be considered as the cause of the contracted state of the anus, and although relief may sometimes be afforded when the original stricture is overlooked, it will necessarily be only of short continuance.

With reference to the employment of the bougie in this complaint, it may be considered, that as it is so decidedly useful in almost all cases of contraction in the rectum, when managed with delicacy and judgment, considerable advantage may be derived from it in the present instance. The cases, however, are materially different; in the one, there is a morbid sensibility of the parts, sometimes connected with inflammation, though in most cases purely nervous, liable to be excited by the most trivial causes, and the violent paroxysms of pain almost invariably constitute the prominent features of the complaint; in the other, there is in general little or no pain at the seat of the stricture, none of that excessive

sensibility, increased to agony on the slightest occasions, but merely an insensible alteration of structure, accompanied with a corresponding contraction, and the whole train of symptoms that necessarily supervene to the obstruction it occasions, which, being violent, are often the first to attract the notice of the patient as well as of the practitioner, and not unfrequently mislead the judgment of the latter. According to Professor Boyer, every attempt he has made to cure this complaint by dilating the anus with the bougie proved either useless or pernicious; in some cases it added so much to the sufferings of the patient, that the practice was soon abandoned; whilst in others it so materially increased the contraction, that in a short time neither a small bougie nor even a clyster pipe could be introduced within the rectum. Mr. Delpech also makes the same objections to this mode of treatment*.

To expect that a cure is to be performed by effecting a dilatation of the sphincter muscles in such cases is to suppose, that

* *Precis elementaire des maladies réputées Chirurgicales*, tom. i.

the violent paroxysms of pain are the necessary consequence of the contraction; an opinion which is decidedly erroneous; but still, as this state of the anus is an indirect cause of the pain, inasmuch as the resistance it affords to the passage of the excrement brings the morbid sensibility that exists into action, it may be presumed, that, if it could be overcome, this morbid sensibility of the parts, distinct from the contraction, might abate, or be subdued by appropriate remedies. Besides, although the act of introducing the finger or the bougie always occasions great pain, yet it does not follow, that it should continue to do so, if used with caution, and when the circumstances of the case have been properly considered. If the bougie will not effect a cure in cases of spasmodic contraction (for when there is much inflammation it would not of course be employed), it will be found not altogether useless on many occasions; and certainly of great advantage in subduing the predisposition, which appears to exist in some individuals to this complaint.

CHAPTER IV.

ON PROLAPSUS ANI.

SECTION I.

On the Nature and Appearance of the Prolapsus Ani.

PROLAPSUS ANI is a general term, applied exclusively to every tumour, which proceeds from a partial or entire protrusion of intestine without the anus. The usual appearance of the complaint is generally such as to supersede the necessity of a description; but there are some points of distinction, relative to its true nature and extent, that require a strict attention, as they are of the greatest importance in practice, and cannot always be discovered, either by the external appearance of the everted portion, or by the accompanying symptoms.

Sometimes only a small portion of the

inner membrane of the anus, or lower part of the rectum, is gradually protruded. In young children, this has usually the appearance of a small vascular tumour around the anus; but in the adult it generally takes place more gradually, forming one or two loose flaps of a pale colour, or an extension of integument in a tubular form, from the entire margin of the anus.

Occasionally a great portion of the rectum is torn from its attachment, and everted, forming a large round tumour nearly equal in size to the fist, and containing in some cases a portion of the peritoneum; whilst at other times, although this happens very rarely in comparison, the colon, together with the cæcum, and even some portion of the ileum, have formed the bulk of the tumour.

In order to understand more clearly the true nature of these protrusions, and the manner in which they are formed, it is necessary to bear in mind the structure of the rectum and anus, their relative position, and immediate connection with the surrounding parts. It should be remembered, that a considerable portion of the rectum

is not covered by the peritoneum; that this portion is connected by a loose cellular tissue to the lower part of the sacrum, and anteriorly to the urinary bladder or the vagina, according to the sex; but in such a manner, that when this tissue is relaxed, it is capable of considerable motion in every direction. That portion of the gut, which is immediately above the upper limit of the internal sphincter muscle, is much wider than the rest. The inner membrane of the rectum is also much thicker, more vascular than that in the other parts of the alimentary canal, and when the gut is not distended, it forms numerous folds, that project more or less into the cavity, and which, from their usual position, are generally termed the longitudinal and transverse columns of the rectum. Their formation is evidently owing to the natural structure of the inner membrane, which cannot adapt itself to the excessive degree of extension and collapse to which it is unavoidably exposed; and when it is infiltrated with fluids, or much relaxed, these folds are very conspicuous.

The inferior portion of the gut, to the

extent of an inch and a half, is inclosed by the internal sphincter muscle, which with its fellow close the orifice; whilst protrusion is prevented from taking place, partly by the natural connection of the peritoneum above, and the surrounding organs, but more especially by the joint action of the levatores ani and sphincter muscles. The termination, however, of the mucous membrane of the rectum, constituting the fine skin within the anus, is naturally rather loose, so that even in a healthy state it is often in some degree protruded when at stool; a contrivance that materially facilitates the transit of the excrement when the bowels are constipated, and prevents also the verge of the anus from being excoriated, which would often be the case, if this part were susceptible only of being dilated, without yielding in other respects.

With this view of the structure and physical properties of these organs, and their relative position and connection with the adjacent parts, it is easy to perceive, that the force of the diaphragm and abdominal muscles, in the effort to expel the fæces, or when forcibly called into action by any

other cause, must necessarily be in a great measure directed against the rectum and anus, as occupying the most dependent part of the pelvic cavity, and being the only parts that, when the abdominal muscles contract, are susceptible of yielding to the pressure of the viscera. Now so long as the parietes of the rectum and anus, together with the levatores ani and the sphincter muscles, continue in a healthy state, no displacement whatever can take place without extreme violence, the efforts of bearing down being directed from these parts to the contents of the intestine, and which are therefore expelled; but when the resistance afforded in the natural and healthy state of these parts is weakened, whilst the parietes of the gut and the muscles that contribute to support them are mutually relaxed, and the compression and straining is unusually great, or when, which frequently happens, these causes act conjointly, either a partial or more complete prolapsus may very easily take place.

Any thing, therefore, which has a tendency to produce relaxation of the rectum, and of the parts about the anus, must ne-

cessarily predispose to the occurrence of a prolapsus ; and hence we find, that this complaint is much more common in infants at the breast, and in elderly persons of debilitated habit, than in those who are in the summer of life, when the muscular fibre and cellular tissue throughout the body possess a much greater degree of firmness and elasticity. It is also a very common complaint with those who have been subject to hæmorrhoids, by which the internal membrane, near the orifice of the gut, being preternaturally distended, with coagula or infiltrated fluids, during the paroxysm, remains flaccid when the afflux of blood to this part has ceased, and is then easily protruded. In these cases the tumour, resembling in general one or two masses of loose integument, is formed very gradually, and can never be wholly returned into the gut, or removed, except by an operation. It constitutes what is usually termed the chronic prolapsus of adults, and although it may sometimes produce but little inconvenience, yet it often excites a degree of irritation, and increases the relaxed state of the sphincter muscles ; so that when a har-

dened motion is passed with straining, or, indeed, from less powerful causes, an additional prolapsus of the inner membrane, or of both tunics, very frequently takes place, and the patient is then induced, perhaps for the first time, to have recourse to surgical assistance. Long continued costiveness, the frequent use of warm or stimulating injections, indolent habits, and protracted disease of any kind, may contribute either more or less to the same end, by producing gradually a state of permanent relaxation and debility, favourable to the operation of the exciting causes.

Those causes, however, which produce a constant uneasiness and irritation in the rectum, are much more frequently the source of prolapsus, particularly when the complaint occurs in children; and may, at any time, produce it where there is little or no predisposition from a weakness and relaxation of the parts. Amongst these are ascarides, the irritation from which is sometimes almost insufferable, chronic inflammation and ulceration of the inner membrane, tumours of any kind within the anus, stone in the bladder, sympathetic ir-

ritation from disease in the vicinity ; these and many other causes of a less important nature, or more accidental in their occurrence, and which assist mechanically in dragging down the inner membrane, or that produce irritation within the gut, and troublesome tenesmus, may be included.

Prolapsus ani may also be owing to a paralysis of the levatores ani and sphincter muscles ; the immediate consequence of blows, or some disease of the vertebral column. An instance of this complaint, proceeding from the latter cause, is related by Tulpius*.

When once a prolapsus has taken place, it is always disposed to recur, to increase so as to prove very inconvenient and distressing, particularly if the patient is engaged in any active occupation. The sphincter muscles being pressed upon from within, and often retained for some time in a state of dilatation, become permanently relaxed ; and, in proportion to the duration of the complaint, the tumour usually increases in size, descends more readily, and is not so easily replaced, so as to remain

* N. Tulpius Obs. lib. iv.

in its natural position. If the inner membrane, about the verge, or immediately within the anus, was not previously elongated and protuberant, this usually occurs after a short time; and partly from the irritation of the tumid inner membrane at the orifice of the gut, as well as from the causes that have given rise to the prolapsus in the first instance, hæmorrhoidal tumours, fissures, with mucous discharge from the rectum, often occur, and add very considerably to the distress of the patient.

Very often, when the tumour is considerable, and it is not almost immediately returned, particularly in cases in which, the complaint being of recent formation, the sphincter muscles have not become relaxed, but contract around the neck of the tumour in such a manner as to intercept the free course of the circulation, the tumour swells, inflames, and the patient is affected with the whole train of symptoms that occur in cases of strangulated hernia. These effects are not, as it has been supposed by some, owing to the action of the atmospheric air upon the sensibility of the inner membrane of the gut, constituting the external part or the whole bulk of the tumour; but

they arise almost entirely from the strangulation of the tumour, in consequence of the contraction and pressure of the external sphincter muscle ; and if assistance be not afforded, the local inflammation may proceed so far as to produce a sloughing, and the patient may perish from enteritis.

The symptoms of abdominal inflammation, however, do not always occur, or proceed to such an extent soon after the prolapsus has taken place, yet, as it is not possible to form a certain estimate of the consequences resulting from any neglect, and the reduction is always more easily effected at first than after some time has elapsed, any unnecessary delay in attempting to replace the protruded portion of intestine is very inexcusable.

Sometimes, when, in consequence of neglect, the gut has been allowed to remain protruded, and cannot be returned, or at least retained in its natural position by the usual means ; and either violent inflammation has not taken place in consequence, or the patient has surmounted the danger from this cause, the whole of the tumour gradually changes its appearance ; the velvety softness and appearance of vascu-

larity disappear ; it becomes dense and unyielding ; and, except that it does not acquire the same degree of sensibility, the external part of the tumour, which was previously a soft, secreting mucous membrane, becomes dense, and in many respects similar to the common integument on the surface of the body. The whole tumour forms one compact indurated mass, and wholly incapacitates the patient from attending to any useful occupation.

But by much the worst form of prolapsus is that commonly termed intus-susception, or volvulus, proceeding from an invagination of intestine at some distance from the anus ; and which, according to the report of Fabricius ab Aquapendente, and other accredited writers, has been sometimes as thick as the fist, and equal in length to the fore arm. Here we have total obstruction, with all the violent and distressing symptoms of ileus, and if relief be not speedily afforded the patient will have no chance of recovery, but what may proceed from the means which nature sometimes employs with success, in the most desperate cases.

SECTION II.

On the Treatment of Prolapsus Ani, and Intussusception.

THE general as well as the local treatment of prolapsus ani must depend upon the nature and extent of the tumour, and the causes that may have contributed to produce it. In the first place, if the case be a simple prolapsus of the inner membrane of the inferior portion of the rectum, or of the whole inferior part of this gut, our immediate object is to return it to its natural situation; which may, in general, be effected without any difficulty, in the following manner:—Let the patient place himself upon his knees and elbows, with the body bent forwards in such a manner, that the pelvic contents may gravitate towards the abdomen, a position that will in some degree facilitate the return of the prolapsed intestine; or if the patient be a female, she may be placed upon her side, the pelvis being elevated with a pillow, and the abdominal muscles relaxed, by drawing the

knees up, and bending the body gently forwards. With the fingers of one hand the surgeon should grasp the neck of the tumour, and with the other hand make a firm and equal pressure, carefully avoiding any thing like violence, until nearly the whole of it is returned, and then with the point of the finger push up the last folds of the gut completely above the external sphincter muscle. In many cases, however, so much attention and trouble is not required, for the patient can reduce the tumour himself without any difficulty.

