On diseases of the rectum / [James Syme].

ON

DISEASES

OF

THE RECTUM.

BY

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PREFACE.

THE Diseases of the Rectum are very frequent in their occurrence, and derive additional interest, from the distressing symptoms which they occasion, as well as the relief of which they admit from the resources of surgical art. It may be added, that the mystery and concealment connected with their situation not only favour the deceptions of empirical practitioners, but also encourage the proceedings of wrong-headed operators, who prefer the most painful and dangerous means of treatment to those which are easy and safe.

On these accounts, it is desirable that this department of surgery should be thoroughly understood by the members of the profession, and that its leading principles should be placed prominently before them. The Diseases of the Rectum have accordingly been made the subject of many treatises expressly devoted to their consideration, and

it may seem unnecessary for me to increase the number of these productions. But the progress of modern pathology and surgical practice has introduced many improvements that have not yet been fairly brought together, and explained in their application to the management of those complaints which are at present more particularly in view. I have attempted to supply this defect; and, by a plain statement of the seat, nature, symptoms, and treatment of the different affections which are met with at the extremity of the rectum, endeavoured to assist practitioners in discharging their duty to the patient, and to protect patients against unprincipled or reckless practitioners.

It was not my wish to criticise the writers who have preceded me; and I have not done so except on one or two occasions, where it seemed necessary in order to explain my own meaning. From unwillingness to extend the limits of the treatise, I have not related detailed cases; but I may assure the reader that there is nothing stated which does not rest upon my own observation.

9, Charlotte Square,

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CONTENTS

CHAPTER FIRST.

CHAPTER SECOND.

CHAPTER THIRD.

CHAPTER FOURTH.

CHAPTER FIFTH.

CHAPTER SIXTH.

ON

DISEASES OF THE RECTUM.

CHAPTER FIRST.

FISTULA IN ANO.

It is not easy to perceive how the disease named *Fistula in Ano* has become so well known to the public, and why the slight incision required for its remedy is performed in the theatre of the hospital with all the pomp and circumstance of a great operation. The mere frequency of the complaint, and the unpleasant nature of its symptoms, are not sufficient to account for this; while its hidden seat and the disagreeable feelings connected with it, so far from favouring exposure, must tend to conceal the knowledge of

its existence, as well as the means employed for its treatment. In these circumstances, the interest taken in fistula, both by the profession and by the public, can be ascribed only to the well ascertained fact, that the disease does not admit of remedy except from an operation, which was formerly one of great severity, and even considerable danger.

Louis XIV. suffered from *fistula in ano*, and, being naturally unwilling to undergo the operation which his medical attendants assured him was necessary, listened to various proposals for curing the disease without having recourse to the knife. Instead of trying these methods on his own person, however, he collected a great number of his subjects who laboured under the same infirmity, and caused the proposed experiments to be tried on them. Some of them he dispatched to the waters of Bareges, others to those of Bourbon, and many more he shut up in rooms provided with everything

that could be suggested for the purpose in view. At the end of a year, finding that not a single patient had been cured, his Majesty yielded to necessity, and permitted his surgeon, M. Felix, to perform all the incisions which he judged proper.

We have here a striking illustration of the necessity of the operation; and the importance attributed to its performance as formerly practised, may be estimated from the number of medical men who were present on this occasion, together with the amount of their remuneration. Besides the surgeon and assistant-surgeon, there were two physicians, four apothecaries, and an apprentice, and the sum total of their fees was L. 14,700.*

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* M. Felix, 50,000 Crowns = L. 6000.
Dr Daquin, 100,000 Livres = L. 4000.
Dr Fagon, 24,000 do. = L. 1000.
M. Bessiere, 40,000 do. = L. 1500.
Four Apothecaries, (each 12,000 do. = L. 500) L. 2000.
M. Raye (apprentice to M. Felix) 400 Pistoles = L. 200.
Dionis, Course of Surgical Operations, p. 228.

The inefficacy of all remedial measures except the knife for curing fistula still remains unquestioned, unless by inaccurate observers or unprincipled empirics; but the extent to which it must be employed is now happily ascertained to be greatly less than was formerly supposed, and, through progressive improvement, it has been at length circumscribed within such narrow limits as hardly to deserve the serious title of an operation. In order to trace the steps which led to this important result, and to understand the true principles of treatment which have been finally established, we must consider the origin of fistula, the causes that give rise to it, the symptoms attending it, and the circumstances which impede its spontaneous cure.

In the first place, a collection of matter is formed under the integuments of the hip near the anus, and usually to one side of it. This deposition sometimes occurs quickly, with heat, redness, and pain of the part, at

other times slowly and insidiously, without any sign of inflammatory action, so that the first circumstance which attracts attention is a flat and ill-defined swelling that results from the presence of the fluid, together with thickening of the adjacent cellular substance. In whichever of these ways the abscess is formed,—and every variety is met with, from the rapidity of a few hours to the slowness of as many months,—the matter, if left to itself, sooner or later, by inducing absorption of the neighbouring textures, makes a way for itself to the surface. But as it is situated between the skin of the hip and the mucous coat of the rectum, it may effect evacuation through either the one or the other of these coverings. In conformity, however, with the general law as to progressive absorption occasioned by the pressure of matters foreign to the healthy constitution of the body, it most frequently escapes by an aperture through the external integument. This opening is usu-

ally very small, often hardly perceptible, and if the cavity be examined after its contents have been discharged, the mucous membrane will be found almost completely denuded, to a small part of its extent, at the distance of an inch or a little more from the anus. As the matter to get into this situation would, if originally deposited externally to the sphincter, have to penetrate between the muscular fibres, its formation probably takes place in the vicinity of the inner coat of the bowel, whence it proceeds outwards, overcoming the obstacles opposed to its progress in this direction, instead of pursuing an inward course, in opposition to the general tendency which leads to the external surface of the body.

If the patient has been previously in pain he feels comparatively well after the matter is evacuated, and may suppose that he is to recover without any farther trouble. But the cavity of the abscess, though it contracts, does not become obliterated; the discharge

continues of a thin and watery consistence; and the orifice acquires a still greater degree of straitness, at the same time generally projecting from the surface of the skin in the form of a small pimple-like protuberance, at the summit of which it is situated. This appearance is owing to an effusion of organizable matter round the opening, in consequence of the continued irritation which is caused by the discharge passing through it. From the same cause the sides of the sinus acquire an increase of thickness and density so as to assume the condition which in surgical language is designated fistulous. If the disease be still permitted to pursue its course unchecked, a small aperture is sooner or later generally formed also through the thin denuded part of the mucous membrane of the rectum. It may seem surprising that this second opening should be formed after the matter has procured vent elsewhere; but there can be no doubt as to the fact, and it agrees

completely with what is observed to happen in the case of abscesses situated in the neighbourhood of the urethra, which, after their evacuation, whether spontaneous or artificial, often discharge purulent matter alone for a time, and then urine also.

It happens sometimes, but very rarely, that an aperture is formed in the first instance through the mucous lining of the gut. This constitutes what has been called a Blind Internal Fistula. The other two conditions that have been mentioned are named the Blind External, and the Complete Fistula. The history of the case, especially the existence of pain and tension in the vicinity of the anus subsiding after a discharge of matter from the bowel, the continuance of such a discharge, and the presence of a flat induration in the hip, with softness and depression in its centre, are the signs which lead to the detection of this form of the complaint. However long the fistula may be permitted to continue, no more than

one internal opening is formed, but through the occurrence of successive abscesses, the external apertures are occasionally multiplied, and sinuses extend into the hip as well as the perineum.

Causes of Fistula in Ano.

The process which has been described as leading to the formation of *fistula in ano* occurs in both sexes, and at every time of life, but is out of all proportion more frequent in males than females, and is comparatively rare before twenty or after sixty years of age. I have operated repeatedly on children for this disease, and more than once on infants only a few months old ; but, so far as I can recollect, in one instance only beyond the age of seventy.

The circumstances which occasion the disease act either by exciting a predisposing liability to it, or by directly calling it into existence. Of the former may be particularly mentioned chronic derangement of

the lungs and digestive organs, especially the lower part of the intestinal canal. And of the latter the most important are constipation of the bowels, sedentary occupations, and exposure to cold. It is difficult to trace the connection between pulmonary complaints and *fistula in ano;* but no point in pathology is better established than that there is such a connection; and attention is not unfrequently first drawn to the phthisical condition of a patient by the disposition that he shows to suffer from the disease in question; whence it has sometimes been erroneously supposed that the discharge of the fistula brings on the disease of the lungs. As the great intestine is generally found ulcerated in the bodies of those who have died from consumption, it seems probable that the morbid state of this part, and not that of the lungs, is the exciting cause of fistula, but the disease certainly does occur in cases of pectoral affection, which exhibit no symptom of intestinal disorder. Most fre-

quently the cause of the disease cannot be precisely ascertained, and the patient is often not aware of its presence until he happens to notice the discharge of matter which proceeds from it. Among the causes of fistula are sometimes reckoned disease of the bones of the neighbourhood, as caries of the sacrum, or exfoliation of the denser osseous texture which composes the arch of the pubes. But the fistulous orifices in the vicinity of the anus originating from this source, are not properly classed with a disease which exists independently of any other local cause than its own peculiarity of position. They cannot be remedied by the same means as *fistula in ano*, and, if remediable at all, require different treatment.

Symptoms of Fistula in Ano.

Uneasiness about the anus, with a more or less copious discharge of thin purulent matter, staining the linen, and otherwise annoying the patient, are the most constant symp-

toms of the complaint. The occasional escape of flatus and mucous fluid from the rectum, are generally superadded in the case of a complete fistula. But the passage of feculent matters through the preternatural channel, though often mentioned as a part of the inconvenience experienced, does not usually take place, and indeed is never met with, except when the disposition to the disease is very strong, as in confirmed phthisis, in which case the aperture of the fistula, external as well as internal, instead of being small and circumscribed by effusion of organizable lymph, is large and flabby. Besides the exudation from the fistula, and more or less uneasiness about the part, especially in going to stool, people of much sensibility are farther distressed by a feeling of weakness and imperfection, which renders their existence almost intolerable. There are other persons of a less sensitive constitution, who, giving themselves no concern about the disease beyond its obvious effects, are able for

a long while to endure the discomfort which it occasions. As an instance of this, I may mention the case of a gentleman between fifty and sixty, on whom I operated for a complete fistula with two external openings, which had existed for thirty-five years. As has been already observed, the orifice of the sinus is usually very small, and, though generally rendered more manifest by being elevated above the surrounding surface, it still not unfrequently escapes the notice of the patient, who supposes that the discharge issues from the anus. Even the surgeon sometimes experiences difficulty in detecting the disease from this source of obscurity; and I once operated upon a gentleman for a complete fistula, after he had been assured by an eminent physician, who carefully examined him, that there was no morbid affection whatever in the neighbourhood of the rectum. The fluid which is discharged varies both in quantity and quality, being at one time thin and watery, at

another thick and purulent. It is often so scanty and limpid, that obliteration of the cavity seems about to be accomplished. But sooner or later the flow is increased; perhaps a new abscess forms, leaving another orifice; at all events, the fistula remains as obstinate as ever, having no limit to its existence except an operation.

When the fistula opens into the gut, more or less flatus and mucus must pass through it, owing to the resistance which the sphincter muscle opposes to their exit by the anus, and thus adhesion or contraction in the surface of the sinus will be effectually prevented. But when the fistula is not complete, the reason why it should not heal like a sinus in any other part of the body is less apparent. The mere laxity of the texture, or any other peculiarity in the nature of the part concerned, is not sufficient to account for this, since suppurating cavities in the neighbourhood of the rectum are known to heal very kind-

ly and readily, as for instance that which results from the operation of lithotomy. When the sinus, as it almost always does, penetrates between the fibres of the sphincter, the obstinacy in question may be ascribed to the frequent motion and separation of the sides of the cavity, which must result from the action of the muscle. But even this obstacle to recovery is not always present, since the fistula sometimes lies quite superficially under the skin and mucous membrane, without passing through the muscular fibres at all. In such cases it seems most probable that the detached and denuded state of the mucous coat of the gut impedes the healing action.

Treatment of Fistula in Ano.