The most difficult and tedious part of this process usually consists in replacing the last folds of the inner membrane, which still continue to return as soon as the finger is withdrawn, and in this respect often prove extremely troublesome. The method recommended by Mr. Charles Bell, of introducing, on the end of the fore-finger, a cone, formed of stiff paper, oiled externally, and wetted at the point, will be found more convenient, and as serviceable as any other; since this cone is easily formed at the moment, and when the finger is withdrawn from within, it will usually come away,

without any portion of the gut following it ; but if this plan should not answer, the rectum bougie, or common candle, or, what is perhaps better, as it does not retain the anus dilated, is the elastic-gum pessary, which may be introduced, and retained for a short time, until the temporary tumefaction of the inner membrane, which is often the chief source of the difficulty, has subsided ; the patient, in the mean time, remaining in the horizontal posture.

When the prolapsed gut has become so tumid that it cannot be returned by the means already pointed out, it is the usual practice to bathe the parts in warm fomentations, which, if they do not diminish the swelling, appear to produce a degree of relaxation in the anus, for the reduction is in general effected afterwards without much difficulty. Richter, however, objects in very strong terms to warm fomentations under such circumstances ; he states that they are not only useless, but are injurious, inasmuch as they increase the swelling*.

* Sehr übel thut daher der Wundarzt, wenn er sich bey der Anwendung warmer erwichender Bähungen uno Breye aufhalt, diè überdem nicht allein nichts helfen,

It may easily be conceived, that very warm fomentations, if merely applied to the tumour, may increase the swelling, without producing that degree of relaxation in the parts about the anus, which facilitates the reduction ; but if the flannels be applied over the perineum and nates, the effect is materially different; and it may be doubted whether the advantage that is gained by the topical application of cold, as recommended by the above-mentioned eminent surgeon, is not more than counterbalanced by the relaxation of the parts about the anus, from the use of warm fomentations, if properly applied.

Sometimes the large intestines are so gorged with hardened fæces, as to impede the reduction, and it is necessary to empty them by a purgative clyster. When this is done, the parts may, in general, be replaced without much difficulty.

It sometimes happens, that the difficulty
sondern vielmehr schaden, indem sie die theile erschlaffen
und die Geschwulst vermehren. — *Anfangsgrunde der*
Wundartzneykunst Band 8 von dem Vorfalle aus dem
Hintern.

of effecting the reduction arises more from a spasmodic action of the abdominal muscles, producing an involuntary effort to reject the prolapsed part as soon as it is returned. In such cases, the warm bath, or semicupium, a large dose of æther and opium, or the fumes of tobacco, and general blood-letting, when the patient is of a plethoric habit, should be employed. The use of tobacco fumes, however, should never be resorted to under any circumstances without the utmost caution, as the immediate consequences are often very alarming, and may even threaten the life of the patient.

If the parts still continue protruded, and the difficulty attending the reduction does not proceed from either of the two last-mentioned causes, blood should be taken from the arm, according to the strength of the patient; and this is the more necessary if symptoms of abdominal inflammation have come on: at the same time we may endeavour to lessen the tumefaction by scarifying the surface of the tumour. It is necessary, however, to recollect, that the

peritoneum is sometimes borne down with the tumour, and if the lancet be used rashly, this membrane may possibly be wounded.

In extreme cases, where none of the preceding means have succeeded in replacing the prolapsed gut, the only plan that remains is that of dividing the sphincter muscles; and however severe this operation may appear, there is no reason whatever why it should not, under some circumstances, be resorted to. For this purpose, the common bistoury must be introduced along a grooved staff, between the neck of the tumour and the posterior margin of the anus, taking care that the instrument is not forced beyond the point at which the gut is reverted; the grooved staff, or conductor, should then be withdrawn, and the inner membrane of the anus, together with the external sphincter muscle, cellular membrane, and external integument, divided in the direction of the os coccygis. After the operation, wet compresses, with the T bandage, should be applied, and considerable care will be required on the part of the surgeon to prevent the parts from being

again protruded before the wound has healed.

Having succeeded in replacing the gut, the next consideration is how it is to be retained there, as whenever the bowels are moved, or on other occasions, it is very liable to be again protruded ; and here the practice must be regulated by the causes that have produced the complaint in the first instance. If the patient be troubled with worms in the rectum, they should, if possible, be removed by a strict attention to the state of the bowels, and by occasional stimulating clysters, that will assist in bringing away the thick ropy mucus in which the ascarides are lodged upon the inner membrane of the rectum. I have found a strong solution of muriate of soda, or common salt, in water, a very useful injection in these cases. The spirit of turpentine is perhaps the most effectual remedy, when taken into the stomach, as it destroys them before they are fully formed in the cells of the colon ; but it is very powerful when taken in sufficient quantity to answer the purpose ; it may be also employed in the form of clyster,

with great advantage in such cases. Prepared in the manner recommended by Dr. Nimmo, this remedy may be deprived of its taste and smell, so as to be much more palatable without losing its anthelmintic properties*.

When prolapsus ani is connected with hæmorrhoidal tumours or excrescences, arising a little within the anus, one or more of these should be removed with the ligature; as in general it may be concluded, that they have been the original cause of the complaint, and it will be wholly useless to attempt a cure until this source of irritation is removed; indeed, in almost every case of prolapsus ani that I have witnessed in the adult, the complaint might be traced to the immediate consequence of the hæmorrhoidal paroxysm, namely, the distention of the inner membrane from the infiltration of fluids, or the formation of tumours within the anus.

The same plan of treatment may be adopted when, in the more chronic cases of prolapsus, some portion of the inner mem-

* Quart. Journ. of Foreign Medicine and Surgery.

brane of the anus is elongated, forming, as I have previously stated, one or more loose flaps, or when the integuments, nearer to the verge of the anus, project in a tubular form between the nates. In these cases the ligature should not be employed; the superfluous skin should be removed with the bistoury or common scalpel, and the wound dressed with a little simple ointment; for although it may often be advisable to include a small portion of the prolapsed skin, for the purpose of producing a degree of firmness and consolidation about the anus, yet, in point of sensibility, it partakes of the nature of the common integument of the body, and whenever a considerable portion of it is incautiously included in the ligature, a practice, which, however injudicious it may appear, I have sometimes seen employed, it will in general be attended with excessive pain, and considerable risk of extensive inflammation.

Relaxation of the inner membrane of the rectum, and of the adjacent parts, may, in some degree, be remedied by injections, composed of a strong solution of alum in a

decoction of oak bark; by appyling cold water to the anus two or three times a day from a large syringe, and by taking a decoction of bark with the sulphuric acid, if it be found to agree with the constitution of the patient. In some cases of prolapsus ani it has appeared to me that Ward's paste has been of service; and from the beneficial influence of this remedy in some chronic forms of hæmorrhoidal disease, I see no reason why it should not be so in cases of prolapsus ani, connected with debility and extreme laxity in the parietes of the rectum and anus.

When the prolapsus occurs in infants or children, not affected with worms, a more solid, nutritious diet will often remedy the extreme laxity of fibre to which it is owing; and if the infant be not very young, but still nourished by the breast, it is advisable to have it weaned as soon as convenient, for the same purpose.

Bandages in general are of little or no use in any form of prolapsus ani, very difficult to apply properly, and extremely troublesome to the patient. The same remark may also be applied in respect to the

different instruments that have been employed, chiefly by the inventors, for the purpose of keeping up the gut. Indeed these are not only useless, but often prove injurious, by causing irritation, and producing a degree of relaxation in the fibres of the sphincter muscles. In some cases, however, as when the inner membrane, or the whole inferior portion of the rectum, has been suddenly protruded by some accidental cause, it may be advisable, in order to prevent a relapse, for the patient to wear an elastic gum pessary, until the adjacent cellular membrane has, in some degree, recovered its usual tone.

When the causes that have contributed to produce the prolapsus have been removed, and the preceding, or other means, have been resorted to without much advantage, one or more small portions of the inner membrane should be extirpated by the ligature. This answers the double purpose of removing a portion of superfluous substance, and of producing, through the medium of inflammation, that degree of firmness and adhesion in the parietes of the gut, and in the parts immediately ad-

jacent, which is natural to them in a healthy state. For this purpose, the bowels should first be cleared by a moderate purgative, and the surgeon may afterwards take advantage of the time when the gut is protruded. If this should not happen to occur at a convenient time, it may be solicited by making an artificial effort, or by injecting a stimulating clyster, which will also answer the purpose of bringing away the contents of the large intestines.

There are two methods of performing this operation, one with the knife or scissors, the other with the ligature. Should the former be preferred, a small portion of that part of the inner membrane, which is immediately above the upper limit of the sphincter muscles, this being usually the most relaxed and protuberant, should be drawn out by the tenaculum, or grasped between the sides of the forceps, and a portion of an oval form, corresponding to the long axis of the rectum, should be separated. The wound should then be allowed to bleed for a short time, before the parts are returned, and the patient be ordered to continue for some days in a

horizontal posture. The reason of recommending the division of the inner membrane to be made lengthwise in respect to the direction of the gut is, that the lips of the wound may be more readily drawn together by the action of the transverse muscular fibres, which would not be the case if the wound were made in the opposite direction.

Although in very sensitive habits, much disposed to take an inflammatory action from trivial causes, it may be advisable to perform this operation with the knife or scissars ; yet, in most cases of prolapsus, it will be found to answer but very imperfectly the purpose for which it was intended : the subsequent inflammation is rarely sufficient to produce the necessary degree of consolidation, and after the wound has healed, and the patient again returns to any active pursuit, the gut continues to protrude as before.

If the portion of inner membrane be removed by the ligature, the inflammation is usually great, and to a certain extent the subsequent advantage is generally proportionate ; but if this operation be performed

under unfavourable circumstances, as when the gut is ulcerated, and the patient is in a bad state of health, or when sufficient attention is not afterwards given to the effects of the ligature, the inflammation may extend to the other intestines, so as to endanger the life of the patient; or suppuration and fistula may take place in consequence.

Severe inflammation from tying a portion of the inner membrane of the rectum is a rare occurrence, when circumstances are commonly favourable, and none of the fine skin about the anus is included; in some cases even it has scarcely been sufficient to answer the purpose of the operation; but it is better to fail occasionally and repeat the operation, than to risk the chance of producing abscess and fistula, or of endangering even the life of the patient, by the rash and indiscriminate use of the ligature in such cases.

In cases in which from neglect the bowel, having remained protruded, has undergone the changes that have been already noticed, the size of the tumour has been very materially diminished by continued and well directed pressure; but this is a very tedious

and troublesome process, it can only answer to a certain extent, and if the patient be not advanced in years, it is much better to submit to the operation of removing it by the knife.

When either from external violence, or from other causes, intus-susception or volvulus has taken place at some distance from the rectum, and the inverted portion of intestine is felt within this gut, or protruded to a greater or less extent through the anus, the case is one of extreme danger, and no time should be lost in resorting to such means of relief as the urgency of the symptoms require. The patient should be laid upon his back, with the pelvis a little elevated, the thighs drawn towards the abdomen, and the chest inclined gently forwards, so as to moderate the muscular resistance, and whilst the abdomen is rubbed by an assistant, to excite an equable peristaltic motion, the surgeon with one hand should grasp the tumour, if external, and with the other endeavour, by the use of his forefinger, and by pressure, to assist in returning the parts to their natural position.

If no portion of intestine can be returned

by these means, the patient should, without loss of time, be placed in a warm bath, or semicupium; and warm water, containing a drachm or more of laudanum, be injected, if possible, in order to overcome the constriction that may exist above, and which often impedes the reduction; or if this cannot be effected, a dose of camphor and opium should be taken into the stomach. After these, the attempt at reduction should be renewed; and if the tumour become sensibly less in consequence, it will be an ample encouragement to persevere until the whole is returned above the anus. If this be effected, and the intestine remains stationary within the rectum, a large sized bougie will be found useful in completing the operation.