It appears from the records of surgery, that the treatment of *fistula in ano*, until within the last hundred years, was extremely complicated and severe. The induration surrounding the walls of the sinus being at-

tributed to a peculiar morbid action resident in the part, it seemed to admit of no remedy except by destruction or removal ; and the cavity itself was thought to require complete division of the gut throughout the whole of its extent affected, with subsequent dressings of the most careful kind. In conformity with these principles, we find that after the patient had been prepared by bleeding, purging, and regulated diet, corrosive sublimate or other powerful escharotics were introduced into the fistula, so as to bring away a slough in the form of a cylinder ; that pieces of gentian root or sponge tent were next inserted to dilate the cavity, and, by thinning the partition between it and the gut, facilitate the third step of the operation, which consisted in dividing the septum to its farthest extent ; and that until the cure was completed, various carefully medicated dressings were daily introduced. Such being the established principles of practice, different practitioners followed out

the objects which they kept in view by a variety of methods. Some, instead of the slow and uncertain action of caustic, employed a knife for removing the callosities, either scooping them out at once, or cutting freely through them in several directions, so as to inflict what was deemed sufficient injury to insure their destruction by sloughing or suppuration. Some divided the septum between the gut and sinus by means of knives, or scissors, or apparatus contrived for the purpose, such as what was called the probe-razor ; and others thought it better to transfix the gut with a needle, so as to include the partition in a ligature of thread or lead wire.

The treatment thus conducted was not only tedious and painful, but often attended with alarming consequences. Inflammation and constitutional disturbance were apt to follow, and the extensive incisions practised for the removal of callosities, or divid-

ing the septum of a deeply penetrating sinus, frequently occasioned very formidable hemorrhage, as well from its amount as the difficulty of arresting it. The cure, moreover, was not always complete, a discharge of matter occasionally still continuing, in consequence of the deep wound not healing at the bottom; and we have the testimony of many authors who wrote at the period referred to, that the effect of freely cutting out the diseased parts was frequently so injurious, or rather destructive to the sphincter, as to occasion constipation, and what was equally distressing, though at first sight hardly compatible with it, incontinence of the bowels, their solid contents being retained, and the fluid involuntarily expelled. It is no wonder, then, that *fistula in ano* came to be regarded as a complaint meriting the most serious apprehension of the patient.

In 1765, Mr Pott published an excellent treatise on the disease, in which he reprobated the practice of destroying the callo-

sities by caustic, and cutting them out with the knife, which proceedings he considered equally unnecessary and hurtful. He pointed out that the cavity of the abscess, and consequently that of the fistula, resulted not from a loss of substance in the part, but merely from distension of the texture, in which suppuration took place, and that the callosities or surrounding induration proceeded not from any new formation, but from induration of the cellular and adipose textures bounding the cavity. On these grounds, he maintained that, in order to effect a cure, it was not necessary either to take any thing away, or to use means for promoting the growth of new substance; that all really required was to relieve the parts concerned from the continued irritation, which caused and kept up the callous thickening; and that this object could be attained most certainly by simply dividing the septum, "so as to lay the cavities of the gut and abscess into one," abstaining from all

escharotic or irritating applications, and using the mildest dressings. For performing the operation, he recommended a blunt-pointed curved bistoury, as the easiest and most manageable instrument.

The soundness of Mr Pott's principles, the forcible language in which they were expressed, and the authority derived from the public field where he exhibited their practical application, produced a strong impression on his professional brethren, and the treatment of fistula has ever since been in a great measure free from the objectionable practices formerly in use. As was to be expected, however, many practitioners clung to the methods in which they had been educated; and even in the present day there are some who, whether from imbibing the bad example thus transmitted to them, or from an unhappy peculiarity of judgment, still prefer the old and unjustifiable process of excision. Fifteen years ago, I saw an eminent professor of surgery in Paris cut out the fistula;

and I understand that he continues to pursue this practice. About eight years ago, a middle-aged woman came under my care in the Surgical Hospital, on account of a recto-vaginal fistula, and stated that her complaint commenced with a *fistula in ano*, for which she had had an operation performed by the surgeon of a provincial hospital, who cut something out, and laid it on the table, since which there had been a communication between the rectum and vagina. Last year, a gentleman from the north of England applied to me on account of some unpleasant consequences resulting from an operation, or rather series of operations, to which he had been subjected, on account of *fistula in ano*. His principal complaint was inability to retain the contents of his rectum, which, notwithstanding the resistance of a carefully constructed bandage, were wont to be suddenly and involuntarily discharged, so as to cause great discomfort, and constant apprehension. Though prepared

to find something far wrong, I was not less surprised than shocked, upon inspecting the seat of the disease, to see no appearance of the anus, but instead of it a deep excavation, at the bottom of which the mucous coat of the bowel presented itself to view, completely divested of the sphincter. From these and other facts of the same kind that might be mentioned, I fear it must be concluded, that the plan of excision is still not entirely abandoned; but, feeling assured that those who persist in adhering to it, notwithstanding all that has been said and written on the subject, would not have their views altered by any argument in my power to use, I shall leave them to follow the progress of improvement at their own leisure, and shall proceed to explain some important steps that have been established in advance of Mr Pott's practice.

It had been noticed by Sabatier and other good surgeons, that the internal opening of a complete fistula was generally seated near

the orifice of the anus. But in 1820, M. Ribes had the merit of showing* that it was always so situated, never exceeding the distance of an inch and a quarter, and often lying considerably nearer the skin. The importance of this observation will appear when it is recollected that the operation requires division of the parts intervening between the two openings of the fistula; since, unless the internal one be sought for in the proper place, it may escape detection, and thus not only occasion an unnecessarily high section of the septum, but, from not being included in the incision, lead to a continuance of the disease. When the internal opening is sought for at the summit of the sinus it cannot be found, so that the fistula is apt to be supposed incomplete or blind external; and M. Ribes, avoiding this error, ascertained that an internal aperture existed much more frequently than had formerly been supposed. He went indeed into the opposite extreme, contending that it

* Quarterly Journal of Foreign Medicine and Surgery. 1820.

was present in every case requiring the operation, and accounting for its constancy by attributing the origin of the disease to ulceration of the mucous coat of the gut. But I have already stated that the abscess which gives rise to fistula is very generally discharged outwards in the first instance; and every attentive practitioner must have remarked that an internal orifice is very seldom met with in recently formed fistulas; which facts are quite inconsistent with this theory of M. Ribes.

I have ascertained farther, that, in those cases where an internal aperture does not exist, the mucous membrane at the part in which it would be situated if present is not only denuded, but rendered so thin that the perception of a probe through it is hardly less distinct than if it had entered the rectum; and that, if the incision extends to this point, the cure will be no less certain than if an opening into the gut had existed.

In regard to the importance of the prin-

ciples thus established, I may, in the first place remark, that, limiting the incision within the narrow bounds that have now been mentioned, lessens not only the difficulty of its performance, and the suffering of the patient, but also the risk of hemorrhage, and the trouble of after treatment; since, instead of having to keep separate the edges of a deep and not easily accessible wound, the surgeon has merely to prevent adhesion between the lips of a superficial cut. But the operation, while thus simplified in its performance, is also rendered more certain in its effect, since in cases of complete fistula the most extensive incisions will fail to afford permanent relief, unless they include the internal opening. I have very frequently operated on complete fistulas that had been looked upon as blind external, from the internal orifice having escaped detection through unacquaintance with its position; and the repetition of operations for the disease, which are so frequently heard

of in practice, are no doubt referable to this mistake.

In the reports of surgical cases which I have published from time to time since the year 1829, and also in the systematic work on Surgery, of which the first edition appeared in 1831, I have endeavoured to explain and impress these principles which have been uniformly acted upon in my own practice. They are still, however, far from being generally adopted, and many writers of the highest authority continue to inculcate the practice of Mr Pott. Sir A. Cooper says,* "if the fistula does not open into the intestine you must pass the instrument (a bistoury) up the sinus till it reaches the extremity."—"A very copious hemorrhage generally follows the division of the septum," &c. Mr Copeland says, "In this operation, though there are no vessels of very considerable size in danger of being wounded, yet, when the sinus extends far up the side of the gut, a hemor-

* Surgical Lectures, p. 425. 1837.

rhage now and then takes place, either at the time of the operation, but more usually a few hours after it, which, if it be not important from the magnitude of the divided artery, becomes often so from the difficulty, perhaps impossibility, of securing it by a needle and ligature."—" I will venture to say, that it (the hemorrhage) has occurred to almost every surgeon who is in the habit of performing the operation."—" After many unsuccessful attempts to secure a bleeding vessel under such circumstances, I once accomplished it by introducing a blunt gorget into the rectum; and, by keeping the gut thus dilated, I was enabled to see the orifice of the bleeding artery and to secure it."* Mr Liston says, " Some con-

* The bad effects of dividing the septum to its farthest extent are well illustrated by the following case which Mr Copeland has given.

" A carpenter, about thirty years of age, had the operation for *fistula in ano* performed on him in the year 1803. There were two extensive sinuses in the nates divided; but the principal one extended above three inches up the side of the gut, and then perforated it; this also was laid open. There was considerable hemorrhage at the time of the operation; but the patient fainted, and the bleeding stopped; and, when the wound

tend that fistulæ are always complete, that they commence from within, and that the internal opening is always at one particular point; but such, according to my experience, is very far from being the case."—"Having reached the extreme depth of the canal, the direction of the instrument's point is changed, so as to apply its cutting surface to the coats of the bowel at that part." *

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was dressed, he went to bed. After he had been in bed about an hour, the hemorrhage returned, and the bleeding artery was so high up the sinus, as to be entirely out of the reach of the needle and ligature; the gut, therefore, and the wound, were filled up with compresses of lint, wet with spirit of turpentine; and, for some time, it was thought that this mode of compression had succeeded in stopping the hemorrhage; but, during our fancied security, his pulse became hardly perceptible, his lips pale, and the whole of the body was in a cold sweat. He was now supported by wine and other cordials; and, in a short time, the hemorrhage burst out again, with as much violence as ever, and continued for more than an hour. All the compresses were now removed, the rectum cleared as much as possible of coagulated blood, and the wound left without any dressings. The hemorrhage stopped, and did not return again; but very large quantities of coagulated blood were evacuated with the feces for three days afterwards. He was, as may be supposed, extremely debilitated by this loss of blood, but finally recovered his strength, and his fistula was dressed, and cured in the usual way."—On Diseases of the Rectum and Anus, pp. 159–161. 3d edition.

* Elements of Surgery, Vol. iii. pp. 70–82.

If the case be as I have stated it, the opinions and practice of which these quotations afford a specimen must tend to occasion great unnecessary suffering; and, therefore, believing that I have not in any respect exaggerated the benefits which are derived from the principles at present advocated, I think it right once more to state them.

1. In complete fistula, the internal opening does not lie farther from the anus than an inch and a quarter, and is frequently much nearer to it.

2. In external fistula not communicating with the gut, the mucous membrane is denuded and attenuated at the part where the opening would be if there were one.

3. In performing the operation it is merely necessary to divide the parts lying between the external and internal apertures, or denuded part of the mucous coat corresponding to the latter.

4. In the after-treatment it is not necessary to interpose any dressing between the

edges of the wound beyond the first forty-eight hours.

Having thus endeavoured to explain the pathology and treatment of fistula in general, I may now consider more particularly the different stages of the complaint.

When the formation of matter in the vicinity of the anus is threatened by the occurrence of pain, hardness, or swelling of the part, it is usual to abstract blood locally by leeches or cupping. Some relief may thus be generally obtained,—but the improvement is neither complete nor permanent, and the progress of the complaint, though it perhaps becomes more slow, is not less troublesome,—being rendered sluggish and unmanageable. The application of heat and moisture by means of the hip-bath or fomentations has a very soothing effect on the patient's uneasy feelings, and accelerates the termination of his complaint, either by inducing resolution of the inflammatory action, or promoting suppuration. Evacua-

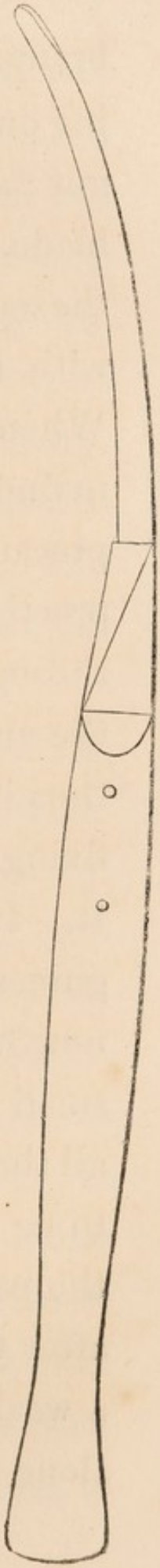
tion of the bowels should be facilitated by the administration of gentle laxatives, such as castor oil, and injections of warm water into the rectum ; and the patient must confine himself to the horizontal posture, as well as the antiphlogistic diet, with strictness in proportion to the acuteness of his symptoms.