It rarely happens, however, in cases in which the invagination is very extensive, that the surgeon is enabled by these means to reduce the tumour; or even should he succeed in returning the whole of it within the abdomen, a great portion of the intestine may still remain in the same state, the circumstances of the case being the same as when the invagination has taken place, but

the inverted portion is not protruded. Emetics have been recommended by some, to produce an inverted peristaltic action ; but vomiting usually takes place at an early period, in consequence of the obstruction, and is often one of the most distressing symptoms. Crude mercury in large quantity has been administered, with a view that by its weight it might assist in drawing back the inverted portion of intestine ; but I am not aware that much decided advantage has been gained by this practice ; and, in one or two instances, this, or the leaden balls that have been given for the same purpose, have ruptured the parietes of the intestines, and escaped into the cavity of the abdomen : besides, in many cases of volvulus, whether the upper portion of the intestine be received into the lower one, or the contrary be the case, the mechanical operation of such substances may be detrimental. Under all these unfavourable circumstances it is not, therefore, to be wondered at, that in cases of intus-susception the operation of gastrotomy should have been proposed or attempted ; and if in such cases, when the usual means of relief fail, death were always to fol-

low as a necessary consequence, it could not be objected to, notwithstanding the apparent barbarity of the operation, and the bare possibility of success which it may hold out to the patient.*

* In a late work of Mr. Howship's, published since the above was written, there are some excellent remarks with regard to the use of the tobacco fume injection, which is strongly recommended by the author in all cases of intus-susception. Those who are in the habit of occasionally indulging in the luxury of the segar, are aware of the equable and increased peristaltic action it occasions; and from this circumstance, as well as from its operation in cases of strangulated hernia, I can readily conceive, that the fumes of tobacco, injected into the intestines, may be a very valuable remedy in the above complaint. Mr. Howship states, that in performing the operation, if the patient be a young child, the tube of the apparatus being secured within the sphincter, one, or at the most two, compressions of the bellows may be made, and if more inflation be required, it must be completed with common air, care being taken to prevent the escape of the first, while the second is introduced.

“ If, from this operation, followed up by diligent frictions upon the abdomen, some action and rumbling in the bowels in the course of an hour be perceived, without any material impression upon the pulse or skin, one or two more puffs of fume may be ventured upon, as one or two hundred are sometimes borne without inconvenience by a grown person; and in this way, by repeating the same series of operations with precaution, and yet with

In most cases of ileus, it is impossible to determine whether the symptoms really proceed from an invagination of the intestine; and no surgeon would think of proceeding to an operation so serious in itself and in its consequences as that of opening the abdomen, until all other means of relief had been tried in vain; in which case the reduced state of the patient, and the violence of the inflammation, have in general perseverance, there will be reason to hope for a successful event."

These remarks, it is stated, "are applicable to those cases in which there is no outward proof of the existence of the complaint: should the protruded bowel have fallen so low as to appear externally, the event of the case will still depend on the relaxation of the constriction in the superior part of the intestines. Under these circumstances, the tube of the fume apparatus must be carefully and effectually inserted between the sphincter ani and the prolapsed bowel, so that the lower part of the rectum may still, as before, be the part inflated. The fume will be thus made to operate where its influence is most wanted, and produce the greatest possible benefit, with the least possible risk. Were the injection, on the other hand, made into the orifice of the protruded bowel, instead of being passed by its side, the fume would go farther than is necessary, and its influence on the constriction be diminished in proportion, while the impression upon the system might prove unpleasant or alarming."

placed the recovery by such means almost beyond the reach of possibility: when the same symptoms occur, in conjunction with a prolapsus, or when the inverted portion is felt in the rectum, the case is no longer ambiguous; and if the operation of opening the abdomen, for the purpose of facilitating the return of the inverted intestine, were admissible in any case, it might be adopted here with much greater chance of success; as no delay would occur in considering the true nature of the complaint, and it might be resorted to as the ultimatum (in the failure of other means), before the inflammatory symptoms had proceeded to any considerable extent.

But death does not always follow in cases of volvulus, when the intestine cannot be restored to its natural position. It has often happened, that after all the symptoms of an acute iliac passion have continued for some time, they gradually abate; the inverted portion of intestine, separating at the point where the invagination and the muscular constriction that impedes its return have taken place, is discharged with the *fæces*, and the patient recovers. In one case that

is recorded, a considerable portion of the cæcum and colon, with its mesentery, were discharged on the fifth day from the commencement of the symptoms. In another case of intus-susception, from violent exertion in lifting a heavy weight, the inverted portion appeared to have separated on the fourth day from the accident, as the violence of the symptoms abated at that time, although it was not until some days after that the loose intestine, consisting of a large portion of ileum, with a quantity of the mesentery, were discharged per anum; and in a third case of the same complaint, in which an immense quantity of intestine and mesentery were forced through the anus, from the fall of a heavy weight upon the abdomen, and could not be returned, the whole mass was cut off close to the anus, and the patient recovered. On measuring the intestine in this case, after it was separated, it was found to be fifty-four inches in length.

In referring to the cases recorded by Bonetus, and many more of the older surgeons, in which is stated the operation of cutting into the abdomen to release the in-

vaginated intestine, it appears very evident, that the operation alluded to was merely for cases of strangulated hernia; and no correct inference, therefore, can be drawn from them respecting the chances of success in the former operation. The truth of this opinion, if it required support, has been very fully and ably discussed in an intelligent paper by Mr. Hevin, and which is enrolled in the Memoirs of the Academy of Surgery of Paris. Of the many cases to which he has referred, there is only one in which the operation of gastrotomy was actually performed, and with success. This is described by the medical attendant in the following manner:—“A female, aged fifty, borne down by severe symptoms of iliac passion, having received no relief from the remedies that she had taken, as clysters, fomentations, poultices, repeated application of the cupping glass to the abdomen, from the advice of Nuck, this very fortunate practitioner at last suspected, that the disease was an intus-susception of the intestine. He procured a very able surgeon to make an incision on the left side of the abdomen, at

four fingers' breadth from the navel, descending obliquely towards the posterior and lower part; then to draw out the intestines (which were to be carefully fomented with tepid milk), in order to discover the seat of the disease; to disengage the intestine, and having replaced it, to sew up the wound. The advice of Nuck was followed, and he obtained all the success he had expected; for scarcely had the surgeon withdrawn the intestines, than, very luckily, he discovered that portion which was the source of all the symptoms the patient had suffered. There was neither inflammation nor adhesion; the intestine was disengaged, and, after being smeared with oil, and conveniently reduced, the operation of gastrotomy was completed, according to the plan that had been agreed upon. Stimulating clysters were given at first, which established the regular action of the bowels. The patient, snatched from death by this operation, soon enjoyed a good state of health, and survived the operation twenty years."

Upon the whole, then, it would appear, that even in the worst cases of intus-sus-

ception, which are almost entirely out of the reach of art to relieve, whether the inverted bowel is above the anus, or protruded externally, all that the surgeon is fully authorised in doing is, to have recourse to the means that have already been noticed; and that if these or similar means prove useless, there is still more probability of a successful issue, by leaving the case to nature, than by undertaking the operation of cutting into the cavity of the abdomen, for the purpose of disengaging the intestine.

CHAPTER V.

ON FISTULA IN ANO.

SECTION I.

*On the Nature, Symptoms, and Causes, of Abscess
about the Anus, and Fistulæ in Ano.*

THE usual appearance, as well as the nature, progress, and termination, of abscesses about the anus, are so familiar to almost every one connected with the profession of surgery, that it would be quite superfluous to say more in this respect than is barely consistent with the intention of a treatise. With regard to the general and local treatment of these complaints, however, it must be acknowledged, that although the writings of Pott, and some of the French surgeons, have brought it to a state of comparative perfection, yet there is still scope for further remark; and excepting those at the fountain head

of information, the practice, very frequently pursued, shows, that many of the excellent principles laid down by these writers are either not in general fully understood, or sufficiently attended to.

Many cases of suppuration in the cellular tissue about the anus have no connection whatever with the rectum, and on this account it may be alleged, that they should not be classed with fistulæ, or other diseases of that organ; but still the original cause may often be traced to some affection of the rectum or anus, although these are not otherwise implicated in the suppurating process; and in cases of simple abscess, or sloughing of the adjacent cellular tissue, the mismanagement of the complaint, or the unhealthy state of the constitution, may eventually necessitate a similar mode of treatment.

The general as well as the local symptoms, that accompany the formation of matter about the anus, and the external appearance of the parts, are necessarily liable to great variation; but for the sake of brevity in the description, and also with

a view to the practice that should be adopted, they may be arranged under one or other of the following heads. The simple phlegmonous abscess; the gangrenous abscess; and those more chronic collections of matter that take place, in greater or less quantity, from ulceration near the lower extremity of the gut, or, that are connected with other diseases.

The simple phlegmonous abscess, which often forms near the anus, is either the consequence of a blow upon the part, or exists as an idiopathic affection. It often arises very suddenly, is ushered in by more or less fever, and restlessness, followed by a burning heat, tension, and acute shooting and throbbing pain at the extremity of the rectum. A swelling soon appears within the buttock, or nearer to the anus; and in proportion as the process of maturation advances, and the contents of the abscess approach the skin, the general irritation is increased, the patient becomes unable to sit up, and the pain and tenderness of the tumour is so great, that he is afraid to move in any direction. If the abscess be not

opened by a lancet, it soon bursts, and in either case the exit of the matter is followed by immediate relief.

An abscess similar to the preceding, but of a milder nature, often forms near the anus ; and is accompanied with little pain, or no symptoms of general irritation. The induration, which appears to be confined to the skin, gradually disappears, and the suppuration is usually followed by a clean, healthy sore. This appears to arise from cutaneous irritation ; for I have often observed it to occur in persons, who, during hot weather, have been necessitated to take more than usual exercise, and have neglected to wash away the acrid secretions which take place in consequence, producing sometimes a degree of tenderness between the nates.

The gangrenous abscess, if I may be allowed the expression, has sometimes, at the commencement, the appearance of phlegmon, but more generally it has more or less of a distinctive character from the first. In the latter case it is invariably attended with a great degree of restlessness, and other signs of gene-

ral irritation ; the fever runs high, and the patient is often affected with a distressing vomiting. The appearance of the tumour is very different to that already noticed, being less prominent and defined, and the skin that covers it is of a dusky or dark pinky hue, extending insensibly into the surrounding surface, and acutely sensible to the touch. The matter is in smaller quantity than might be expected, very unhealthy, and, instead of being accumulated, is very often distributed in an irregular manner immediately beneath the skin.

In some cases the skin and subjacent cellular tissue lose their natural firmness and elasticity ; the dull red colour of the integuments extends, and sloughing takes place to a considerable extent ; but more frequently, with the same appearance, the surface retains its usual feel, whilst the violence of the diseased action is expended upon the cellular tissue beneath. From an extension of irritation to the surrounding parts, the urethra and bladder become affected ; the patient is tormented and alarmed by strangury, retention, and sometimes suppression of urine, and trouble-

some tenesmus. If the patient be subject to piles, they are generally aggravated at this time ; the bowels are obstinately constive, and the sphincter muscles are sometimes affected with a painful spasm, that continues without intermission, or comes on at intervals in violent paroxysms. As the disease proceeds, the pulse, which at first was hard, full, and elastic, gradually becomes weak and fluttering ; there is a general loss of power and mental exhaustion indicated in every attitude and motion, but more especially in the countenance, in which the intense brightness of the eye is strongly at variance with the physiognomical expression ; and if a favourable change be not very soon produced, by a vigorous application of the means that will be pointed out, the constitution continues to sink, and the patient expires.

This state of the parts usually occurs in those whose health has been broken by former intemperance, and its formation is not unfrequently aided by a want of cleanliness, or by confinement in close rooms, where the air is contaminated by noxious effluvia. From the operation of these

causes it not unfrequently supervenes to a more healthy suppuration, and the poor and wretched, although not always the most disposed from previous habits to this complaint, are eventually the greatest sufferers.

Matter also forms more immediately about the anus and lower part of the rectum, but with symptoms of a much less decided character than those already noticed. The patient, perhaps, feels rather indisposed, and is troubled by a constant desire to go to stool; but there is frequently very little fixed pain. After a short time the abscess bursts internally, and the *fæces* are found to be smeared with matter. On introducing the finger within the anus some degree of induration is felt around the inner margin, and a little higher up the seat of the disease may be discovered from the hollow doughy feel, and the passage of the contained matter. In some cases there is no ulceration internally, but the matter passes down, and forms a small tumour close to the anus; whilst, in the majority of those cases which form small fistulæ, requiring an operation for

the cure, the suppuration appears to commence in the parietes of the gut; and if an opening take place externally it is very small, and often concealed between the plaits formed by the inner membrane of the anus.

The origin of the latter affections, or those sinuses, in which the parietes of the gut are more or less implicated, may frequently be traced to the state of the rectum. When hæmorrhoidal tumours, strictures, or other affections of the gut are present, they may almost invariably be considered as the immediate cause, either inasmuch as they favour the production of ulcers in the parietes of the gut, and which, from the irritation of the moisture from the fæculent matter, become converted into small sinuses, or as they produce suppuration in the cellular tissue, attached to the muscular tunic, from irritation. Inflammation and its consequences are readily produced in the cellular membrane by causes, that can have little or no effect upon parts of a more substantial texture; and hence it is that suppuration is readily established from irritation within this organ,

although its parietes are apparently not affected. This fact, which is only sufficiently obvious to those who have paid attention to the subject, is pointedly alluded to by Mr. Charles Bell, who, by comparing it with the relative state of things, in respect to many of the other natural passages, and showing that the same phenomena are connected in other parts, has contributed to form of it one of those principles which are so useful in practice. "I do not," he observes, "find it distinctly stated, that the inflammation within any of the natural tubes or passages will produce abscess externally. Yet we have abscess external to the fauces from inflammation of the membrane of the throat; we have suppuration around the cartilages of the larynx, from inflammation of the inner membrane; so we have abscess by the side of the lachrymal duct, and by the side of the urethra in the perineum, from irritation and inflammation existing within these tubes. These are so many analogies with the suppurations which arise about the anus from irritation within. We must consider, that the cellular membrane is many degrees more disposed to the forma-

tion of abscess than any other texture; and that as an inflamed gland itself will yet produce pus in the surrounding cellular membrane, so the extremity of the rectum, without being the seat of suppuration, will yet cause it in the loose texture which is around it." It is from this circumstance, that the small sinuses about the anus are usually connected with piles, or chronic inflammation existent in the inner membrane of the gut.

Abscesses and sinuses, similar to the preceding, frequently occur as idiopathic affections at the conclusion of some other disease. In elderly persons, and those who have led an irregular life, they denote a bad habit of body, and if not carefully attended to at the commencement, may become habitual, or they may degenerate, and form unhealthy suppuration with erisipelatous inflammation of the surrounding integuments. In young men I have frequently seen them occur during that state of general derangement and debility consequent to dissipation and intemperance. When combined with phthisis, the fatal event is usually accelerated. Those cases in which

collections of matter arise from a diseased state of the sacrum or vertebræ, and which are generally connected with scrofula, do not of course come within the limits of this paper.

SECTION II.

On the Treatment of Abscesses near the Anus, and Fistulæ.

IN the simple phlegmonous abscess formed in the cellular tissue near the anus, or in those small suppurating tumours of a more chronic character, and which are more superficial, the same mode of treatment is required as when matter is formed in consequence of healthy inflammation in other parts of the body; but in consequence of their vicinity to the extremity of the rectum, and the known difficulty that attends the regeneration of the parts destroyed by this process, when once this organ has become implicated in the disease, they require a much more careful attention. Although, in cases of active suppuration, the matter will often soon force an outlet through the skin, and the cavity may heal with little difficulty, yet this will not occur in every

instance. The constitutional irritation may re-act upon the part, producing an unhealthy suppuration; or the contents of the abscess may penetrate in different directions, laying the foundation of fistulæ, and rendering the cure much more complicated and difficult than it otherwise would have been. On this account, it is always proper to make even more than a free opening along the most dependent part of the tumour. When the abscess points at an early period, we may wait with safety until the skin has become thin and discoloured, as there will in this case be less disposition afterwards in the external wound to heal suddenly, and consequently no necessity to produce irritation and a callous state of the edges of the sore, by forcibly plugging up the orifice, until the granulations have approached the surface; but under other circumstances the opening may be made before the external skin has undergone any material alteration in its appearance, for the reasons above stated. Common poultice, applied moderately warm, attention to the state of the bowels, with an occasional opiate, if deemed

requisite, are all that is generally necessary. By these means, the patient will recover rapidly, and without any of those unpleasant symptoms, which arise from an extension of the inflammatory action to the bladder and the neighbouring parts.

In the gangrenous suppuration, the chief means of treatment consist in making a free opening at an early period, so as to give a ready exit to the slough and matter; and when the state of the parts approaches to the nature of carbuncle, or, in other words, when there is a tendency to deep and extensive sloughing, this operation is doubly indicated. The lancet should be introduced through the diseased mass, and carried in such a direction as to leave no lodgment whatever for the matter, and afford ample room for the free application of the dressings. Mildly stimulating poultices, with anodyne fomentations, should be applied, and changed frequently, and such general remedies administered as will tend to correct the constitutional disorder.

If, notwithstanding these means, the parts become more flabby and less sensible, the pulse weak, irregular, and fluttering, and

there is great depression, with shivering, low delirium, and drowsiness, the patient may be considered in the most imminent danger, and more active remedies, without loss of time, should be resorted to. Wine, brandy, with ammonia and bark, should be given in large quantities, whilst a free current of air is kept up in the chamber, and the parts are assiduously bathed with hot spirituous fomentations.

With regard to the use of stimulants in such cases, it may be useful to observe, that they should be varied or alternated, as they are apt to lose their efficacy by repetition. This fact may appear of but little importance, or perhaps too obvious to require particular mention, but it is not always borne in mind in practice; and, in more than one instance, I have had occasion to remark the very great advantage that may be drawn from it. If circumstances will allow it, the patient should not be informed of his danger: hope is often the sole anchor of life in this state; and to deprive the patient of its cheering influence can, in general, answer no useful purpose, even in a moral point of view; whilst in

other respects, although he may be but imperfectly sensible, it may prove very pernicious. The retention of urine which usually accompanies the complaint may be relieved by the semicupium, by keeping the bowels open with fomentations and warm mucilaginous injections, combined with opium. As the secretion of urine is usually very scanty under such circumstances, and the retention is supposed to arise from spasm, it is not considered good practice to introduce the catheter, unless the distention of the bladder, which may be felt above the pubes, should render it absolutely necessary. By an active perseverance in these means, the constitution may sometimes be brought to rally, even in very desperate cases; and after the separation of the sloughs, the parts may granulate and heal without any operation.

The local treatment of the sore, when a more healthy suppuration is established, should consist of mild dressings; and so long as the cavity continues to contract, and a free passage remains for the discharge, the parts should not be irritated, either by applications that are too stimu-

lating, or by cramming the sore with lint, &c., unnecessarily. Those restrictions also with respect to diet, which have been considered necessary during the recovery, should not be hastily abandoned; and a change of air will often be found of great service in contributing to the re-establishment of the general health.

It frequently happens, in cases of common abscess in the cellular tissue about the anus and rectum, that, in the progress of the suppuration, these parts are more or less denuded, and, in some cases, even the whole lower extremity of the gut is completely isolated; under either of these circumstances, the reparation will generally take place to a certain extent, but a small fistulous sinus running along the base of the gut, and sometimes communicating with others of a similar nature, may remain, and ultimately require an operation.

The necessity of dividing the parietes of the gut, which form a part of the sinus, led to the erroneous conclusion, that whenever this organ was at all denuded, or even in all deep seated abscesses in the adjacent cellular tissue, the same practice should be

adopted, and it is not very long since surgeons in general were in the habit of performing the operation for fistula in ano in numberless cases, which under proper management would not have required it. Even at the present time it sometimes happens, for I have seen instances of it, that either from ignorance, or from the almost uncontrollable itch of employing the knife upon all occasions, patients are made to undergo the operation when there was not the least necessity for it. For the improvement of the practice in most cases of abscess about the anus, the profession is largely indebted to M. Faubert, although experience has since shown, that the principles of cure he inculcated are less generally applicable than the reader of this author's excellent paper may be led to expect*. The judicious surgeon, under such circumstances, will always wait until the cavity has contracted itself into a narrower compass, when it will be time enough to think of operating should a sinus remain, showing no disposition to heal; and he will have the advantage also of knowing where

* *Memoire sur les grand Abscess du fondement.*

to direct his incision, so as to divide those parts only that may require it, for the purpose of completing the cure : besides, if in cases in which there is considerable suppuration, and consequent destruction of the cellular tissue of these parts, the division be hastily effected, before an opportunity has been afforded of seeing to what extent granulations will form, and the parts have become, in some degree, habituated to the irritation of disordered action ; instead of a firm, healthy cicatrization, an increased suppuration may supervene, so as to separate the gut still more from its attachment, and produce the necessity of another operation at a more distant period.

It is astonishing to witness how much nature will effect, in some cases of this kind, especially to those who have been taught to consider the knife as a *sine qua non* under such circumstances. I have seen two instances, in which very large and deep collections of matter occurred subsequent to constitutional disorder, and the parietes of the rectum were laid bare to some extent, that did well without any other assistance than that of affording a free exit

to the matter by a large external incision, and by dressing the wound with simple ointment. If, in either of these cases, the operation of dividing the parts with the knife had been hastily resorted to, with a view to accelerate the cure, the risk might have been considerable, and the cure retarded, in consequence of the increased inflammation that would have supervened. It must, however, be acknowledged, that no general conclusion can be drawn from the ultimate success of a few isolated cases like the preceding, at least with respect to the probability of requiring the operation eventually; but they furnish sufficient grounds for delaying the operation until circumstances show that it is absolutely necessary.

In all cases, however, in which the coats of the rectum are perforated, whether this has taken place at the commencement, or is merely consequent to the formation of abscess in the vicinity; in those wherein the same parts are not perforated, but are left extremely thin and almost lifeless; and finally, in many other cases of fistulous sinuses formed immediately external to the

gut, which, independent of any accidental causes of irritation, show no disposition to heal, but, with a free outlet, continue to discharge a thin unhealthy matter; in all these cases there is only one method of treatment to be adopted, namely, to make one cavity of the rectum and sinus, by dividing, with a knife or ligature, the intervening parts, and in the former case to produce a gradual healing of the wound from above downwards, by such means as will best answer this purpose, without producing much irritation.

The state of the parts, in many of the cases to which I have alluded, partake of the nature of simple abscess, or unhealthy suppuration, and cannot with any degree of correctness be denominated fistulous, a term which it is almost unnecessary to remark has given rise to much injudicious practice. It not unfrequently happens, however, more especially in those cases of small or chronic abscesses, that form close to the anus, with little pain, and which constitute the great majority of cases requiring an operation, that when the matter does not obtain an outlet at an early period, or even

under opposite circumstances, one or more sinuses are found, which, in the strictest application of the term, may be denominated fistulous.

This state of the sinus may be owing to improper treatment; to its relation to the gut, which may be perforated, or so much denuded as to be incapable of forming granulations; it may arise from an impaired state of the health, from specific disease; or, finally, it may be connected with a diseased state of the sacrum and lumbar vertebræ, in which case the attention must of course be directed in the first instance to the source of the discharge, the nature and treatment of which require a separate consideration. Fistula in ano may be defined a deep hollow sinus, discharging a thin unhealthy matter, the sides of the cavity are diseased or indurated, generally smooth, as if they were lined with a fine membrane, and without the slightest disposition to heal. If it has been improperly dressed, or, as I have just stated, it has been produced by these means, there is often, besides these appearances, more or less inflammation and thickening of the

surrounding parts, with fever, restlessness, and the whole train of symptoms consequent to local irritation, as tenesmus, dysury, &c. The indication under such circumstances is precisely the same as when a similar state of parts occurs in other situations. If any thing be introduced, it should be a small dossit of lint, smeared with some fresh simple ointment; after which a common poultice may be applied until the induration has subsided, and a more healthy suppuration established. Sometimes the constitutional symptoms under such circumstances may also require attention; if there be much local inflammation, with fever from any cause, the antiphlogistic regimen should be enjoined, and even general blood-letting may be resorted to, if there be nothing in the habit of the patient to forbid it. The dysury and tenesmus, &c. will disappear as the state of the local affection improves; but should these symptoms be urgent, they may be relieved by warm anodyne fomentations and clysters. Under this treatment, the sinus may possibly put on a disposition to heal, in some cases, after the local inflammation

has abated, but this of course was not the immediate object; the condition of the parts, and of the general health, will be so far improved, as to render the operation admissible, and afford the prospect of a more speedy and effectual cure.

There are many circumstances that may render the operation either inadmissible or fruitless, and which, if attended to, might in many instances have been remedied. When the complaint has been originally produced and is kept up by some affection of the rectum, as hæmorrhoidal or other tumours, strictures, &c.; these should of course be cured in the first place, at least so far as the nature of the case will admit, after which the operation may be performed with much greater chance of its proving wholly successful. Secondly, when, as I have just noticed, the orifice and parietes of the sinus are very callous and inflamed, whether this state of the parts arise from injudicious treatment or other causes; and lastly, when the general health is radically defective, or the long continuance of the sinus, especially in elderly persons, may have rendered it in some degree necessary,

from its having become associated with the state of the constitution. In the latter case, it is very rarely advisable to undertake the operation, at least with the knife, particularly if the sinus remain nearly stationary in every respect, and prove of little inconvenience to the patient. A contrary practice indeed, under such circumstances, has not unfrequently put the patient to much unnecessary pain, and ultimately aggravated the complaint, whilst it has sometimes been productive of more serious affections in other parts of the body. In one instance I have known it succeeded by a disordered state of the stomach, which, after some time, terminated in a fatal contraction of the pylorus. A case is related by Richter, in which the healing up of a fistulous sinus was followed by amaurosis, which was again cured by a return of the disease, the two affections alternating with each other.