So soon as fluctuation can be perceived, it is considered right to evacuate the matter, which otherwise might diffuse itself into the neighbouring loose cellular texture, and lay the foundation of troublesome sinuses. The knife is now almost exclusively employed for this purpose, and a free incision is made by it from the hip towards the anus, through the centre of the undermined integuments. Poultices are then applied for a few days until the inflammatory engorgement subsides, after which the cavity gradually contracts, and the case passes into the condition of a sinus or fistula. It might be thought better to divide

the septum between the abscess and gut in the first instance, and some practitioners have advised this to be done. But it appears that recovery after the operation is not so speedy or so certain when it is performed thus early as when it is delayed until the textures affected are allowed to subside into their natural state.

In examining a case of fistula with the view of operating, the fore-finger of the left hand should always be introduced into the rectum, while the probe is guided with the other, since it is otherwise almost impossible to discover either the existence or the position of the internal opening. The probe should be slightly curved, and have its concavity turned towards the opposing finger, which is often able to detect the orifice, or rather the irregular induration surrounding it, and thus assist in directing the instrument. If there is no internal opening, the same exploration will discover the denuded part of the mucous membrane which occupies its place,

and equally with it determines the limit of the incision. As the fistula is situated most frequently on the right side of the anus, and very rarely either behind or before it, the most convenient position in general is stooping forward, with the arms resting on a table or chair. But when the orifice happens to be on the left side, unless the surgeon is ambidexter, the patient should be placed on his back with the limbs elevated.



In performing the operation, the knife here represented will be found the most easily managed. It is narrower in the blade, particularly at the point, and less curved than the bistouries in common use. It should be gently insinuated up along the fistulous canal, while the operator's finger in the rectum assists in guiding its direction, and passed through the internal aperture if there is one, or pushed through the mucous mem-

brane if it still remains entire; the point, resting on the finger, is then brought out of the gut; after which, by a sawing motion of the blade, or a steady movement of it forwards, the septum is divided almost instantaneously with little pain, and hardly any bleeding. When much difficulty has been experienced in finding the internal opening, it is a prudent precaution, especially for a surgeon not much practised in the operation, to push the probe through the sinus, and bring its point out at the anus, before using the knife, since it is thus impossible to miss the orifice by transfixing the thin membrane which surrounds it. If any sinuses extend under the integuments of the hip or perineum, they should now be laid open with the knife, and then small pieces of dry lint are placed between all the cut edges. This dressing will require to be renewed on the following day, when the patient's bowels have been moved, and after this a pledget of lint, moistened with a weak solution of sulphate of zinc, or water alone, and covered with a piece of oiled silk,

to prevent it from drying, may be placed over the wound until the cure is completed. A T bandage, or couple of handkerchiefs put on in this form, will enable the patient to keep the dressing applied without confining himself to the horizontal posture, which beyond the first day or two is quite unnecessary. Great attention to cleanliness will be required, and frequent ablution with soap and water contributes not only to comfort but also to a speedy recovery.

What has now been said relative to the treatment of *fistula in ano* applies to those cases of the disease that admit of remedy, which fortunately constitute a large proportion of the whole. But before determining to operate, or holding out the probability of relief from doing so, it is necessary to ascertain that no obstacles exist likely to frustrate the surgeon's efforts, and defeat the patient's hopes. The most common of these opposing circumstances is a phthisical condition of the patient, which, as has been already observed, powerfully predisposes to

the disease, and in the event of an operation being performed, is apt either to impede the healing of the wound, or lead to relapse through the formation of new abscesses. Any tendency to this condition, therefore, should render the prognosis in respect to an operation more or less unfavourable, though its performance cannot always with propriety be declined. Patients after exhibiting symptoms of pulmonary disease frequently recover so as to live for many years nearly or altogether free from complaint; and while the issue of their principal disorder is thus uncertain, it would be wrong to withhold the chance of recovery from the minor one, which often occasions more anxiety than the other. The refusal to operate also requires a very painful explanation; and the slight incision which has been shown to be all that is necessary for curing the disease, if it has not this effect, at least makes the patient more comfortable, by lessening the irritation of the parts concerned,

and moderating the discharge. In these circumstances, unless the fatal disease is so far advanced as to render surgical interference improper, though the operation for fistula may not with prudence be proposed or urged in consumptive cases, it may be performed if requested by the patient.

Fistulous openings near the anus, and leading into the rectum, sometimes communicate also with the urethra. The origin of this complicated form of the disease is an abscess situated between the prostate gland and perineum, which, from not being evacuated early by incision, discharges its contents into the urethra and rectum, before overcoming the resistance to an outward course, which is opposed by the fascia of the perineum; and when at length openings do take place in the skin, they are usually situated at the verge of the anus and root of the scrotum. Flatus and thin feculent matter escape by the urethra, urine issues from the rectum, and a copious fetid discharge proceeds from the external orifices The patient

suffers great and unceasing distress, and, unless relieved by efficient treatment, ultimately sinks under the continued irritation and exhaustion.

These formidable consequences of allowing the abscess to open spontaneously render it incumbent on the surgeon to be careful in recognizing the disease at an early period, and giving free vent to the matter, by an ample incision through the integuments and fascia of the perineum. The disease is generally induced by exposure to cold. It commences with pain in the region of the prostate gland, aggravated by micturition and going to stool, and is attended with more or less fever. When the matter begins to accumulate, difficulty is experienced in voiding the urine, sometimes to the extent of complete retention, and requiring the catheter to be introduced. The patient may continue in this state without any alteration, except the occasional occurrence of rigors, for eight or ten days or even longer, until the fluid makes a way for its escape.

The perineum when examined is found to be fuller than natural. But, as the integuments retain their ordinary colour and consistence, this change may readily escape observation ; and fluctuation, owing to the depth of the abscess, can hardly be perceived, unless the finger is introduced into the rectum, through the coats of which the fluid is easily felt. I have frequently been asked to draw off the water when obstructed in this way, without any suspicion having been excited as to the cause of difficulty, and have known the practitioner first take alarm from observing that the catheter contained pus. Examination by the rectum, together with the history of the case, will leave little room for doubt as to the existence of matter. But if there should still be any uncertainty, it will always be right to make an incision in the perineum, since this can do no harm, and the withholding of it exposes the patient to the danger of all the distressing consequences that have been mentioned, as resulting from spontaneous evacuation of the abscess.

When the disease has advanced to its fistulous state, it is necessary to lay open all the sinuses; and even then the recovery is not always speedy or complete. The operation should be commenced by dividing the septum between the gut and the cavity left by the abscess. For this purpose the knife is introduced into the orifice which lies nearest the verge of the anus, guided upwards until it enters the gut, and then carried outwards through the septum, which in this case is generally more extensive than in an ordinary fistula, from the internal orifice being seated higher, even above the inner sphincter. The sinuses which extend between the anus and scrotum are next to be laid open, and then pieces of dry lint are inserted between the cut edges. The deep incisions which are sometimes required expose the patient to the danger of hemorrhage; and if there should be any appearance of this the bleeding vessels are if possible to be tied, or cold applied to the

wound while the hips are elevated, which means seem far more effectual than pressure, owing to the looseness of the textures concerned. After the cure appears to be complete, a very small fistulous communication is apt to remain between the urethra and rectum, allowing a few drops of urine to pass occasionally. If this does not close within a moderate time, or proves annoying to the patient by exciting his alarm, a red-hot iron wire should be introduced into the orifice, exposed by a speculum, as often as may be necessary for inducing contraction and obliteration of the slender canal. In all cases of this kind, especially those which have been long established, it is proper to search the urethra and rectum for stricture; since this additional complication is not unfrequently met with, whether as a cause or consequence of the fistula it is not always easy to determine.

Fish bones and other bodies of a similar form are occasionally arrested in their

passage through the alimentary canal by the *sphincter ani*—and may then penetrate the coats of the gut, so as to cause the formation of an abscess, which of course will not admit of being healed so long as the irritating substance remains. It is only by examination with the probe or finger that this complication can be discovered—the patient seldom being aware of having swallowed any thing improper, or at all suspecting the cause of his complaint. When the nature of the case has been ascertained, the fistula should be laid open in the ordinary way, and then if necessary more extensive incisions may be made to permit extraction of the foreign body without violence, or tearing of the surrounding parts.

Fistula in ano is sometimes found associated with stricture of the rectum, and in this case has been attributed to the resistance which is opposed to the passage of the contents of the rectum by the preter-

natural contraction of the gut. If so, the orifice ought to be situated higher up than the stricture, instead of which it occupies the usual position, about an inch from the anus. The explanation thus afforded, therefore, cannot be received, and we must suppose that, if the stricture has any share in causing the fistula, it must act merely by exciting irritation in the neighbourhood. In regard to the performance of the operation, the presence of a stricture does not require any deviation from the usual course of proceeding; but the recovery of the patient will of course depend upon the practicability of restoring the rectum to its natural capacity and texture.

The abscesses which result from the *Morbus coxarius*, or hip disease in its advanced stage, frequently open in the hip in its lower and back part—but those which proceed from caries of the sacrum, and those connected with exfoliations from the ischium

or pubis—discharge their contents near the anus, so as to present the appearance of ordinary fistula at this part. It is obvious that, if the sinus depends upon caries, it will not be benefited by any extent or number of incisions, and that if it leads to an exfoliation, the detached portion of bone must be extracted as an essential step to recovery. About ten years ago I was asked to see a young man who had suffered several operations for what was supposed to be fistula, without obtaining relief, and had at length become exhausted beyond the hope of recovery. A careful examination led to the discovery of an exfoliation lying inclosed in a capsule of cartilaginous firmness, formed by the origins of the flexor muscles of the knee, from the tuberosity of the ischium. After its extraction, the patient quickly recovered, so as to marry and have a family. I lately saw a young woman who had suffered from *fistu-*

la in ano for five years, and wished to have the operation performed. On introducing the probe I felt it grate past a hard surface, and extracted a thin scale of bone, which had probably been detached from the arch of the pubis, as she attributed her complaint to a strain sustained in hastily descending from the top of a coach.

CHAPTER SECOND.

HEMORRHOIDS.

The expression Hemorrhoids, in the meaning usually applied to it, comprehends various tumours which grow at the verge of the anus. It thus denotes a disease of more frequent occurrence than perhaps any other to which the human body is subject, very few people especially in the higher ranks of life being entirely free from it in one form or another. The morbid swellings do not all possess the same constitution and characters, but differ in both respects so widely, as to require being divided into three distinct sorts. In the *first* place may be mentioned those which depend on enlargement of the veins at the extremity of the rectum,—*Secondly*, those termed External Hemorrhoids formed by enlargement of

the thin skin and subjacent cellular texture, which, lining the orifice of the gut, and connecting the mucous membrane of the bowel with the external integument of the body, though naturally seated neither within nor without the sphincter, projects beyond it when distended by inflammatory engorgement,—*Thirdly*, those which consist of a vascular development of the mucous membrane, constituting tumours that possess a great tendency to bleed when protruded without the anus. They do not occupy this position except in consequence of the expulsive efforts employed in evacuating the bowels, and so soon as these cease to operate, or pressure is applied externally, return into their proper place within the sphincter, whence they are named Internal Hemorrhoids. Before particularly considering the structure, symptoms, and treatment of these tumours, it will be proper to inquire generally into the circumstances which determine their formation.

Causes of Hemorrhoids.

When the bowels are evacuated, more or less of the lining membrane of the anus is everted, and distended by the resistance which is then opposed to its venous circulation. Constipation, by rendering the expulsive efforts more continued and laborious, must increase this effect, and tend to produce permanent enlargement of the protruded part. But constipation usually depends on errors of diet or regimen, particularly redundant nourishment, and deficient exercise, causing derangement in the healthy action of the digestive organs, that not only leads to irregularity in the evacuations, but likewise, through the medium of constitutional disturbance, proves a fruitful source of local disease; and as the parts about the extremity of the rectum are in such circumstances, as has just been explained, exposed to more

than usual irritation, it is not suprising that they should frequently become the seat of morbid action. The disease being once established, will promote its own increase by impeding evacuation of the bowels, and from the pain as well as hemorrhage attending it, deranging the healthy action not only of the digestive organs, but likewise of the whole system. Pregnancy, enlargement of the liver, and other abdominal tumours, will, by opposing a free return of blood from the pelvis, favour the production of hemorrhoids, especially those which depend upon a varicose state of the veins. In addition to the exciting causes which have been mentioned, it would appear that a predisposition to the disease frequently exists, since in some people it is induced much more readily than in others. Persons thus prone to the complaint occasionally suffer from it at the age of puberty; but it seldom proves troublesome until the frame is fully de-

veloped, and is generally most distressing from the age of 20 to 50.

Venous Hemorrhoids.

The lower part of the rectum is supplied with numerous veins lying under the mucous membrane, through which they may be readily distinguished. These vessels in the neighbourhood of the anus are liable to varicose enlargement, and then present the appearance of irregular tumours encroaching on the cavity of the gut. They extend for an inch or two above the anus, but hardly show themselves beyond it, unless the nates are held aside, when they may be seen projecting from the sides of the orifice. They possess a dark colour, smooth surface, circumscribed form, and tense consistence. The veins thus altered are liable to inflammation of the same subacute kind to which the varicose *vena saphena* is subject. In this state they become larger, harder, and excessively painful, es-

pecially when in the slightest degree compressed, so that sitting and evacuating the bowels occasion great distress. The blood circulating through them frequently coagulates during such attacks; and if it subsequently undergoes absorption, a spontaneous cure may be accomplished. At other times suppuration ensues in the surrounding cellular substance, and may thus lay the foundation of *fistula in ano*. A discharge of blood also occasionally proceeds from ulceration of the enlarged veins, just as happens in the leg.

This form of the disease has attracted more attention than either of the others, and has even been supposed to be the sole cause of hemorrhoidal swellings. In a slight degree it is certainly very common, and to this extent frequently exists, along with enlargement of the neighbouring textures; but without such combination it rarely attains sufficient size to produce much inconvenience, or attract the patient's

notice. The situation of the visible part of the tumours, neither within nor altogether without the sphincter, together with their form, consistence, and colour, render their recognition very easy. In regard to the treatment, the tendency of the venous tissue to resent irritation forbids any operation; and excision as well as puncture, which have been recommended, should both be carefully avoided, lest they excite inflammation of the enlarged vessels, and give it the unmanageable character which distinguishes it when of traumatic origin. Soothing measures are the most useful, such as rest in the horizontal posture, gentle laxatives, as castor oil, injections of tepid water into the rectum, and the hip-bath. When the symptoms are severe leeches may be placed round the anus, opiate injections should be employed, and lotions, containing acetate of lead with opium, applied to the inflamed parts. By these means the paroxysm is subdued in the course of a few hours, or days at the farthest;

and by care afterwards in guarding against the causes of excitement, future attacks may either be prevented or rendered less distressing.

External Hemorrhoids.

The thin skin which connects the internal mucous and external cutaneous covering at the anus, like the same texture in other situations as the lip and prepuce, is liable to swelling, from distension of the loose cellular substance which lies under it. Any irritation in the vicinity may occasion this; and the derangement once induced contributes to its own increase, by causing protrusion of the affected part beyond the sphincter, when, the circulation being impeded, the tendency to inflammatory engorgement is promoted. A tense red tumour, or series of tumours, may now be seen at the margin of the anus, easily distinguishable from varicose veins in the same situation, by their florid colour, pyriform

shape, and more yielding consistence. In other respects the symptoms are nearly the same. The inflammation usually terminates in resolution, but sometimes leads to suppuration, and also, though very rarely, proceeds to mortification. When the engorgement attending the excited action subsides, the distended skin may resume its natural condition completely, but, in general, does so only partially, and remaining relaxed, constitutes a permanent pendulous fold at the orifice of the gut, always ready to resent any irritation, and swell to its former or even a still larger size.

The artificial mode of life which results from the usages of civilized society tends so strongly to the production of hemorrhoidal disease, that few people remain altogether free from it; and this form is the one which it most frequently assumes, often existing independently of any other morbid affection, and very generally accompanying other diseases of the rectum. Various me-

thods have been pursued in the treatment of external hemorrhoids; but it is needless to mention any other than excision, since this is undoubtedly the best mode of removing them. Scissors curved to one side will be found the most convenient instrument for the purpose, and may be employed either alone, or with the assistance of a hook to steady the tumours during their separation. The operation is very easy, and attended with little pain or bleeding. It is also quite effectual. The best time for its performance is when the hemorrhoids are in a quiescent state; and it should always be insisted upon when they are present in a case requiring any other operation, since unless removed previously, or at the same time, they would be apt to suffer from the irritation, and, by adding the complication of inflamed piles, greatly increase or prolong the patient's sufferings. The blades of the scissors should be directed from the circumference towards the centre of the anus, in order to get at the root of the tu-

mours without taking away any sound skin. A piece of dry lint is the only dressing required in the first instance, and often proves sufficient, as the raw surface readily contracts and heals. If necessary, a sulphate of zinc lotion may be applied.

While the hemorrhoids are suffering from inflammation, excision may still be practised, and it should be resorted to if the patient is willing to endure the pain that attends cutting in this state, in order to get speedily relieved from the complaint. If it be thought better to delay the radical cure until the parts get into a condition more favourable for its easy performance, the same soothing means that have been already mentioned as proper in the cure of inflamed venous hemorrhoids should be employed. Unless the tumours are very tense, it is also useful to make gentle pressure on them, to unload their vessels, and promote their return within the sphincter.

As excision always affords an easy, safe, and effectual remedy for external hemor-

rhoids, it seems unnecessary to say much of the other means which have been proposed, and more or less extensively adopted. The ligature is decidedly objectionable, as being infinitely more tedious, and also more painful than the knife or scissors, without any compensating advantage. The application of astringent ointments, such as the *Unguentum Gallorum*, is very inefficient, and calculated rather to amuse the patient than to afford him any real benefit; and the introduction of bougies can hardly produce more than a little temporary relief. The best palliatives are attention to regimen, the use of gentle laxatives, such as sulphur with cream of tartar, and Ward's paste, which in all diseases of the rectum attended with relaxation has often a remarkably good effect. A portion of it, about the size of a nutmeg, may be taken twice or thrice a-day. Of local applications the ointment just mentioned, together with an admixture of opium, or subnitrate of bismuth, may be regarded as the best.

Internal Hemorrhoids.

The mucous membrane at the extremity of the rectum, immediately above the thin skin, which is the subject of the last mentioned swelling, is liable to a morbid development of its texture that gives rise to very serious symptoms. There are thus formed tumours seated altogether within the sphincter, unless when forced into view by sufficiently powerful expulsive efforts, and hence named Internal Hemorrhoids. They possess an irregularly round form, a florid colour, a granular uneven surface, and very vascular structure, so as to bleed freely from the slightest injury. They resemble a strawberry very much in appearance, and seldom existing singly, in general constitute a more or less complete annular swelling, which, when protruded beyond the anus, seems to close the aperture of the gut completely, and is surrounded by an external ring proceeding from distension of the neighbouring loose texture, which is the

seat of external hemorrhoids. The two kinds of growth are easily distinguished, not only from their difference of position, the one being seated within the other, but also by their difference of surface, the one being smooth and the other granular.

The substance of the internal hemorrhoidal tumour is so vascular and disposed to bleed, especially when forced beyond the sphincter, that it has been considered similar to the erectile tissue which composes aneurism by anastomosis and nævus. But these diseases are, with few if any exceptions, of congenital origin; while internal hemorrhoids rarely make their appearance before the age of maturity; and the vessels of the latter growth, instead of being dilated into the cellular-looking structure which composes the former, are small and arborescent. There hence does not appear to be any analogy between the two morbid structures farther than their disposition to bleed.

How this growth of the mucous membrane originates it is not very easy to explain. The circumstances which have been mentioned as accounting mechanically for distension of the veins and swelling of the lax textures at the verge of the anus, cannot operate here; and we must be satisfied with inquiring into the causes which operate less directly in producing the disease. Like other hemorrhoidal affections it occurs chiefly in the vigour of life. It is much more common in males than females, and in both sexes greatly more frequent in the higher than the lower ranks of society. Residence in warm climates, a luxurious diet, deficient exercise, and excitement of the generative organs, are the circumstances which seem to have the most powerful influence in determining its commencement, and encouraging its progress, especially when several of them operate together. Literary pursuits and a professional life, which admits or requires sedentary ha-

bits, are observed to favour the production of this morbid excrescence. It would seem, in short, that the superfluous nourishment usually acquired by persons in easy circumstances, when not expended in bodily exertion, is apt to find vent through the channel of internal hemorrhoids, into which it may be directed by the opposition afforded by a sitting posture to the free return of the blood circulating in the pelvic viscera.

The symptoms which attend this kind of hemorrhoid may be divided into three sorts, namely, painful sensations, protrusion of the tumour, and hemorrhage. Some patients complain of these inconveniences equally; others complain of them singly. But in general they are all present together, while one of them predominates by its severity, and the attention which is consequently bestowed upon it. The painful sensations are referred either to the seat of the disease itself, or to the urinary or-

gans, with which the rectum is intimately united in sympathy. The pain of the swellings is sometimes described as dull and oppressive, at others sharp and lancinating. The irritation of the urinary organs occasions uneasy feelings in the course of the urethra, frequent desire to make water, and difficulty in doing so. There is no regular proportion between the extent of the disease and the severity of its symptoms, nor is there any difference observable in the appearance of the tumours adequate to account for the variety that occurs in the nature as well as the degree of the annoyance which they occasion, and which no doubt must depend upon individual peculiarities of local or constitutional irritability. A gentleman, about 35 years of age, complained of pain at the extremity of the rectum, which was seldom entirely absent, and from which he occasionally suffered so much as to feel quite unhinged and incapacitated for any exertion either of body

or mind. On examination I could find no morbid appearance except a very small internal hemorrhoid, not larger than the point of the little-finger, the removal of which completely relieved him. The urinary symptoms are sometimes so prominent as to call attention from the true seat of the disease. A gentleman, about 50, suffered for years from excessive pain in the region of the bladder, with frequent desire to make water. He consulted a great many physicians and surgeons of eminence, and had at length made up his mind that the disease, in accordance with the opinion of a distinguished pathologist, was tic-douloureux of the bladder, when a medical friend thought of examining his rectum, and discovered several large internal hemorrhoids, which I removed to the patient's great comfort.

The protrusion of the swellings is a nearly constant symptom of the disease, and is troublesome merely in proportion to their

size. At first the tumours pass beyond the sphincter only during the forcible and continued efforts to evacuate the bowels which attend constipation; but by-and-bye they descend more readily, and return with more difficulty, requiring to be pushed up by external pressure; and in cases of old standing, where the skin lining the anus, from being frequently put upon the stretch, remains permanently relaxed, hanging in folds round the orifice, the tendency to protrusion is so great, that the hemorrhoids descend not only on all occasions of going to stool, but also whenever the patient makes the slightest exertion, or even when he simply assumes the erect posture. The protruded part is of course painful, especially when subjected to pressure, and, by soiling the patient's clothes with the mucous and bloody discharge that issues from its surface, is a constant source of vexation. A middle aged lady, whom I saw with Dr Begbie, had been confined for two years to

the horizontal posture by hemorrhoidal swellings, which descended from the gut whenever she attempted to walk or stand. After the disease was removed she could walk for miles without any inconvenience. —A gentleman, about 50, whom I saw with Dr Davidson, had suffered for upwards of eighteen years from a protrusion of this kind, and, holding an office in the courts of law, which frequently required him to sit for many hours in public, endured more distress than it is easy to describe or imagine. He was completely relieved by removal of the enlargement.—A man, about 40, from Dundee, was lately in the hospital here under my care on account of a hemorrhoidal protrusion, which had troubled him for more than twenty years, and latterly disabled him entirely for his occupation, which was that of a weaver. He returned home quite well.—Many other cases could be mentioned in illustration of the protrusion of the tumours constituting the prominent feature

of the disease. It is such cases which generally go under the title of *Prolapsus ani*, and, being supposed to depend upon weakness of the sphincter, are palliated very imperfectly by the application of bandages to support the gut. Such means of palliation are no less unpleasant than inefficient, and in some respects, indeed, may be considered as even more irksome than the disease itself. It is therefore of the utmost importance to take a correct view of the derangement, which leads to an easy, safe, and effectual remedy.