Whenever fistula in ano is evidently connected with, or arises from a disordered state of the constitution, the operation may succeed, but the result will in general be much more satisfactory, and the risk of

inducing any other disorder much less, if we previously succeed in palliating this state, and in restoring even a temporary degree of tone to the system. If the digestive functions are but imperfectly performed, a small quantity of the blue pill combined with rhubarb, and alternated with moderate doses of castor oil every other night, may be given with advantage, whilst, at the same time, the diet should be strictly attended to, and some bitter infusion, combined with a grateful aromatic, exhibited. The general treatment, however, in such cases, must of course depend upon a variety of circumstances, which it is wholly unnecessary to mention; but it may not be useless to remark, that all purgatives are very injurious. No reputable surgeon, it is conceived, would undertake an operation without considering the state of his patient's health; and the necessity of paying some attention in this respect is to no cases more applicable, than to those in which the rectum is implicated.

The absolute necessity of dividing the parietes of the gut, in most cases of fistula in ano, may be attributed in a great mea-

sure to the very great difference between the structure of this part and that of the surrounding cellular tissue, in consequence of which, similar causes are not followed by corresponding effects; so that there is no balance of action, nothing mutual in the healing process. The same cause, that will produce inflammation and the formation of pus in the soft tissue adjacent to the extremity of the rectum, will have but little influence on the parietes of the gut; besides, the same action, established in parts differently organized, requires a greater or less time before it will subside or go through the usual changes, the duration being usually in proportion to the density of the tissue in the part affected.

But a still more powerful cause of disunion, and perhaps the only one in many instances of this nature, is, the almost continual action to which the extremity of the intestinum rectum, from the very nature of its function, is unavoidably subjected. This circumstance was too obvious, and the deduction too clear, as well as useful to his purpose, for it to escape the notice of M. David, in his very ingenious essay on the

effects of motion and rest, wherein he attempts to explain the continuance of the disease upon this principle, and ascribes the utility of the operation solely to the comparative state of quiescence consequent to it. "Even fistulæ," he remarks, "present some precise indications for the employment of rest. The division of the noose or bridge of flesh that lies between the two openings forming the fistula, does nothing more than protect the parts forming the noose from the habitual motion which prevented their union. When they are once divided, they enjoy, in comparison with their former state, a degree of rest sufficient to allow the cicatrix to be formed throughout the whole ulcerated extent that forms the sides of the fistula; we may even observe, that the healing of the wound is never more surely and more speedily effected than when, by means of a soft tent, we make our dressing press a little upon all the diseased parts."

The utility of the tent, however, arises also from another cause; it is chiefly employed with the sole view of preventing the diseased parts from healing below, until

this process is fully completed above, which if not prevented by separating the lips of the wound, generally render another operation necessary. The advantage of filling the wound to the very bottom, to produce an equal pressure upon all parts, may also be questioned as a general principle; certainly, in many cases, it is quite unnecessary.

Operation with the Knife.

Having taken the usual precautions with regard to the state of the bowels, and cleared out the rectum with a common clyster, place the patient with his back towards the light, the body bent downwards, and resting upon a table or the back of a chair; or, what is more convenient for the operation, as it gives him a much better view of the seat of the disease, is to have the patient placed upon his knees and elbows, upon the bed.

The common probe should now be introduced, and having by this means ascertained the extent and direction of the sinus, the operator should pass the fore finger of his left hand, smeared with oil, into the

anus, and by feeling with the point of the probe along the outside of the gut, he will in general be able to ascertain if there be an internal opening. Should this be the case, the probe must be withdrawn, and a directory introduced in its place, along which the probe-pointed bistoury should be passed, until its point, having entered the opening, rests upon that of the finger in ano; or the bistoury may be dispensed with in most cases. The operation is then to be completed by withdrawing, in a direction rather inclined to the gut, both the finger and instrument thus steadily pressed together, until the whole of the intervening parts are divided. Should there be any other opening below the part at which the instrument entered the gut, it ought if possible to be traversed by the incision.

When there is no communication with the gut, or the sinus is found to extend beyond that which has been discovered, an opening may be made by pressing the point of the instrument against the finger in ano at the extremity of the sinus; or by piercing this part with the stilette previously introduced through the canula. The latter

method, I think, is preferable, when the sinus happens to extend farther than usual, as in that case the parietes of the gut not being, perhaps, so completely denuded as in the common fistula, the blunt point of the bistoury will not so easily pass through without some degree of force, which at all events can be of no service. Should the patient in this case object to an assistant, the fistula knife will be requisite. The operation is then to be completed by dividing the whole of the intervening parts, as in the preceding instance.

Should an instance occur, in which the sinus extends so far, that the finger cannot conveniently meet the point of the instrument where it perforates the gut, a circumstance that may happen, although it is extremely rare, it would be difficult and injurious to endeavour to perforate the gut without some counter pressure. The grooved wooden gorget may be employed for this purpose; and, if the parts are to be divided with the knife, it will serve also to direct the incision, and defend the loose folds of the intestine from being injured. A similar practice may be necessary when

operating upon a male subject that is very corpulent, although the sinus may not be very deep; for in the male the anus is naturally deeper within the nates than in the other sex; and when in addition to this there is a superabundance of fat, and the hand of the operator is not of the most pliable structure, it will not be so easy to pass the finger far into the gut as when the operation is to be performed under opposite circumstances.

It rarely happens, however, that the knife is employed when the sinus extends much deeper than usual, as it is considered imprudent to do so, both on account of the extent of the wound, and the hemorrhage that may take place in consequence; but in two instances I have seen the operation performed with the wooden gorget, when the sinus was said to extend beyond the reach of the finger: in one case, the operation was followed by rather a troublesome hemorrhage, but both patients eventually did well. In the *Journal de Chirurgie* a case is related, in which a similar operation was performed by Desault, for a sinus, which is described as callous, and extend-

ing much beyond the reach of the finger, but the hemorrhage was not, as might have been expected, considerable*. Fortunately, however, the sinus very rarely extends so far, and it would seldom be advisable, under such circumstances, to use the knife. The upper part of the sinus is usually on a line with the internal opening; and this, when present, is almost invariably either immediately within the anus, or just above the upper limit of the internal sphincter muscle. In confirmation of this, I may be allowed to quote the opinion of Dr. Ribes of Paris, who for a long term of years has examined a great number of subjects, chiefly with a view to ascertain the exact course of the sinus, and the situation of the internal

* Un trajet fistuleux, également accompagné de callosités, s'étendoit le long du rectum, dans la cavité duquel le stilet alloit se rendre, beaucoup au dessus de la portée du doigt, puisqu'on ne pourroit en atteindre le bout qu'au moyen du gorgeret enfoncée de quatre à cinq pouces — Cette operation ne fut pas suivie, comme on auroit peut-être pu le craindre, d'un hemorrhagié considerable. Le peu du sang, qui suintoit des bords de la division s'arrete facilement au moyen d'une meche portée dans l'intestin jusqu'au dessus de la plaie, et de bouterolles de charpie saupoudrées de colophone.

opening. The following are his remarks on this subject.

“ After having carefully examined and verified the state of the parts in the great number of dead bodies that have fallen to my observation for the last twenty-five years, I have met with seventy-five that had been affected with fistula in ano, but which had died from other diseases. I endeavoured, in the first place, to ascertain correctly the precise situation where the internal orifice is seated; secondly, the course most generally followed by the fistula, and the parts through which it passed.

“ With regard to the situation of the internal orifice, I have most frequently found it a little above the place where the union is effected between the membrane lining the rectum and the external skin; sometimes also a little higher up; but the opening is never seated above five or six inches high, at least in all of the seventy-five dead subjects, in which I discovered fistulæ, I never found the internal orifice to exceed this height in one instance, and in several, it was at the utmost not more than three or four lines up. The opening itself appeared

as if ragged or torn. In the greater number it was soft, but in a few it was hard and ragged.

“The exact course of the fistulæ was a little variable: in many cases I have seen them, after arising from within the rectum, descend between the mucous membrane and the internal sphincter muscle. When they had reached the lower part of the muscle they turned back, passed through the external sphincter and the skin, and proceeded to form an opening near the margin of the anus. In many other cases, the fistula passed through the fibres of the internal sphincter muscle, descended immediately between it and the longitudinal fleshy fibres of the rectum, continued downwards on the upper surface of the external sphincter, passed through its fibres, and then proceeded to ulcerate in penetrating the skin at a greater or less distance from the inferior extremity of the rectum. But in a considerable number of these subjects, the parts through which the fistulæ penetrated were so much disorganized and confounded together, that it was impossible to ascertain their precise course. In all

these subjects also, the course of the fistula was lined by a membrane formed accidentally, very thin, smooth, and uniform in its texture, but apparently destitute of any villosity. The result of these researches has convinced me, that, in nearly all cases, the fistula is effected in a pile, and that its passage is sometimes determined by some vein of the hæmorrhoidal plexus."

It frequently happens, that there are more sinuses than one communicating with that which enters the gut. These are not always so easy to discover at the time of the operation, without some pains are taken, nor is it always advisable to direct the instrument through more than one at this time, as the state of the patient may not admit of so severe an operation. In some cases, however, the cure may be expedited without any risk, by laying open one or more of the more external sinuses, and cutting away the jagged edges formed by the diseased skin.

When there is no ^{external} internal opening, and the sinus communicates with the rectum above, a bent probe should, if practicable, be passed into the internal aperture, and

drawn forwards, so that its point may press against the outer skin, and show the exact situation at which the lancet should be introduced. This is not in general so difficult as might be imagined, because by causing the patient to strain, as if at stool, the internal orifice may often be brought into view; but when it happens to be seated higher up, it will require some management and much patience to effect this purpose. After an external aperture is made, the case is then precisely the same in every respect as when it is formed naturally, and the operation is completed in the same manner. I have previously stated, that in many cases in which matter is accumulated in rather considerable quantity about the extremity of the rectum, that, after laying open the abscess with the lancet, it is advisable to wait until the cavity has somewhat contracted, previous to performing the operation for fistula in ano. The reasons for such practice, in many cases, are sufficiently obvious; but whenever the abscess, or rather the sinus, is formed immediately beneath the fine skin of the anus, the disease has generally more of a chronic character,

and there is little or no destruction of the cellular tissue, it is much better to complete the operation when the external opening is effected. It may be useful here to remark, that if a strict examination be not made, an external aperture may exist without its being discovered, as this is often extremely small, and concealed between the rugæ of the anus. Should there be two external openings, it is possible they may communicate with different sinuses, to ascertain which, a curved probe should be introduced, to determine the communication; or two straight probes, one passed into each aperture, will answer the purpose.

In some cases the sinus is nearly straight; on other occasions, it first runs horizontally above the external integument, then turns suddenly upwards, and penetrates the intestine, whilst frequently it pursues an uncertain and devious course from its commencement to the aperture at the anus. All these circumstances often prove very annoying to a surgeon that is but imperfectly acquainted with the exact anatomy of these parts, and the course which the fistula generally follows, but with this necessary in-

formation, and a sensitive hand, very little difficulty is ever experienced.

In performing the operation for fistula in ano, no pains should ever be spared in endeavouring to discover the internal aperture. This, by some surgeons, is not considered of much importance; but having seen the operation fail from neglect of this kind in two or three instances, I am induced to think otherwise. The sinus, it is true, will heal to the whole extent, but a small aperture, from which a little matter continues to exude, remains within the gut; and as this is prevented from healing with facility, in consequence of the motion of these parts, and of the irritation of the moisture that oozes from the fæces, another sinus may form, requiring the operation to be repeated; for this reason I think it advisable to discover the internal aperture, and, when the sinus happens to extend still higher, that it should, if possible, be included in the division.

Cases have sometimes occurred, in which the cellular tissue is so far destroyed by suppuration, that the extremity of the gut is left almost completely isolated, so that to

effect a cure it becomes necessary to divide it in two places; and under aggravated circumstances of this kind, some surgeons have not hesitated to recommend, that the lower extremity of the gut should be entirely removed to perform this operation. In one instance on record it is stated, that an inch and a half of the extremity of the rectum, including the greater part of the sphincter muscle, was cut off. This patient recovered, and the functions of the part continued to be performed much as usual. I have known this example adduced, as a proof how little danger there is of producing an inability to contain the fæces by dividing the sphincter muscles, and that the action of the adjacent muscular expansions will often remedy any partial loss of power in the former when it is present.