The bleeding which proceeds from internal hemorrhoids is the most alarming symptom attending the disease, and the one which occasions the most serious effects. It takes place when the tumours are protruded beyond the sphincter, and varies in amount from a few drops to several ounces. The blood sometimes seems to ooze from the surface, and at other times springs out in a jet, extending, if permitted, to the distance

of several feet ; whence it is often supposed that the patient has ruptured a blood-vessel. The quantity lost at each time of going to stool is very unequal, and varies with the condition of the patient, increasing when there is general irritation of the system or excitement of the pelvic viscera, and diminishing in circumstances of an opposite kind. For weeks or months the hemorrhage may cease altogether, and then return more vigorously than ever; but its general tendency is to increase with the duration of the complaint. At its commencement the discharge of blood may in some instances be regarded as salutary, as it occasionally seems useful in relieving other parts of the system from oppression. But when it becomes habitual and copious, besides the unpleasant feelings connected with it, very serious derangements of the system are apt to be produced. The patient loses flesh, and acquires a remarkable paleness of complexion, which is after-

wards exchanged for a peculiar dingy yellow hue, like that of imperfectly bleached wax. The lips no longer possess their vermilion colour, and resemble those of a dead body; the tongue too has a blanched appearance very characteristic of the state induced by excessive or continued depletion. These symptoms are attended with great listlessness, or want of energy both of body and mind, disturbed sleep, irritability of temper, quick pulse, and headach, which is generally increased by rising up more than by lying down. Palpitation and pain in the region of the heart, and difficulty of breathing, are also frequently induced by slight exertion or agitation of any kind.

It is obvious that the condition which has now been described must not only prove very distressing in itself, but tend to the production of other serious diseases; and, therefore, ought to be remedied with the least possible delay whenever ascertained to be present. A popular prejudice has existed

against interference with bleeding piles, on the ground that harm may arise from suddenly checking an habitual discharge; but the worst consequences thus anticipated are hardly to be dreaded more than those directly sustained from the disease; and the result of experience is quite opposed to the apprehension of harm being so produced. In illustration of the safety with which the hemorrhage may be arrested, even when of the longest standing and greatest extent, I may mention the case of a lady, whom I attended with Dr Donaldson of Ayr. At an early age she had begun to suffer from hemorrhoids, and thirty years ago had been advised by the late Mr Benjamin Bell to have them removed. This was declined, and the disease went on increasing with all the usual symptoms, until at length the bleeding, which for seven or eight years had been very profuse, so affected the general health as to excite the serious alarm of her friends. She exhibited in an extreme de-

gree the peculiar aspect and other symptoms of exhaustion caused by a continued drain of blood. But very soon after the removal of the hemorrhoidal tumours, which were large and numerous, so as to encircle the aperture of the gut, she regained her strength together with a healthy look; and though three years have now elapsed since the operation was performed, she has not suffered any unpleasant symptoms from the sudden suppression of her complaint.

The existence of bleeding from internal hemorrhoids frequently escapes the observation of the medical attendant, from the patient carelessly overlooking or wilfully concealing it. In females, the delicacy of the sex, which is an additional obstacle to discovering the disease, should excite corresponding vigilance on the part of the surgeon; and whenever there is any ground for suspecting its existence, be the patient male or female, an examination of the bowel in its most protruded state should be insisted

upon before giving any opinion of the case. It is also very necessary to beware that the symptoms, especially those connected with the circulation, do not obscure the nature of the disorder, and make it appear to depend on what are really its secondary effects. As an instance of this, I may take the case of a gentleman, about 40, an English commercial traveller, whom I saw last spring with Dr Alexander. He had laboured long under what was supposed to be disease of the heart, and been treated for this complaint by one of the most eminent provincial physicians in England. His waxy look, bloodless lips, and defective energy, together with irregular action of the heart, certainly afforded considerable ground for this opinion; but Dr Alexander discovered that there was an internal hemorrhoid, which bled profusely every time the patient went to stool, and I removed it, with the effect of quickly restoring him to health. There is reason to fear that in such cases as this the

cause has not only been mistaken for the effect, but may even have been supposed to exert a salutary influence in moderating the violence of its action,—in other words, that the flow of blood from the rectum depended upon disease of the head or heart, and was useful in lessening its force. Such erroneous views may have led to the equally erroneous practice of abstracting blood artificially in these circumstances, the effect of which may be easily imagined.

The treatment of internal hemorrhoids is generally regarded with much uncertainty and apprehension, from the conflicting opinions of practical writers on the subject, and the disagreeable results of some methods which have been pursued. Excision is certainly the quickest and easiest mode of removing the tumours, but is very apt to occasion a serious or even fatal hemorrhage. The blood does not readily escape externally, but, accumulating in the rectum, excites the desire to go to stool, and is then

voided in the form of a dark-coloured feculent-looking fluid, which may impose upon the attendants, and conceal from them the true situation of the patient. Sir A. Cooper has related the case of a Scottish nobleman who perished in this way, and several other instances of the same kind. If other practitioners had been equally candid, we should doubtless have had more testimony as to the danger of this operation; and every surgeon who has practised it must have experienced more or less alarm. Before my own views were settled as to the best means of treating the disease, I on one occasion cut away an internal hemorrhoid, which was partially protruded, and found it necessary to employ manual pressure for several hours to restrain the bleeding that followed. In another case of the same kind, I succeeded in securing the vessels by ligature. In order to obviate this danger, it has been proposed to transfix the base of the protruded part with pins, to prevent the raw surface from being drawn

within the sphincter until the bleeding ceases, or is arrested by ligature.* But it is to be feared that the hemorrhage, though prevented so long as the part was kept tense by the pins, might occur after their removal, unless they were allowed to remain until the orifices were sealed up with lymph, which could not be done without the risk of exciting inflammation and constitutional disturbance.

Excision being thus objectionable, caustics of different kinds, and the actual cautery, have been employed for destroying the hemorrhoidal growth, and might possibly be so managed as to prove useful in doing so. But as these means are excluded from modern surgery for this purpose, and as there is another which perfectly attains all that can be desired in treating the disease, I may proceed at once to speak of it, namely, the Ligature.

By applying a sufficient number of liga-

* Salmon on Prolapsus of the Rectum.

tures to the roots of the tumours, they may be certainly removed without any danger of bleeding. But it has been alleged, that, instead of this danger, another not less formidable is encountered in that of inflammation, spreading from the strangled parts, and either terminating fatally, or causing extensive suppuration and sloughing in the neighbourhood of the anus. The seeming resemblance between the condition of an internal hemorrhoid, to which a ligature has been applied, and a strangulated hernia, makes it appear likely that this effect would follow the operation; but experience teaches, what a more careful analysis of the cases would lead us to expect, that the bad consequences thus anticipated do not really present themselves. In a strangulated hernia, the circulation of the protruded parts is not entirely obstructed, but merely impeded, so as to cause inflammation, with its usual local and constitutional symptoms,

aggravated by the importance of the affected part; while a hemorrhoid subjected to the ligature is completely detached from any share in the vital action of the system, which, consequently, cannot be influenced by its condition. Accordingly, however similar the two cases may appear at first view, their results prove very different; and I feel warranted, after very extensive employment of the ligature, to state, that it may be used without the slightest risk of serious or alarming inconvenience.

In order to account for the bad consequences which Mr Copeland and others have related as occasionally attending the use of the ligature, it will be sufficient to remark, that if the threads are not drawn tight,—if such large portions of the morbid texture are embraced by them as to prevent the degree of compression requisite for preventing altogether the circulation through the tumours,—or if the whole of the disease is not included, disagreeable effects may

not improbably ensue. Sir A. Cooper has advised that the ligatures should not be drawn tight, with the view of lessening the pain caused by them. But, with all deference to his high and justly esteemed authority, I feel no hesitation in stating, that though the suffering of the patient may in this way be rendered less severe in the first instance, it will ultimately be much greater, as well as more prolonged, and attended with more danger of spreading inflammation, than if the strangulation had been completed at once. To obviate this objection, it has been proposed to cut away the tumours, immediately after they are tied, close or near to the knot, which method, it is obvious, must be attended with another danger, since the ligature, when thus left unsupported, will be apt to slip off, and permit the vessels to bleed. If the threads are drawn tight they will not so readily quit their hold; but in this case no advantage can be derived from removing the strangu-

lated parts, which then cease to maintain any living action, and very soon collapse into the form of flaccid bags.

I thought at one time that the best plan of proceeding with the ligature was to include at first only a part of the disease, with the view of avoiding any risk of exciting more irritation than the part or patient could safely bear; but I am now persuaded that by doing so much more pain and danger of undue excitement are occasioned than by the summary process of tying all the tumours at once. In illustration of this I may mention the case of an eminent provincial practitioner whom I attended with Dr Abercrombie. He had long suffered from the bleeding of internal hemorrhoids, and was at length reduced to a state of extreme exhaustion. From being a strong muscular man, he had become a feeble emaciated invalid, unable for any exertion of body or mind, with the waxy look, frequent small pulse, and headach in as-

suming the erect posture, which characterize the state arising from continued depletion. As the tumours were large and numerous, I commenced the treatment by tying one of the smallest, with the view of ascertaining what degree of freedom might be used with the remainder. The ligature separated at the end of two days, but the other excrescences swelled and protruded from the anus to the excessive distress of the patient, who described his suffering as intolerable, and alarmed the neighbours by his cries. As his pulse suffered little alteration in frequency or hardness, and his belly continued free from pain, no great apprehensions were entertained as to the result. The inflammation accordingly did not extend beyond the limits of the diseased growth, the whole of which mortified and sloughed off, leaving the patient completely freed from his complaint, though at the expense of much more suffering than had been anticipated.

It is not difficult to explain why a partial operation should produce such effects. The morbid texture of the hemorrhoidal tumours, like all other formations not entering into the original constitution of the body, being hasty and violent in its disposition to excited action, readily inflames when injured, and suffers more acutely than the natural textures. The slightest excitement is apt to make it swelled and painful, and when it is partially subjected to a tight ligature, inflammation so intense as to destroy its vitality may be occasioned, while, if the whole be included the separation takes place, not indeed without some uneasiness, but certainly without any of a serious or alarming character. On the same principle any operation attended with local irritation in the neighbourhood of internal hemorrhoids, is apt to be followed by troublesome consequences from their excitement. A gentleman came under my care for *fistula in ano* with this complication. I advised that both

complaints should be remedied at the same time, to prevent the irritation caused by an operation for one of them, from injuriously affecting the other. The patient, however, persisted in requiring the fistula to be cut by itself in the first place, which was done, and followed by a very distressing paroxysm of the hemorrhoidal disease. He returned to the country to recruit his health, and came back some weeks afterwards to have the excrescence removed. Another patient came lately above a hundred miles' distance to be operated upon for fistula, and made no mention of any other ailment. I performed the necessary incision, and a day or two afterwards was surprised to see a large internal hemorrhoid protruding from the wound. He then told me that he had long suffered from bleeding piles; and I expressed my regret that this communication had not been made sooner, as both diseases might have been remedied together, with less

inconvenience than he was then subjected to. It happened fortunately that the inflammation proved so intense as to destroy the tumour, which sloughed off, so that the recovery was completed without any farther operation, but certainly, as in the last case, with much more pain and confinement than if the hemorrhoid had been tied when the fistula was cut. Still pursuing the same principle, when any pendulous folds of skin are observed to surround the anus in a case of internal hemorrhoids, I should advise them to be removed with the scissors at the same time the ligatures are applied, lest they inflame and prove troublesome in consequence of the neighbouring irritation.

When the operation is to be performed the patient should take a dose of castor oil, so as to evacuate his bowels previously to it, as they had better not be moved for forty-eight hours afterwards. The hemorrhoids having been fully protruded by a

sufficient degree of straining, the patient either stoops forward, resting with his arms on a chair or table; or if a female, lies on one side with the limbs drawn up, so as to expose the parts concerned. The surgeon then introduces the fore-finger of his left hand within the sort of ring which is formed by the morbid growths, and, keeping it there as a guide, transfixes their roots in succession with a needle and double thread, directed from without inwards through the centre of each close to the base. The ligatures, which should be waxed silk, of proved strength, are next to be tied as tightly as possible, each of course including the half of a tumour. Their ends are then cut away as near to the knots as may be, without endangering their security; and the protruded parts are lastly pressed gently back within the sphincter.