In reference to the probable consequences of completely dividing the sphincter muscle in one or more directions, it may be remarked, that, in general, the operations for fistula in ano furnish no accurate data, since, in nine cases out of ten, I do not think that more than a few fibres of the external muscle are divided, whilst on

other occasions, nothing but the inner membrane of the anus, and perhaps a few fibres of the internal sphincter are included in the division; that it is only in cases of the larger abscess near the anus, that the external opening takes place on the outer edge of the external sphincter, requiring an entire division of this muscle in the operation for fistula; and as these cases are comparatively rare, the inference is therefore less positive. I have known one instance in which the parts were divided on each side of the anus under such circumstances, but the patient has ever since experienced some difficulty in restraining his evacuations; in consequence of which I am induced to conclude, that the result of such operations must in this respect be rather uncertain, and that they should not therefore be resorted to with rashness, where all other means of cure have not had the fairest trial, and have proved useless. This opinion is strengthened by the experiments of Valsalva, who, after dividing the sphincter muscle in dogs, with a view to ascertain the ultimate effect, found that, although the

anus recovered its functions, yet it was not so perfect as before.

Considerable inconvenience sometimes occurs from hemorrhage, when the knife is employed in cases of deep-seated fistulæ. This generally takes place an hour or two after the operation, and although it may not be dangerous, yet it is often sufficiently alarming to require the strictest attention. Hemorrhage in such cases is generally owing either to the division of some of the principal arterial ramifications, or, what I believe to be much more frequently the case, it is caused by the means that are made use of to arrest or prevent it. If, after the operation, the divided parts are allowed to bleed for a short time, the wound is not too much crammed with dressings, and the patient is kept cool and quiet, bleeding will very rarely occur to any considerable extent; but when the contrary method is pursued, it is almost a necessary consequence; and if, under such circumstances, an attempt be made to check it, the evil is often increased instead of remedied.

The injudicious practice of forcibly plugging the gut in such cases is pointedly noticed by Mr. Copeland. "I have so frequently seen," he remarks, "the hemorrhage kept up as long as this method of plugging the intestine was persevered in, and cease spontaneously when every kind of application was omitted, and the parts left for a short time exposed to the open air, together with a cool room, and avoiding all drink that hurries on the circulation, that I cannot help thinking, that the irritation of the compresses keeps up the bleeding, and that the most eligible mode of treating it, when it is impossible to secure the vessel with ligature, is to take off every kind of dressing, and to suffer the part as much as possible to be exposed to the external air." The occurrence of hemorrhage, from the injudicious use of compresses, must have been remarked by the experienced surgeon in many other cases; and, indeed, wherever pressure cannot, from the situation of the parts, be applied so as to arrest the course of the circulation in the larger branches, it will generally augment the discharge by heating and irri-

tating the wounded surface, which produces an increased determination of blood to the capillary vessels.

When the hemorrhage cannot reasonably be attributed to causes which have produced a temporary excitement in the wounded parts, we may conclude that it proceeds from the division of one or more principal vessels, and we should endeavour to discover the point from which the blood issues, with the improved speculum ani. This has many advantages over that of former construction ; by opening the blades of the instrument, after it is introduced within the gut, a considerable surface is exposed, and we may probably succeed in taking up the bleeding vessel, or in applying the actual cautery to the same part, if it is too deep to make use of the tenaculum. The actual cautery, when applied with dexterity, is by no means so painful as may at first view be conceived, in cases of deep-seated hemorrhage ; and its avowed utility is a sufficient and the best apology that can be offered for having recourse to a practice, that has been denounced as the relic of barbarism and ignorance. It should be recollected,

that sensibility is the most acute where it is most wanted, namely, on the surface of the body ; that within the rectum, as at the base of a deep wound, the application of the heated wire is scarcely perceptible.

Unfortunately, however, in consequence of the difficulty of obtaining a perfect view of the parts, the hemorrhage cannot always be stopped by the above means, in which case we must have recourse to the application of pressure in the best manner that the unfavourable situation of the parts will admit. The method recommended by Petit, and so often alluded to by other writers, is very troublesome, and cannot be adopted at the moment*. A much

* The following is the description given by that author of the manner in which he recommends pressure to be applied in cases of hemorrhage from the rectum :—
“ With some lint I form an oblong plug, neither too hard nor too soft ; over one end of this I pass two pieces of string, tie them at the other end, and to keep them fixed I apply around them several long slips of lint, from one end to the other. The four ends form one cord, which should be at least eight or ten inches long. I moisten the interior of the anus, and the outer part of the ball of lint, by which means I am enabled to introduce it with ease within the anus, above the sphincter, or as far as the open vessel. This plug is sufficiently

more simple and efficacious plan, and which has been found to succeed when the former had been employed to no purpose, consists in introducing the centre of a square piece of linen within the rectum, on the point of the fore-finger, and filling the sac thus formed with lint. The compression is then increased by drawing the four corners of the linen forwards and cross-wise, whilst, with the fingers of the left hand, pressure is opposed to extend the mass of lint, and also to prevent its being pressed solely against the anus. This plan

large to fill the intestine, but not to stop the bleeding. To effect this I take another plug of lint, across which I pass the cord of the former, which I hold firmly with one hand, and draw it forwards, whilst with the other I press upon the external plug, as if I wished to push it within the rectum. The pressure is so much the greater in proportion as the external plug is forced in the opposite direction; and in this way the vessel is pressed upon by three powers, namely, by the extension of the internal plug, by its inclination from above downwards, and by the pressure of the external plug in the opposite direction. The string which hangs from the anus I wrap in some linen, and fold upon the lint, which forms the outer plug. I then cover it with several compresses, and with the T bandage, by which means the cord is so fixed, that the two plugs cannot separate from each other."

I have made use of myself, and I think that in most cases of hemorrhage, proceeding from the lower part of the rectum, it will be found to answer the purpose.

Hemorrhage, under similar circumstances, may be owing to another cause, unconnected with the mere division of the parts ; it may proceed from the surface of an hæmorrhoidal tumour, which existed previously, but has been suddenly developed by the effects of the operation upon the vessels of the rectum. This, however, is merely an accidental occurrence ; but as considerable hemorrhage at other times often arises from this source, I may be allowed a short digression. If we can succeed in obtaining a view of the tumour, the blood may be discovered to proceed from one or more minute orifices on the surface ; pressure will be of little service in this case, and the tumour should either be included in a ligature, or the bleeding may be stopped by applying some strong styptic, or a red-hot knitting needle, to the point from which it proceeds.

Operation with the Ligature.

This method of curing fistula in ano is of

very ancient date: it was employed by Hippocrates and some of the Latin surgeons, but probably only in cases of fistulæ occupying the very extremity of the gut. Since that time it has been laid aside, and renewed alternately, according as it has been advocated or denounced by the prevailing authorities of the day. The chief objection to this operation is the irritation it may occasion, being sometimes succeeded by symptoms that are rather alarming. On this account, or perhaps for other reasons, the ligature is generally employed only by empirics, to whom patients are more readily induced to apply, from the agreeable promise of receiving a perfect cure without cutting. There are cases, however, in which this mode of curing fistulæ is decidedly preferable; and if some eminent surgeons have not recourse to it on any occasion, it is owing either to a partial consideration of the subject, or to one of those combinations that occasionally warp the judgment, and turn the current of medical opinion without sufficient grounds or ultimate advantage.

In operating with the ligature the same precautions are to be adopted, with regard

to the state of the bowels, as in the preceding case; and the patient being placed in a convenient position, the common probe is to be introduced to discover the extent of the sinus, and its connection with the intestine. If, after a careful examination, no communication is discovered, the parietes of the rectum are to be perforated at the upper part of the sinus, by a stilet, introduced through a small canula, slightly curved at the end. The stilet must be withdrawn, and, if the leaden wire be used, the point of the canula remaining in the aperture, the operator is then to pass the wire through it, until an inch or more has entered the gut, when the fore-finger is to be again introduced to draw it without the anus. The two extremities of the wire are then to be drawn gently forwards, twisted together, and a small dossit of lint placed between it and the external skin, to prevent this from being wounded. Should the silken cord be preferred, the canula will not be required, unless the gut is to be perforated: an eye probe will answer the purpose of conveying the cord within the gut, and when it is withdrawn it should be

tied moderately tight; the same precaution being taken, of introducing a little lint to defend the skin, as in the preceding instance.

In proportion as the ligature is found to relax it should be drawn gently forwards, and again secured; this may be necessary every day in some cases, but the necessity for it will depend, in a great measure, upon the tightness with which the ligature is applied. When all but the external skin is thus divided, the operation should always be completed with the knife, as the pain and irritation of the ligature are much greater when nothing but the external skin is included; and if continued, it is rather tedious in effecting the division of this part.

The leaden wire employed by Foubert in cases of fistula in ano, produces much less irritation than the silken cord, and on this account it is very generally preferred in cases of recent fistula; but it has its disadvantages; for it is liable to extend when tightened, which, in some measure, defeats the purpose of the operator, and it may break if care be not taken. In

cases of very old fistulæ, that have become callous, and have no disposition whatever to heal, the cord of twisted silk is more likely to effect a cure than either the knife or leaden wire; but these will sometimes resist every mode of treatment, nor is it, as I have previously remarked, always advisable to interfere with them.

If at any time, during the application of the ligature, the patient is affected with shivering and sickness, pain or tenderness of the abdomen, we may in general conclude that these symptoms are owing to the ligature being drawn too tight; and if attention be not paid to this circumstance, dangerous inflammation may supervene. Sometimes, indeed, it happens, that, with every precaution, disagreeable symptoms will come on, in consequence of the extreme irritability of the constitution; in which case it becomes necessary to withdraw the ligature, and at a proper time the parts may then be divided by the bistoury in the usual manner.

Upon a comparative review of the different modes of operating for the cure of sinuses and fistulæ in ano, it would appear,

that the knife is in general the most convenient and the best, because in nine cases out of ten the sinus is situate quite at the lower extremity of the gut, or almost upon the verge of the anus ; but when the sinus extends much deeper than usual, or when it has been of long standing, the ligature is generally to be preferred ; and that the effects of the latter will depend in some degree upon the substance of which it is composed, as well as upon the manner in which it is applied, and the state of the parts to be divided.

CHAPTER VI.

ON ULCERS OF THE RECTUM.

SECTION I.

On the Nature and Causes of the Ulceration.

AN ulcerated state of the rectum is not unfrequently an immediate or a more remote consequence of diseases affecting the whole of the alimentary canal, as dysentery, inflammation from the operation of poisons, &c., in many of which this part, and the lower portion of the ileum, appear on dissection to have been principally affected: but ulceration very frequently takes place, in the inferior portion of the rectum, independent of these causes; being either connected with some local affection, as hæmorrhoidal tumours, strictures, &c., or existing separately, in consequence of inflammation, long-continued irritation, or some specific action in the mucous membrane of this part. Ulceration, I am inclined to think, is

much more common in the rectum, particularly at its lower extremity, than in any other portion of the intestines; but it is very frequently overlooked, the pain, irritation, &c., with which it is accompanied, being generally attributed to piles; and it is only when the disease has not passed off, but increases, the symptoms becoming extremely urgent, or when the patient has been for some time annoyed with a discharge of matter from the anus, that the surgeon is called upon for an opinion; in which case the disease has not only become extremely difficult to cure, but is sometimes so far advanced as to endanger the life of the patient.

The most common species of ulceration is that which takes place in consequence of irritation from some local cause; it is often very superficial, and as the inner surface of the rectum is more tumid and vascular than usual, the sore itself is not always easily distinguished even by inspection. The patient is affected with pain and smarting, but not in any violent degree; the tenesmus, however, is sometimes very troublesome, and the irritation extending

to the bladder and loins prevent him from taking exercise with any degree of comfort. These symptoms, together with a discharge of mucus or purulent matter with the evacuations, necessitate an inspection, for it is impossible to be satisfied of the position or the existence of ulceration by merely examining the gut with the finger.

Sometimes the ulceration has more of a chronic character, the surface is also superficial, but glossy, like a common indolent sore in any other part of the body. This form of ulceration, as well as the preceding, is usually found in connection with hæmorrhoidal tumours, excrescences, or prolapsus of the inner membrane, and appears to arise from an imperfect circulation in the parts, or long continued irritation. In many cases it appears to take place subsequent to or in conjunction with chronic inflammation of the mucous membrane, when the situation and extent of the disease is not difficult to ascertain (if brought into view), in consequence of the dry and dusky red appearance of the former. This state of the parts is usually accompanied with a dry costive state of the bowels, an

impaired appetite, and other symptoms arising from a torpid state of the intestines. In general there is not much pain in the gut; and although the patient is often troubled with tenesmus in a certain degree, yet this, in general, is by no means so troublesome as might be expected from the extent of the ulceration. Fig. 2 is a sketch of this disease, taken from the body of an elderly female, to whom, in conjunction with other causes, it had proved fatal. The mucous membrane, to a considerable extent, presented a dryish and deep red appearance; and the ulcerations shining, and imbued with a whitish matter, were very conspicuous; but, owing to the want of colouring, the sketch conveys but an imperfect idea of what it is intended to represent.