The symptoms consequent upon the operation vary with the extent of the disease, and the irritability of the patient. There is seldom much, or indeed almost

any complaint of pain until the ligatures are tied; and the patient even then in some cases feels little inconvenience. The suffering which attends this step of the process, however, is in general considerable, and often very severe. It is most intense at first, and usually subsides gradually in the course of a few hours, until the uneasy sensation is little or not at all perceptible. Want of sleep is frequently one of the effects produced, and is sometimes so distressing and prolonged as to excite serious alarm. It is accompanied with nervous excitement, rendering the patient restless, more or less incoherent in his ideas, and wild in appearance. The pulse is seldom much affected, and when it does suffer disturbance, merely becomes quicker without any of the hardness which denotes an inflammatory state of the system. The bowels are constipated, so as not only to cease evacuating their contents spontaneously, but to require laxatives of greater power than is sufficient in ordinary circumstances. Dif-

ficulty of making water, sometimes amounting to complete retention, and requiring the catheter to be introduced, very frequently occurs, but seldom continues beyond the first twenty-four hours. In two cases I have found it last for nearly a fortnight. When the patient goes to stool a day or two after the operation, there is either no protrusion at all, or a much smaller one than formerly, and in general no bleeding. Little inconvenience is experienced after the unpleasant effects immediately consequent upon the operation have subsided, until the ligatures separate, which is usually about the end of a week; when a painful feeling is often complained of in the raw surface left by the sloughs, and a little blood is occasionally discharged along with the evacuations. Soon after this the irritated parts regain their natural condition, and all the disagreeable symptoms which proceeded from the disease, as well as those

caused by the operation, completely disappear.

Such being the consequences of tying internal hemorrhoids, the treatment after the operation may be easily determined. An opiate, containing thirty or forty drops of the solution of muriate of morphia, should be administered to the patient if he complains of pain, and be repeated from time to timeif it continues severe, or a somewhat larger dose may be injected into the rectum with a teaspoonful or two of warm water. Fomentations may at the same time be applied to the anus. And if, notwithstanding the use of these means, much suffering is still experienced, the hip-bath of poppy-head decoction should be employed. The retention of urine if slight may be relieved by giving the *Spiritus Ætheris Nitrici*, or the camphor mixture; and if more obstinate, will require the catheter to be introduced occasionally as long as it lasts. The patient should restrict himself to the

antiphlogistic regimen, and drink freely of simple diluents, such as barley-water or lintseed tea, to lessen the acrimony of the urine. He should also confine himself to the horizontal posture until the ligatures separate. In general very little requires to be done in the way of treatment, the patient after the first hour or two usually suffering little uneasiness, and even then scarcely more pain than what attends the disease during its state of excitement.

CHAPTER THIRD.

PROLAPSUS ANI.

By *Prolapsus Ani* is understood a tumour formed by protrusion of the coats of the intestine through the anus. Such tumours consist either of the gut in its whole thickness, or of the mucous membrane alone in a state of morbid development. Being thus differently constituted, they should not be confounded together, as they usually are, but be carefully distinguished, since they have no resemblance to each other, either in the nature of their production or the treatment which they require. In making this distinction, it is fortunately unnecessary to employ any new names, since, if the title prolapsus be confined to denote

those protrusions in which the whole thickness of the gut is concerned, the other forms of the disease may be all referred to the head of Hemorrhoids.

In this restricted sense, *prolapsus ani* consists of a tumour generally round or oval, but sometimes cylindrical, varying in size from that of a small egg to that of the largest orange, exhibiting the slimy surface of a mucous membrane, and affording a copious secretion of very similar appearance to red currant jelly. It is obvious that the connections of the lower part of the rectum must prevent it from descending, so as to present these appearances, which can be accounted for only by supposing that the higher part of the gut becomes invaginated in the portion below it, so as to project beyond the anus. In short, the derangement will be the same as that which is named Intussusception, with this difference, that in the latter case the invagination

occurs higher up the intestine, beyond the reach of sight and touch. It has been maintained by some that the lower part of the rectum alone was concerned in the formation of prolapsus, the protrusion of this apparently fixed portion being accounted for by the relaxation of its coats. But this explanation does not agree with the anatomical structure, the phenomena observed during reduction of the protruded bowel within the sphincter, or the appearances which have presented themselves in cases that terminated fatally.

In regard to the causes of prolapsus, it is of importance to notice, in the first place, that the disease is almost entirely confined to children, and persons of advanced age who suffer from a relaxed state of the *sphincter ani*. In the former it is produced by long-continued or inordinate straining to evacuate the bowels; and in the latter, it results merely from want of the usual

resistance to descent from the anus. The excessive expulsive efforts are induced by irritations of various kinds,—of which may be particularly mentioned, teething, intestinal worms, stone in the bladder, and morbid states of the mucous lining of the alimentary canal. Weakness of the sphincter is generally connected with deficiency of nervous energy in the pelvic viscera or lower extremities; but sometimes depends on a want of power confined to the muscle itself, which either loses its contractile tone, or is impeded in its action by a relaxed state of the parts which it embraces.

The symptoms of prolapsus vary with the size of the part protruded, and the degree of vigour with which the intestine resents its unnatural position. They are therefore in general more urgent in young persons, and less so in old people There is always more or less uneasiness in the protruded part, and obstruction to the eva-

cuation of the bowels; and if inflammation commences, the sufferings of the patient become extreme, terminating even in his death, or mortification of the invaginated portion of intestine. Though the bad consequences are not always very rapid in their progress, the disease, if left to itself, can never be regarded as free from danger, and should, therefore, always be remedied as soon as possible.

The treatment of prolapsus resolves itself into the means required for replacing the intestine, and those employed for preventing a return of the complaint. In order to attain the first of these objects, the patient should be laid horizontally on his side or back, with the limbs bent upon the pelvis, and desired not to hold his breath, which, by confining the abdominal viscera, opposes the ascent of the gut. The surgeon then grasps the tumour in his hand, having previously lubricated its surface with oil, and, gently but steadily compressing its neck,

while at the same time he urges on the body of the swelling, gradually pushes the protruded parts within the sphincter. In most cases this reduction is easily accomplished. But when it has existed for several days or longer, the coats of the bowel become so much thickened and painful, that the manipulation requires to be conducted with great care and patience.

The prevention of relapse may be accomplished variously, according to the circumstances of the case. If irritation be the exciting cause, it must of course be removed; and for this purpose different means will be required, according to its seat and nature. If a stone in the bladder is the source of disturbance, it must be cut out; if ascarides in the rectum, they must be expelled by proper medicines; if it proceeds from dentition, the gum must be scarified, and the ordinary soothing means employed; and if it be connected with an unhealthy state of the mucous membrane, astringents, anodynes, and gentle stimulants of a proper

secreting action, together with regulation of diet and regimen, will be necessary. While attempts are thus made to withdraw the source of irritation, the patient should be prevented, so far as possible, from voluntary straining, which is apt to continue through the bad habits which have been acquired. With this view, the bowels ought not to be evacuated in the sitting posture usually assumed by children in doing so, as it renders the pressure of the diaphragm most direct upon the contents of the pelvis; and the patient should sit upon a chair so high as to prevent his feet from reaching the ground, which will keep the trunk erect, and moderate the force of the expulsive efforts. Care also should be taken to prevent him from sitting too long or too frequently at stool.

In cases of the other kind, in which the protrusion depends not upon inordinate pressure outwards, but upon deficiency in the usual resistance of the sphincter, while

it is equally proper to reduce the prolapsed bowel without delay, the means of prevention for the future must be of a different kind. There being here no local irritation in existence, of course nothing can be done with the view of removing it; and the treatment is consequently limited to preventing the patient from voluntary straining, and to increasing the resistance of the sphincter. Constipation of the bowels, which necessarily leads to long-continued and laborious efforts at expulsion, should be carefully prevented by regulation of the diet and regimen; by the use of appropriate laxatives; and by the injection of tepid water into the rectum, which not only is a powerful assistant of medicines given by the mouth, but often proves sufficient to supersede their employment altogether. The enema syringe of Read, more convenient, perhaps, in its original form than any of the subsequent modifications which it has undergone, renders the administration of this

means so easy and simple, that no difficulty need be experienced in its habitual use. Every patient who suffers from constipation of the bowels, and more especially all those who have any tendency to prolapsus, should be provided with the apparatus.

When the weakness of the sphincter depends upon a paralytic state of the muscle little can be done for its remedy, and a bandage must be worn to support the rectum. But if the contractile power remains at all, though diminished by distension of the orifice, and impeded in its action by relaxation of the parts about the anus, the patient may frequently be relieved by a very simple operation. It consists in removing a portion of the pendulous skin which surrounds the orifice of the gut, and produces its beneficial effects, by relieving the sphincter from the obstruction to its efficient closure, which is caused by the presence of relaxed integuments, and by inducing consolidation of all the textures

concerned, through the changes consequent upon the inflammatory action it necessarily excites. The source of irritation which, as has been already explained, is apt to proceed from the skin thus altered, is also in this way removed. Mr Hey of Leeds removed the whole circle of pendulous skin. But M. Dupuytren found that the object in view could be equally well attained by taking away merely a few of the folds into which it is thrown when allowed to collapse round the anus. The scissors curved to one side prove most convenient for effecting this excision, and should be directed from the circumference towards the centre of the aperture. The folds of skin should be held tense by a hook or forceps, and be removed from the distance of about an inch and a-half quite up to the mucous membrane, a small part of which should be included in the incision. It is not necessary to remove more than four or five of the folds. Mr Howship has

recommended the ligature, instead of the knife or scissors, for this purpose, on the ground that it excites a more salutary degree of irritation. But the pain and delay attending its use would more than counterbalance this alleged advantage, which may be compensated for by the freedom of excision.

In adults who are said to suffer from *prolapsus ani*, there is seldom any thing more protruded than the internal lining membrane of the bowel, more or less thickened or altered in its texture. The complaint, therefore, would be more properly designated internal hemorrhoids; and this correction of terms would prevent much confusion in practice, since, in such cases, instead of removing the morbid swellings, the treatment is in general erroneously directed to strengthening the sphincter, or supplying substitutes for it in the form of bandages. It is true that the symptoms may be alleviated by obviating constipation, using astringent applications

and medicines, cutting away the folds of relaxed skin, or even by employing a bandage. But such treatment is merely palliative, and the relief is neither complete nor permanent; while, if the hemorrhoidal growths are recognized as the cause of the protrusion, it may be at once completely and safely remedied in the way that has been described; and the treatment of prolapsus, strictly speaking, will be confined to those comparatively rare cases in which the gut descends independently of any alteration in its texture.

CHAPTER FOURTH.

POLYPUS OF THE RECTUM.

The rectum is sometimes, though very rarely, the seat of morbid growths from the mucous membrane, which resemble the tumours named Polypi in other parts of the body. The extreme rarity of this disease may be estimated from the statement of Sir A. Cooper, that in the whole course of his experience he has met with only ten cases of it. He says that it generally occurs in children, and very rarely in adults, and that the most advanced age at which he has met with it was twenty-two. The few cases that have fallen under my own observation were in persons who had attained or passed the middle period of life. Except in cases where there is a general vegetation of morbid ex-

crescences from the surface of the gut, and which are not, properly speaking, examples of the affection in question, polypus of the rectum always, so far as I know, occurs singly. The tumour is of a round or pear-shape, varying in size from that of a pea to the bulk of a hen's egg, and either smooth or lobulated on the surface. It has a narrow neck or footstalk, which is usually attached within an inch or two of the anus. In its consistence there is considerable variety, the texture being sometimes firm and unyielding, at other times soft, and hardly distinguishable by touch or ocular inspection from the lining coat of the bowel.

The causes which give rise to such productions are quite unknown, since the difficulty of discovering the tumour while still small and recently formed, together with the want of frequent opportunity for observing its development and progress, throw much obscurity upon the circumstances attending its origin; but if successfully

investigated, they would probably be found to consist in circumstances of an irritating nature.

The symptoms are similar to those of internal hemorrhoids, being a sensation of weight and uneasiness in the rectum, pain, and frequently a discharge of blood in going to stool, and irritation of the bladder and uterus. The footstalk is sometimes so long as to allow complete protrusion of the tumour beyond the anus, in which case its existence cannot be overlooked. But when it is retained within the rectum, a very careful examination with the finger is necessary for detecting its presence.

The treatment of course requires removal of the polypus, and this may be effected either by excision or by the ligature. There does not appear to be the same danger of bleeding from the former of those methods, as when it is employed for the extirpation of hemorrhoidal tumours, but there must always be more or less risk of unpleasant consequences from this source,

and the ligature should therefore be preferred. In a case which I saw with Dr Hilson of Jedburgh, the tumour, which was about the size of a cherry, and appeared to have existed for upwards of twenty years, was attached to the posterior surface of the gut by a slender footstalk, long enough to permit its being readily protruded from the anus. A single ligature might have proved effectual, but, to make the strangulation as complete as possible, I passed a needle through the root of the growth, and tied each of its halves with a separate thread. The patient, who was a lady upwards of seventy years of age, recovered without any inconvenience. In another case, for which I am indebted to Mr Craig of Ratho, it was necessary to pursue a different method.

" In January 1835, Mrs H. aged 44, was delivered of her ninth child. The labour was in every respect natural and easy, and she made a good recovery.

"On the 2d of April 1836, I was sent for to visit her, and upon my arrival found that she had had a very profuse discharge of blood from the rectum. She was pale and exhausted, with a small feeble pulse. As the bleeding had ceased, and I was unwilling to disturb her, I merely prescribed the horizontal posture and doses of acetate of lead, with Dover's powder every four or five hours. The quantity of blood discharged could not be accurately ascertained. I saw two common water-pots nearly full, the one with scybalous feces and blood, the other apparently with blood. But she told me that more had been previously passed to the extent of inducing syncope. There was no return of the bleeding, and she made a good recovery.

"On investigating the nature of this case, I was informed by the patient that for fifteen years she had been more or less annoyed by uncomfortable sensations in the pelvis, with pain in her back, loins, and

thighs: That some years ago, while pregnant, and within six weeks of delivery, she had had a similar bleeding nearly as profuse, after which she made a very tedious recovery: That during the births of her younger children, she had been sensible of an uneasiness in the posterior parts which was not formerly remarked: That when she strained at stool something frequently came down, which required to be returned; and that she had consulted a variety of practitioners for the complaint, without obtaining any relief.

"I could hardly think, as seemed to have been previously supposed, that the uterus was the seat of the disease, because her labour had been natural; because the menstrual evacuations were regular; and because when examined it was felt of the ordinary size as well as consistence. Suspecting that piles might be the cause of her complaint, I carefully examined the rectum, and in the hollow of the sacrum de-

tected a large pendulous tumour attached to the gut by a narrow neck. It was lobulated on the surface, and in consistence resembled the placenta or lung. It could not be protruded. But this seemed owing rather to its size than the resistance of its root. Pulling it gently occasioned pain shooting through the pelvis. It was sensible to pressure near its origin, but not in its mass generally. Having no doubt that this polypus was the cause of all her suffering, I proposed its removal; and on the 18th of November Mr Syme effected this by applying a ligature round its neck. In the course of a few days afterwards the tumour sloughed away in different pieces, which did not permit its structure to be satisfactorily ascertained. After this her general health improved, and she was relieved from all the disagreeable sensations which had so long distressed her, and at length produced a serious depression of spirits."

Great credit is due to Mr Craig for dis-

covering the polypus in this case, since the consistence of the tumour, as recognized by touch, was so similar to that of the intestinal coats, that I could not satisfy myself of its presence, except by feeling the neck and tracing it into the body of the swelling. The ligature was passed by introducing it on the point of the finger, carrying it round the footstalk, and then withdrawing it by means of a hook.

CHAPTER FIFTH.

STRICTURE OF THE RECTUM.

The rectum, like the œsophagus, which it resembles in many other points of structure, size, and morbid derangement, is liable to stricture of two different kinds. In one of these there is merely contraction of the coats, with thickening and induration of their texture. But in the other there exists a morbid growth, attended with the symptoms, and prone to the changes, which characterize malignant degenerations of structure. Want of attention to this very obvious and necessary distinction has often led to great misapprehension in regard to the nature of the disease, and serious errors of practice in its treatment. By some it has been looked upon as always admitting of

remedy at an early stage, and by others it has been considered always incurable; while the good effect of introducing bougies in cases of the simple or non-malignant kind has encouraged those who supposed the stricture to be constantly of a carcinomatous nature, to expect benefit from the employment of pressure in the treatment of cancer occurring in other parts of the body.

Simple Stricture of the Rectum.

The simple stricture is seated very near the lower extremity of the rectum, a little within the sphincter, between two and three inches from the anus. It is here that the gut changes the direction of its course, and after following the curvature of the sacrum, makes a sudden turn outwards to its termination. There is thus formed a sort of angular projection by the posterior surface of the bowel, which may be supposed likely to increase when sub-

jected to continued irritation of any kind, and at length to constitute an inconvenient degree of contraction. It has been maintained that this is not the sole seat of stricture in the rectum, and that the disease frequently occurs farther up the canal, especially at the distance of five or six inches from the anus. Indeed, some have gone so far as to profess their ability not only to recognize, but to treat it successfully when seated beyond the rectum altogether, in the sigmoid flexure of the colon. That contractions of the great intestine may occur in any part of its course, I do not mean to question. But that the thickening and induration of its coats are in such cases usually confined to the narrow limits which constitute a stricture in the ordinary acceptation of this term, or that the strictured part can be accurately ascertained, and efficiently dilated by the use of instruments, I have no hesitation in expressing my unqualified disbelief.

It is very natural for persons suffering from constipation to suppose that obstruction of the bowel is the cause of their complaint; and they are consequently ready to believe in the existence of stricture, when it is intimated to them by their medical attendant, especially if, at the same time, hopes of relief are held out from the employment of mechanical treatment by dilatation. There is too much reason to fear that unprincipled practitioners have taken advantage of this facility in the disposition of their patients to promote their own unworthy views. But I should be sorry to allege, that a want of good faith was requisite either for the discovery or the treatment of strictures high up the rectum. The practitioner is hardly less exposed to deception than the patient; and if he examine the rectum, under an impression that there is a stricture existing in it, he will be very apt to believe that he has found one. In the feeble

and unhealthy persons who are usually suspected to labour under the disease, the coats of the rectum are so thin and relaxed as readily to catch the point of the bougie employed for exploring the cavity, and thus impede its progress, which is also apt to be arrested by the promontory of the sacrum. As an instance of this, I may mention the case of an elderly lady whom I saw with Dr Begbie. She had been supposed to suffer from stricture of the rectum, between five and six inches up the gut, and had been subjected to treatment for it during several years before coming under Dr Begbie's care, by two gentlemen of the highest respectability in this city. Finding that the coats of the rectum, though greatly dilated, were quite smooth, and apparently sound in their texture, so far as my finger could reach, and conceiving that the symptoms of the case denoted a want of tone or proper action, rather than mechanical obstruction of the bowels, I expressed a de-

cided opinion, that there was no stricture in existence. Not many months afterwards the patient died; and when the body was opened not the slightest trace of contraction could be discovered in the rectum, or any other part of the intestinal canal. One of the gentlemen who had been formerly in attendance was present at this examination; and wishing to know what had occasioned the deception,—which he said had led to more than *three hundred hours* being spent by himself and colleague in endeavours to dilate the stricture with bougies,—he introduced one as he had been wont to do, and found that, upon arriving at the depth it used to reach, its point rested on the promontory of the sacrum. Other cases might be mentioned to illustrate the uncertainty of information as to the capacity of the higher part of the rectum, obtained by exploring the gut, and to show how far the best-intentioned practitioners may be misled by the sources of fallacy I have endeavoured to explain.

If the symptoms of stricture of the rectum could be traced at an early stage of the disease, difficulty in evacuating the contents of the bowels would probably be their most remarkable feature. But the complaint almost always steals on insensibly, so as not to attract attention until fully formed; and then the inconveniences experienced are so different from what might be expected, that they tend rather to obscure than to indicate the nature of the complaint, which is therefore seldom suspected by the patient. There is at present in the hospital here a woman who was admitted on account of a *fistula in ano*, in whom, on introducing my finger into the rectum, to guide the knife in dividing the septum, I found a stricture in the ordinary position, so tight as to exclude any thing larger than a moderate-sized urethra bougie; yet she had been quite unconscious of its presence, though the symptoms proceeding from it were extremely severe. The rea-

son of this is, that the effects of a confirmed stricture are in general the frequent, often almost incessant discharge of thin feculent matters, owing to the copious secretion of mucus which results from the irritation of the disease; and that the thin slimy stools, occasionally tinged with blood, attracting more notice than the small indurated masses of feces passed along with them, make the case assume the appearance of diarrhœa. The mistake thus committed not only prevents the proper means of remedy from being employed, but leads to the administration of astringents and anodynes, which must prove hurtful, by checking the process instituted by the system for its own relief. This consists in the copious secretion of fluids into the cavity of the great intestine, which lessens the solidity of the feculent matters, and facilitates their passage through the narrow channel that remains for their escape. Being forced down upon the stricture by the violent efforts at

expulsion which are made to unload the distended bowels, a small quantity is urged through the stricture, and issues from the anus in a sudden jet, as if propelled by a squirt. The grand character of the disease in its advanced stage, then, is the frequent squirting out of thin feculent matters, containing no solid masses, or only very small ones, and mixed with blood or mucus, accompanied by a sensation of cutting or burning in the rectum. In addition to this the abdomen is distended, partly by retention of its feculent contents, partly by tympanitic swelling, caused by derangement of the bowels. Pain also is felt in the sacrum, extending down the limbs; and abscesses frequently form in the vicinity, so as to lay the foundation of *fistula in ano*. In this case the sinus does not, as has been alleged, open into the gut above the contracted part, but holds its usual position near the anus, and should be regarded rather as an accidental consequence of the

neighbouring irritation, than as a direct effect of the stricture.

The disease is met with more frequently in females than males, and generally occurs about the middle period of life. It is extremely distressing; and if not remedied may at length prove fatal, by gradually exhausting the patient's strength, or exciting inflammation of the bowels. Some years ago I attended a gentleman for *fistula in ano* together with stricture of the rectum. Not long afterwards he told me that his wife complained of symptoms similar to those he had suffered from the latter ailment. I proposed an examination of the rectum, which was declined, and I heard no more of the patient, until raised one night with an urgent request to visit her immediately She was labouring under the symptoms of peritonitis in its advanced stage, and died before the end of many hours. The rectum was contracted almost to obliteration at the usual part. Instead of

terminating thus abruptly and violently, the disease more frequently, when it proves fatal, gradually exhausts the strength of the patient, by the continued uneasiness, and derangement of the digestive functions which attend it. Extreme emaciation and hectic irritation are thus induced; and unless some other disorder occurs to arrest his sufferings, he at length sinks under the complaint. The progress of such cases is by no means rapid; and the disease after attaining a certain extent often seems to remain stationary; so that there is usually ample opportunity for its discovery and treatment.

From the slow and insidious formation of stricture in the rectum, it is not easy to ascertain the circumstances which give rise to it. The analogy of what happens in other mucous canals would lead to the supposition that continued irritation of the gut is probably the immediate exciting cause. But the precise way in which this state is oc-

casioned, or why, when its other effects are so common, it should so rarely produce the effect in question, are points that have not yet been satisfactorily made out.

In the treatment of the disease some temporary relief may be derived from injecting tepid water or oil into the rectum, to soothe the irritation of its coats, and facilitate the discharge of its contents. But as the patient by such means as these cannot be freed from his complaint, it is necessary to inquire how the gut may be restored to its natural capacity. Of the means employed to remedy strictures of mucous canals in general, namely, the caustic, the knife, and the bougie, the two last mentioned have alone been resorted to in treating stricture of the rectum. Division of the contracted part with a cutting instrument, notwithstanding the obvious risk of hemorrhage and inflammation incurred by doing so, has been occasionally practised ; and with such speedy as well as com-

plete relief, that some practical writers regard this method as the one which ought to be preferred. But as experience has ascertained that, in certain conditions of a constitutional and local kind, wounds of the rectum, even though of very small extent, are followed by serious or fatal consequences; and as the bougie, though not so speedy in its operation as the knife, is equally effectual, and not exposed to the same objection, prudence seems to require that the practice of incision should be either entirely abandoned, or only used in particular cases with extreme caution. The best instrument for the purpose is the blunt-pointed curved bistoury; and the stricture should be either divided backwards, in the direction of the sacrum, or notched at different parts of its circumference by cuts of smaller extent.