Ulceration of the rectum not unfrequently puts on a more severe character than the preceding; the surface of the sore is deeper, the edges hard and irregular; it spreads with more rapidity, and the surrounding parts of the mucous membrane are affected with an erisipelatous inflammation, which sometimes extends without the anus. In this case there is much more constitu-

tional irritation, and all the local symptoms, as well as such as are called into action by the peculiar sympathies with the adjacent parts, are aggravated. This, which may be termed the phagedenic sore, I am inclined to think, generally proceeds from an acrid state of the biliary and other secretions, in conjunction with more general causes; indeed I have remarked, that all ill conditioned ulcers are more or less connected with an unsteady condition of the bowels, and an impaired habit of body, existing prior to their formation.

In many cases ulceration appears to take place in the rectum, independent of inflammatory action, and without any obvious cause, and as there are no urgent symptoms when the disease is wholly above the sphincters, it would be overlooked, were it not for a troublesome discharge of dirty matter from the anus. I have seen two cases of this nature, which eventually proved fatal: they occurred in elderly men, whose health appeared to have been broken by intemperance. On examining the inner surface of the gut after death, it was found to have much of its usual ap-

pearance, but it was studded in every direction with small deep ulcers, covered with a dirty yellowish matter; in some parts cicatrization appeared to have taken place. Were these ulcers the consequence of some constitutional affection? for in other cases I have remarked, that the small, deep, circumscribed ulcers, in the alimentary canal, indicate the severity of the preceding inflammation.

Although ulceration in the rectum and other parts of the alimentary canal sometimes takes place, apparently without the intervention of inflammatory action, even when there is no specific disease affecting the constitution, yet in general it is otherwise. Here, as in other parts of the body, the extent and peculiarity of the inflammation, and of its consequences, will depend upon the state of the constitution at the time; and if ulceration supervene, it will necessarily vary in symptoms and appearance, from the superficial sore amounting to little more than excoriation, or the common chronic ulceration, to that which penetrates through the entire coats of the intestine within a short period, or which is

accompanied with and produced by extensive suppuration and sloughing. Connected with symptoms of dysentery, suppuration has been known to take place to a very considerable extent, so as to render it almost impossible, under the most favourable circumstance, for the patient to recover. Bonetus has recorded an instance, from Jacobus Fontanus, in which, on dissection, more than two hundred ulcers, intermixed with abscesses, were found extending from the commencement of the colon to the very termination of the rectum*. In many cases, also, in which inflammatory action in the vessels of the mucous membrane is connected with an impaired, or perhaps a scorbutic habit of body, producing copious discharges of dark

* *Potest Dysenteria emanare à tumoribus in intestinis procreatis. Perit filius meus honoratus novem annos natus, Dysenteria ab ulceribus orta ex tumoribus intestinorum: cum ejus locus nobis esset ambiguus, et symptomatum causæ penitus ignotæ, de mortui corpus secandum curavimus. — Chirurgus invenit à principio coli ad finem usque recti plusquam ducenta ulcera rotunda mixta cum aposthematibus, quorum ulcerum aliqua corroserant totum intestinum: illis ulceribus interjacebant, partes aliquæ intestinorum sanæ et integræ.*

coloured fluids and blood, ulceration may take place to a considerable extent, if the complaint be not strictly attended to. On dissecting the bodies of those who have died under such circumstances, large patches of the intestinal canal, and sometimes the whole of the rectum, have been found black, tumid, and in a state of complete mortification; such cases, however, and all others in which the disease is diffused throughout the intestines, require a more ample and separate consideration; and although the rectum may, in many instances, be more or less affected, they cannot be included amongst the diseases of this part.

Ill-conditioned ulcers of the rectum are often connected with hæmorrhoidal or other tumours and prolapsus ani, when they must in general be considered as a consequence of these affections. They are usually known to be present by a discharge of foetid sanious matter from the anus (particularly with the evacuations), tenesmus, and irritation of the bladder. In consequence of the discharge and the diarrhea that often occurs in such cases, they have not uncommonly been mistaken

for some biliary affection, and treated as such, until, from the progress of the disease, and its effects upon the constitution, it has been too late to remedy the evil. In these, and in all other cases wherein ulceration continues for any considerable time within the rectum, the patient eventually becomes hectic and emaciated, and, after lingering perhaps for some years, dies from exhaustion.

Small ulcers very often form near the extremity of the rectum, from a sloughing of varicose veins. On introducing the finger the edges of the ulcer feel hard and irregular, and there is often little disposition to heal. To this cause I am inclined to attribute many of those fistulæ in ano, which take place without any constitutional affection prior to their formation, and which run close behind the inner membrane of the anus.

Whenever ulceration takes place near to the anus, or rather within that portion of the gut included by the sphincter muscles, it is usually attended with much greater pain, and more sympathetic affection, than when it is situate higher up in the intestine; an

occurrence that might be expected from the unfavourable position of the ulcer, as well as from the nature of the inner membrane of this part, which, in point of structure and sensibility, has more resemblance to the common integument on the surface of the body : hence those minute fissures which form near the margin of the anus are always exceedingly painful, and generally very difficult to cure. The position of the ulcer, however, has one advantage; it affords the surgeon an opportunity of applying dressings, which may facilitate cicatrization.

In some parts of the continent ulcers of the rectum are not very uncommon, and some of them which I have seen were decidedly venereal. This assertion will not appear singular, when we consider the frequency of a crime in those countries, which here, it is to be hoped, is as rare as it is abhorrent. I have seen two instances of primary venereal ulcers of the rectum that eventually proved fatal. When cancerous ulceration affects the rectum it is always accompanied with considerable thickening, induration, and contraction of the coats :

the sufferings of the patient from the ravages of the disease are very great, and the event, in the present state of surgery, is necessarily fatal: but it has already been sufficiently considered in the chapter on strictures, and need not be noticed here.

Ulceration of the rectum, although it may exist as a local disease, is frequently owing to impaired health, or a disordered state of the digestive functions; but there is another circumstance with which this as well as most other affections of this part are connected, namely, the prevailing habit of taking purgative medicines, especially such as contain aloes; by which the rectum in particular is excited, and rendered prone to take on any disordered action. Indeed I have generally found, upon inquiry, that patients affected with diseases of the rectum or anus have been, either more or less, in the habit of taking such remedies upon every occasion; and the ultimate effects of this practice may readily be conceived, if we had not experience to guide us.

SECTION II.

On the Treatment of Ulcers of the Rectum.

THAT degree of morbid change or injury, which is easily repaired in many parts of the body, in other parts becomes very difficult to cure, in consequence of the unfavourable circumstances with which it is intimately connected, and from the operation of the same causes sometimes degenerates into incurable disease. This fact is strikingly exemplified in many diseases of the alimentary canal, and more particularly of the rectum, in which the continued motion and the mechanical action and irritation of the passing contents are very unfavourable to the natural process of cure in such cases. Moved about and compressed in every direction, and continually abraded, it is easy to conceive how ulceration, when once it has taken place, is liable to increase, or grow worse; and in examining the bodies of those who have died from dysenteric complaints, we are rather disposed to wonder how repara-

tion, under all circumstances, could take place to such an extent as the appearance of the cicatrices would indicate to have been the case. A few years ago I was present at the dissection of the body of a man, who, when on service abroad, had suffered very severely from dysentery, and appeared to have sunk under the consequences of this complaint, added to an irregular mode of living; numerous cicatrices were found in the ileum, colon, and upper portion of the rectum: in the latter a deep indolent ulcer still remained about three inches from the anus, and a little lower down were two small ones communicating with a sinus.

It unfortunately often happens, that when a patient complains of pain and uneasiness within the rectum, these symptoms are attributed to internal hæmorrhoids; this has frequently occurred in cases of ulceration; and as the fæces are often found to be smeared with blood and mucus, the original opinion appears to be sufficiently confirmed. By this common error, and by the supine neglect so frequent in such cases, the disease gains ground, and refer-

ence is rarely made to a respectable opinion, until the effects upon the constitution or the neighbouring parts, or the urgency of the local symptoms, absolutely require it. Very frequently, indeed, the complaint was of this nature at the commencement; but in consequence of the tumid inner membrane, or of the tumours which sometimes exist, being forced down and compressed by the sphincter muscles, or the surface being abraded by hardened excrement, ulceration takes place, the complaint assumes a new character, and requires a different treatment.

Whenever ulceration takes place in the rectum, whatever may be its true nature, or the cause that has contributed to produce it, there are some general rules that must always form a part of the medical treatment; namely, to lessen as much as possible any inordinate action or distention of the gut; to restore the healthy state of the secretions which are mingled with the aliment, as the biliary secretion, &c., and to prevent the ulcerated surface being abraded by hardened excrement. To fulfil these indications, the patient should se-

cond the operation of such remedies as may be conceived proper for his case, by paying the strictest attention to his diet. It is not possible to point out a diet that would be even generally applicable, as so much must depend upon the state of the constitution and the previous habits of the patient; but in general it should be moderate in quantity, yet sufficiently nutritious, what the stomach can digest with ease, and has no tendency to produce constipation. The patient should be enjoined to take moderate exercise; and if the bowels are disposed to be confined, their action should be aided by exhibiting some mild aperient, such as the patient has found by experience to agree with him; but never in such quantity as to produce purging: castor oil is the best remedy in these cases, but the patient cannot always retain it upon the stomach. Instead of costiveness, a contrary state of the bowels frequently exists, or at least there is such an irritable state of the mucous membrane of the intestines, or of the digestive organs in general, that the least change of weather, or the most trivial causes, will produce diarrhœa.

In such cases, the appearance of the alvine discharges will afford some criterion for the practice that is to be adopted. Moderate doses of the blue pill, and some light tonic medicine, with strict attention to diet, will often answer the purpose, by moderating the disordered action, and correcting the weakness on which the excessive irritability chiefly depends; but the practice must necessarily depend upon a variety of circumstances.

In cases of common indolent ulcers, a cure may in general be effected with little trouble by topical applications only. Lint steeped in moderately strong solutions of the sulphate of copper, or the nitrate of silver, will generally answer the purpose better than any thing else, particularly when the ulceration is immediately within the anus; as they can be kept almost constantly applied to the surface: in other cases the same applications may be employed in the form of injection, and if these fail, we may generally succeed in effecting a cure by introducing daily a small roll of lint, smeared with some gently stimulating or astringent ointment, within the rectum. Should the

edges be very much indurated, and they can be sufficiently distinguished by means of the speculum, they may be touched with the lunar caustic. A similar treatment may be adopted for those irregular ulcers which are often connected with hæmorrhoids, and which appear to proceed from the suppuration of some small tumour, or the sloughing of a dilated vein.

In ulcers of recent formation, connected with considerable inflammation of the mucous tunic of the rectum, producing bearing down, painful tenesmus, and irritation of the bladder, leeches, and afterwards warm fomentations, should be employed; great advantage will also be obtained from emollient anodyne injections; the bowels at the same time being kept moderately open by some mild aperient, and the antiphlogistic regimen enjoined. This treatment is of course intended to abate the inflammation, from which the symptoms principally arise, and whether ulceration may have taken place or not is a matter of little moment in respect to the general and local means that are adopted. In many cases, however, the same train of symptoms take

place in a very aggravated degree, merely from the excessively irritable state of the sore, and to a certain degree in almost all ill conditioned ulcers within the anus. Under such circumstances, I have seen the surface of the ulcer undergo a sudden and complete change for the better, by applying to it a pretty strong solution of the nitrate of silver. When it is connected with hæmorrhoidal tumours or excrescences, these should be removed, but not until some means have been adopted to moderate the symptoms.

There is a species of ulceration in the rectum attended with the most acute pain, and extremely sensible to the touch. Mr. Brodie mentions in his lectures, that he has seen two cases of this kind. A great variety of remedies were tried without any good effect, but they were eventually cured by using the opiate suppositories.

In cases of cancerous ulceration, the extent of art at present extends no further than to the palliation of symptoms. In addition to the usual means employed for this purpose, and which have already been noticed, I have known very great relief af-

forded by Magendie's remedy, the acetate of morphia: it has appeared to me to lessen the sufferings of the patient, and alleviate in a very surprising manner the extreme irritability of the bowels which often exists in these cases.