The use of bougies in removing strictures is a remarkable example of good practice, originating from false principles.

It was at first adopted with the view of destroying the obstruction through the effect of medicinal substances, which were in this way applied to the contracted part of the canal. And when experience had proved that bougies of the simplest composition, as those constructed of metallic substances, were not less effectual than those of the medicated kind, the process of improvement was next ascribed to the mere dilatation acting mechanically as on a tube of dead matter. Hence it was thought impossible to introduce the instruments too frequently or for too great a length of time. At least once a day was thought essential, and they were permitted to remain for hours at a time. But the contracted canal is not composed of dead substance, and the stricture depends upon a peculiar morbid action of the living texture. The beneficial effect of the bougie, therefore, must consist in the excitement of another action opposed to the one formerly in operation, and ca-

pable of restoring the gut to its natural state.

It is the effusion of organizable matter into the cellular texture of the part that causes the stricture, and it is the absorption of this deposit which removes the disease. The bougie by effecting pressure excites the action of absorption. And if the pressure be too great, too long continued, or too frequently repeated, there will be a great risk of causing more than sufficient irritation for the purpose; and of inducing again the very condition it is desired to counteract, the consequences of which must be a confirmation and increase of the disease. The perfection of treatment by means of the bougie may thus be considered to consist in using it merely to the extent requisite for producing its beneficial effects; and this is now fully ascertained to be much less than might at first view have appeared possible. Instead of requiring to be introduced daily, and to remain in the passage for hours, it appears that the bougie causes

a sufficient degree of excitement if used every third or fourth day, and withdrawn immediately after being passed through the stricture. Under this system the improvement not only advances at least as quickly as when the operation is performed more frequently, but is likewise much more sure in its progress, and much less apt to be interrupted by undue irritation of the part concerned. These principles now regulate the treatment of stricture in all the mucous canals which are subject to it, namely, the urethra, œsophagus, and rectum.

Rectum bougies are constructed of various materials; and from the facility of guiding them through the stricture, owing to its position in the vicinity of the anus, the composition of the instrument is of less consequence, than when the disease is seated in the urethra or œsophagus. Metals, wood, glass, and cloth made up with plaster or elastic gum may be employed. But, on the whole, those formed of iron and

elastic gum are the most convenient. The former are cheap and imperishable, the latter are more expensive and liable to decay, but perhaps more easily introduced and less hurtful to the feelings of the patient.

When the operation is to be performed the patient should be placed upon his side, and then the surgeon, having in the first place satisfied himself as to the precise position of the stricture, by feeling it with his finger, passes a bougie lubricated with oil or lard up to the obstruction, and presses against it steadily but gently. If the resistance cannot be overcome without using force or causing pain, he withdraws the bougie, and tries a smaller one in the same way, thus proceeding until he gets one to pass through the contraction, immediately after which he withdraws it, and concludes the process for that time. If necessary some soothing means, such as an opiate injection, or the hip-bath, may be employed to allay any undue irritation that

has been excited even by this cautious proceeding. At the end of three or four days, or a longer interval, if the patient continues to suffer from the former operation, the bougie which was introduced upon that occasion is again passed, and followed up by another of larger size; and thus the treatment is carried on until the disease ceases to occasion any inconvenience, and a full-sized bougie can be introduced with ease.

Malignant Stricture of the Rectum.

There has been some difference of opinion as to the comparative frequency of simple and malignant stricture of the rectum. From my own observation of the cases that come under treatment, I should say that the latter is more often met with than the former. It generally occurs in the same part of the gut as the simple stricture, but is not so limited or regular in its extent. The diseased growth is sometimes confined to one side of the gut, at others it

affects the whole circumference; and it is only in the latter case that there is stricture properly speaking, though it is usual to designate by this title all morbid growths occurring in the coats of the rectum. The swelling is usually of a very irregular form, and seldom extends less than several inches along the gut. Occasionally it descends quite to the anus, or even shows itself externally, but more frequently it leaves the coats of the intestine free for an inch or two within the sphincter. The morbid growth generally possesses a moderate degree of firmness, and exhibits characters intermediate between those of carcinoma and medullary sarcoma. It encroaches on the cavity of the rectum so as to impede more or less the evacuation of the bowels, and being attended with the symptoms which are wont to proceed from such degenerations, occasions great and almost unceasing distress. The patient complains of a shooting or fixed dull pain in the back, at the upper part

of the sacrum, and extending down the limbs, together with a sense of weight and uneasiness in the part affected, especially after motion of the bowels, or the operation of any circumstances causing irritation of the disease. He passes blood and purulent matter along with his stools, which are thin and frequent; and though in the earlier stage of the disease, difficulty may be experienced in passing them through the thickened coats of the gut, there is for the most part ultimately rather an inability of retention from the action of the sphincter being impeded by the progress of the disease. His countenance displays the greenish-yellow complexion characteristic of malignant disposition in the system, and he loses flesh as well as strength. On examination the gut is found not only contracted, but thickened and irregular on the surface. The coats at the affected part are hard and unyielding, and the morbid growth is felt projecting into the cavity, sometimes in the form

of rounded tubercles, at others rough with ulcerated depressions. As these changes, judging from touch alone, do not differ except in degree from those which attend the simple stricture, it would often be difficult to determine merely by local examination the nature of the complaint. But the symptoms which accompany it are so well marked, that the disease can hardly be either overlooked or mistaken. In its progress the patient becomes generally exhausted, and falls into a hectic state, which is soon followed by dissolution.

In common with other malignant affections, carcinomatous stricture of the rectum does not admit of being remedied by any kind of treatment directed with the view of restoring the diseased part to its natural state, and its situation forbids any prospect of benefit from removal by the knife or any other means.

In these circumstances, palliation is all that can be reasonably attempted; and for

this purpose opiate injections with the hip-bath are very useful. The patient should be enjoined to abstain from every kind of stimulating food and drink, and also to avoid any exertion of body likely to aggravate the complaint, resting as much as possible in the horizontal posture. The introduction of bougies, and all other operations not only can do no good, but must ever produce an injurious effect, by increasing the irritation of the disease, and accelerating its progress. It appears that a considerable portion of the rectum, even to the extent of a couple of inches, may be cut out without immediately fatal or any very serious bad consequences in the first instance. But the patient can experience no benefit from this being done, and, in addition to the pain of the operation, must have an impulse given to the morbid action. And if there are any cases in which this excision of the rectum has been followed by a permanent cure, the disease could not have been of a malig-

nant nature. It may seem unlikely that so severe a proceeding should ever be resorted to except in cases the most hopelessly incurable by other means. But, so far from this, however startling and incredible it may appear, the fact is, that removal of the extremity of the rectum has of late years been taught and practised in this city, as the best mode of treating those hemorrhoidal affections which are generally comprehended under the title of *prolapsus ani*. That a complaint which, as has been shown above, may be certainly remedied with little pain, no danger, and without any injury to the natural structure, should give occasion to an operation so dreadful in its performance and effects, as cutting out the end of the bowel, together with its sphincter, is to be deeply regretted, as well for the credit of surgery as the good of humanity. It is needless to say that, after this extirpation has been performed, the healing of the wound is attended with an extreme contraction, I have heard even

obliteration of the gut; and the patient must consequently, like the victim of the ancient operation for fistula, suffer from the united miseries of constipation and incontinence.

It is possible that cancer may occur at the verge of the anus, as it does in the somewhat similar texture of the lip, and then excision may be practised without any impropriety. But cases of this kind are extremely rare, and should be carefully distinguished from those in which the coats of the bowel are implicated, where the knife can never be prudently or beneficially applied.

CHAPTER SIXTH.

SPASMODIC STICTURE OF THE RECTUM.

Cases are occasionally met with in which the patient expresses great suffering from uneasy feelings referred to the neighbourhood of the anus, though no alteration of structure in the parts concerned can be detected by the most careful examination. It is stated that the bowels are evacuated with difficulty and pain,—that the pain frequently does not come on until after going to stool, and then continues extremely severe for an hour or longer ;—that sitting is very uncomfortable, unless the body rests on one hip, so as to protect the anus from pressure,—and that there is an unpleasant sensation of fulness in the perineum, with heat in the urethra, frequent desire to make

water, or other symptoms of irritable bladder. These complaints are not always equally severe, and often become greatly aggravated, from time to time, with more or less complete remissions, which are not unfrequently preceded by discharges of blood or matter from the rectum. The anus, instead of presenting its ordinary conical appearance, looks flat when examined, and hardly presents any trace of the orifice, owing to the inordinate contraction of the external sphincter muscle. If the finger be introduced, which is not accomplished without great pain and difficulty, every attempt to examine the gut causing excessive distress, not only at the time, but for hours afterwards, it feels much more strongly compressed than usual. And when the nates are held aside, so as to bring the lining membrane of the anus into view, one or more ulcerated fissures are occasionally observed between its folds.

This affection occurs in every rank of

life, but is almost entirely confined to the male sex. From not being attended with any obvious alteration of structure, it is often considered imaginary, and treated merely as a nervous complaint. It has only of late years attracted the attention of the profession, and is yet far from being familiarly known to practitioners in general. Boyer has given an excellent description of the disease, under the title of Fissure of the Anus,* believing that the excessive contraction of the sphincter depended upon the irritation of the ulcerated chops, which he thus designated. That these two morbid affections frequently exist together there can be no doubt. But that the spasmodic stricture is of secondary origin, and dependent upon the other, is not reconcilable with the facts presented in practice. In a considerable proportion of cases, I have

* De la Fissure ou Gerçure de l'Anus, accompagnée du resserrement Spasmodique du Sphincter ; Traité des Maladies Chirurgicales, Tome x. p. 125.

found the sphincter firmly contracted, without any perceptible fissure or abrasion of the surface. And I have also, though more rarely, met with fissures producing great uneasiness to the patient, but not accompanied with spasmodic stricture of the anus.

It is very difficult to explain the cause or origin of this complaint. Its nature leads to the suspicion of some chronic excitement or irritation of the parts concerned, or those in their neighbourhood. Anxiety and distress of mind have evidently a powerful influence in confirming and aggravating its symptoms, and may not improbably also occasion its commencement. General irritability of the system may also constitute a predisposition to its production. And every thing that tends to irritate the rectum is of course apt to increase the patient's sufferings. Thus, introducing the finger or foreign bodies of any kind within the anus—forcibly expelling indurated matters from the bowels,—using stimulating

articles of food or drink,—and remaining long in a sitting posture, are observed to be hurtful.

In the treatment of this spasmodic stricture, it has been found that the most effectual, if indeed not the only means of affording relief, consists in making an incision through the constricted parts. Boyer recommended this operation as essential for the cure of fissures at the verge of the anus, which he considered the cause of the contraction. And though his theory in this respect seems questionable, the advantage of the practice cannot be disputed. But the good effects of an incision are no less remarkable when there is merely contraction without fissure; and therefore, in a practical point of view, it is of little consequence how the two affections are supposed to be connected.

Boyer believed that it was necessary to cut through the whole thickness of the sphincter; and instructions for performing the operation to this extent have been given by many later writers. From my own ex-

perience, however, I am satisfied that it is not necessary to divide more than the external sphincter, or merely a portion of it, together with the lining membrane of the anus and subjacent cellular substance. The most convenient instrument for the purpose is a blunt-pointed straight bistoury, which may be guided on the finger with a sawing motion to the requisite depth. The incision should be made towards the side of the gut, and through one of the fissures, if there be any present. A piece of dry lint is the only dressing required after the operation; and the wound may be treated subsequently as if it had been made for a *fistula in ano*.

The following case affords a remarkable instance of this affection. I was asked to see a gentleman about sixty years of age, who stated that, a few weeks before, after sitting out a long debate in the House of Commons, he had felt extreme difficulty in evacuating the bowels, having previously for several years experienced more or less

uneasiness from this source; that he had consulted a physician and surgeon in London, who prescribed laxatives without affording relief; and that his complaint had continued so as at length to confine him to bed. I proposed an enema, which was at once objected to, on the ground that the anus would not admit the smallest sized tube. Suspicion being thus excited, the anus was examined, and found to present the characteristic features of spasmodic stricture. Having explained my views of the case, I gently insinuated the narrow sheath of a *bistoury caché*, which I happened to have with me, and then expanding the blade, withdrew it, so as to make an incision at one side of the orifice. A copious stool immediately followed, and the patient was at once completely relieved from his complaint.

THE END.

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