It has been too much the practice in the treatment of diseases of the rectum, to trust entirely to an examination with the finger, or even to prescribe without this precaution; a practice which has in part been owing to the disadvantages attending the common speculum ani. One on an improved plan has been invented by Dr. Reece, which with the assistance of a small wax light will enable the surgeon to obtain a very sufficient view of many diseases at the lower extremity of the rectum.

CHAPTER VII.

ON EXCRESCENCES, ETC., ABOUT THE ANUS AND WITHIN THE RECTUM.

SECTION I.

On the Appearance and Causes of Excrescences, &c.

EXCRESCENCES, under which denomination I include all tumours wholly of superfluous growth, are, I believe, more commonly formed about the verge of the anus and the lower portion of the rectum than in any other part of the body. They are noticed or described in the works of Hippocrates, and those of other ancient writers; and in consequence of the varieties of form, more than from any real difference in their nature, they have received the appellations of *figus*, *thymi*, *condylomata*, *crystæ*, &c., &c., to which they have been supposed to bear some resemblance. No advantage, however, can be gained by such a classification; for it is sufficiently evident, that the

general form of all these fleshy or warty bodies is often in a great measure owing to accidental causes: they must necessarily, therefore, vary considerably in this respect, and no treatment founded upon this criterion can answer any useful purpose. If one or more excrescences, whatever may be their structure, are formed within the anus, they are necessarily compressed as they increase in size, and become elongated; whilst the surface being kept moist, and not so much exposed to the action of the external air, is generally smooth and fleshy; but when they arise from the margin of the anus, or from the skin of the adjacent parts, their mode of growth is much less restricted, and their appearance otherwise altered.

There are, however, some more essential distinctions, which, arising from a knowledge of the causes, and from the general appearance of these excrescences, may indicate some difference in their nature, and be of some utility in the treatment of them.

When the lining membrane of the anus has been for some time irritated, and often

inflamed, either in consequence of being protruded as in cases of hæmorrhoids and prolapsus ani, or by some acrid secretion from the rectum or the membrane itself, small fleshy excrescences more or less numerous often arise, and sometimes attain a considerable size. These are generally of a greyish red colour, but situated within the sphincters, they are not unfrequently of a darker hue; they differ also in density, but in general they are rather friable, and easily made to bleed. Although sometimes very similar to the common hæmorrhoidal tumours, that from being repeatedly gorged with fluids have become permanently solid, yet they are decidedly different: in the former there is merely a development and slight change of parts that previously existed, and the cutis is only connected with the tumour inasmuch as it forms for it an envelopment; and although in some degree permanently solid, yet these are not quite uniform in respect to size, being in some degree increased or diminished, according to the afflux of blood to the vessels of the rectum: in the latter the

substance of the tumours is entirely a new production, formed by the vessels of the cutis from which they grow ; the increase is gradual, and they rarely or never swell and inflame spontaneously.

It sometimes happens, however, that these two affections are combined, particularly around the verge of the anus ; for when the common hæmorrhoidal tumours are formed in this part, the skin that constitutes their envelopment being protruded and inflamed from the distention, as well as in consequence of the irritation of acrid secretions, the matter of gonorrhæa, or other causes, it becomes diseased, and a true excrescence is formed upon what was previously a common hæmorrhoidal tubercle. In such cases the margin of the anus is often protruded, in the form of a prominent fleshy mass, with an irregular surface, sometimes studded with bluish tubercles ; and not unfrequently the excrescence becomes excoriated, ulcerates, and discharges a purulent or a thin unhealthy matter. Under these circumstances the disease has sometimes been mistaken for cancer ; but this

can only arise from ignorance or inattention, and it differs sufficiently, both in its progress and appearance, to authorise such a conclusion. Perhaps, as some surgeons have stated, the diseased action may degenerate, but I have seen no instance of this.

Small warty excrescences sometimes arise from the inner membrane of the anus, producing after a short time a sensible narrowing of the passage, considerable pain and irritation when the patient is at stool, and a continued discharge from the anus. If not visible externally, they may be known to exist by the above mentioned symptoms, together with the appearance of the evacuations, which are necessarily more or less uneven or ragged, and sometimes smeared with blood and matter; or they may be easily ascertained by the rough uneven feel on introducing the point of the finger within the anus. This state of the parts, if not carefully considered, may be mistaken for a much more important one, namely, that form of stricture which appears to be consequent to the venereal disease, and which, as I have previously

stated, is rarely cured after the disorganization has proceeded to a certain extent; or it may under some circumstances be mistaken for cancerous ulceration. If the patient, however, be made to strain downwards, the appearance of the excrescence, and of the fine skin of the interspaces, will be sufficient to show the true nature of the complaint, which although very distressing is comparatively harmless.

The appearance of the fleshy excrescences that arise from the common integuments about the anus is sufficiently well known to supersede the necessity of a description; they are generally owing, either to the irritation of the matter of gonorrhœa, or other acrid secretions, which excoriate, or produce an unhealthy state of the cutis in these parts, and in some cases they appear to be remotely connected with the venereal disease. In general they are soft and spongy, possessing an imperfect vitality, and but little feeling; but sometimes they are more solid and better organized, requiring other means of cure than those

which usually answer in cases of cuticular excrescence.

Small red nipple-like excrescences are occasionally found arising from the common integument around the margin of the anus. These, as well as other forms of excrescence of the same part, are very frequently owing to a want of cleanliness; and some individuals are much more disposed to them than others, in consequence of the cuticular secretions in this part being easily increased and rendered acrid, whenever they are necessitated to take much exercise on foot, particularly in hot weather. That many of these excrescences may in general be considered merely as local complaints is pretty evident, for I have seen them in persons in every respect healthy, and sometimes in children; but in general they are regarded with a suspicious eye, in consequence, probably, of their being sometimes found in those who have symptoms of syphilis. Their origin, however, under such circumstances, may often be attributed to other causes than this, admitting that they are remotely connected with

it. It is scarcely necessary to mention, that venereal ulcers may be produced in these parts from the contact of matter arising from a similar affection within the labia pudendi in females ; and, in consequence of the incrustation of the matter which is given out, produce the appearance of a warty excrescence, which dropping off, as the parts beneath heal from the operation of mercury, may lead to a supposition, that these incrustations were organized excrescences, dependent on a venereal taint.

Polypi, soft red fleshy tumours, and others of a scrofulous nature, are occasionally formed within the rectum, at a greater or less distance from the orifice, and may prove fatal solely by the irritation they cause, independent of any particular diseased action with which they may be connected. The formation of the tumour is seldom attended with much inconvenience at the commencement ; but after it has attained a moderate size, and may be felt pendulous, or projecting from the parietes of the gut, the patient begins to be affected with a heavy dragging pain at

the seat of the tumour, pains in the abdomen, and a frequent desire to go to stool, at which time the substance of the tumour may, under some circumstances, be forced without the anus, or even torn from its attachment. By degrees the digestive functions become affected, and after the patient has for some time suffered from the train of unpleasant symptoms consequent to this state, diarrhœa and hectic fever supervene, and he is reduced to a state of emaciation and extreme debility. These symptoms may be owing to the irritation of the body of the tumour; but they are often aggravated by the ulceration which may take place in consequence, either on the surface of the tumour itself, or on the adjacent inner membrane of the rectum, even in cases in which there is nothing of a malignant nature in the disease: indeed it rarely happens that carcinoma in this part forms any thing more than an irregular tubercular mass, though it has been found to exist as a pendulous tumour, similar in form to a common excrescence.

Many of these tumours are formed be-

tween the coats of the intestine, as in cases of scrofulous deposits, of which I have seen two instances ; and in many cases of schirrhous tumour : others appear to arise out of the mucous membrane, as the vesicular polypus ; the soft, friable, red excrescence, which is sometimes seen, and often exhales blood in considerable quantity from its surface, and the hæmorrhoidal excrescences which have been noticed.

SECTION II.

On the Treatment of Excrescences and of Tumours within the Rectum.

ALTHOUGH many kinds of excrescence about the anus, and even the glandular-like tumours within the rectum, are often considered as consequent to syphilis (and when there is reason for supposing that the habit is tainted, it may be necessary to employ general remedies as well as local means, in the cure of them), yet, so far as my own experience and observation ex-

tends in this respect, they have almost invariably appeared to me, merely as the consequences of some local irritation, or mechanical injury, and have yielded to the treatment which such a conclusion would indicate.

In cases of hæmorrhoidal excrescences, as they are usually termed, either the knife or ligature may in general be employed to remove them, without the same fear of hæmorrhage or inflammation that generally accompanies the application of similar means to the common pile ; because they are not, like the latter, enveloped by the cutis or mucous membrane of the part, nor can vessels of any considerable size enter into their substance, as in some cases of hæmorrhoidal disease. If there are several excrescences of varied size, the best plan is to remove them with the scissros ; but when there are not more than two or three, these are pendulous, and the patient has great objection to have them cut off, they may be included in separate ligatures. In many cases, even when there is much disposition to relaxation of the inner membrane and

prolapsus, the ligature will be preferable, as it will effect the double purpose of removing the excrescence, and producing a firmer condition of the parts about the extremity of the rectum. In two instances I have seen some large condylomatous tumours cured by puncturing them with the common lancet, and by exhibiting colchicum internally. The tumours withered away gradually ; but how far this was aided by the operation of the above remedy, I cannot pretend to determine.

The preceding remarks, however, do not apply to that irregular fleshy mass which is sometimes formed around the verge of the anus in those who have been long subject to hæmorrhoids. In such cases the substance of the excrescence should be removed with the common scalpel, being first included in a double ligature, for the purpose of facilitating the operation.

The small warty excrescences arising from the inner membrane of the anus are to be cured by cutting them off with the blunt-pointed scissors, and by introducing afterwards tents, smeared with some astrin-

gent ointment. If they do not disappear entirely under this treatment, they should be touched daily with the sulphate of copper, or the nitrate of silver. After a short time the cure in either case is to be completed by using occasionally the common bougie, until the inner membrane has nearly regained its former smooth and more healthy condition.

The cauliflower and warty excrescences, which spring up in numbers from the common integument about the anus, as well as from a considerable portion of that covering the adjacent parts, extending even to the pubes, may often be destroyed by sprinkling them with a powder, composed of the *ærugo æris* and *pulv. sabinæ*, by dressing them with ointment, containing the oxymuriate of mercury, the sulphate of copper, &c., or by applying daily the nitrate of silver, or acetic acid to their surface. Such as do not readily give way to these or similar means, may be removed with the common scalpel, which, in such cases, is always preferable to employing a ligature. The bleeding, how-

ever, is generally considerable, and will require some little attention.

With regard to the means to be pursued in cases of tumour within the rectum, much must depend upon our opinion of its nature and its distance within the gut. If these circumstances are favourable, the ligature may be applied round its base with the aid of a canula; after having taken the necessary precaution of bringing the patient into the most favourable condition, by some previous attention to diet, and exhibiting such remedies as may be applicable to the peculiarity of his case. I have seen a solid tumour as large as a pullet's egg successfully removed by the ligature, although it was as much as five inches from the anus; and the patient recovered without any disagreeable symptom. In another case of tumour, rather lower down in the gut, the ligature was also applied, but the patient afterwards sunk under the local irritation, and the diarrhœa that came on after the tumour had separated. On examining the rectum after death, its internal coat was found very much thickened and irregular:

a deep unhealthy looking ulcer had formed just above the narrow termination of the gut, and the part to which the tumour had been attached had a sloughy appearance, and communicated with the upper portion of the ulcer. The ulceration in this case had no doubt existed previously ; a circumstance that, I think, is very unfavourable to the operation with the ligature, and would induce me to employ the scissors, or some other instrument, whenever the situation of the tumour would render it practicable.

Previous to performing either one or other of the preceding operations, it is generally advisable to dilate the orifice of the gut by introducing a tent or bougie, and increasing the size gradually. This will afford great assistance to the operator, even when the tumour is not situate very high up, and may render the operation practicable, when without this precaution it would not have been so.

The utility of pressure from the bougie, in some cases of tumours within the rectum, has been noticed in the

chapter on strictures ; it will be sufficient here to remark, that this mode of treatment could seldom be adopted with advantage in cases that are at all favourable for the application of the ligature ; and that when the tumour is of a cancerous nature, or it is very soft, painful when touched, and disposed to bleed, pressure is always injurious.

THE END.

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The next chapter contains a description of the various kinds of stricture, and a method of treating them.

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