recovers from the collapse, but there is no passage from the bowels, and the abdomen becomes distended and there is localised tenderness, the surgeon is to diagnose *laming of the intestine* from the prolonged congestion.

CHAPTER XXXVI.

DIAGNOSIS OF THE DISEASES OF THE ANUS AND RECTUM.

It will be convenient to discuss very briefly the diagnostic value of the common symptoms of anal and rectal disease; but although this is done, it cannot be too clearly stated that in no case should a diagnosis rest upon such data, but that in every case a careful and thorough exploration of the parts is necessary; these symptoms may enable a surgeon to *guess* the nature of a patient's malady, but a careful examination will alone enable him to arrive at a *diagnosis*.

Pain is perhaps the most frequent of these symptoms. It may be an *itching* more or less severe, known then as *pruritus;* this is particularly associated with external piles, herpes, erythema or eczema of the anus or adjacent skin, external fistula, ascarides, constipation, and sexual irregularities. When *throbbing* in character it is generally due to acute inflammation and abscess, or to strangulation of prolapsed piles or mucous membrane. When *colicky* in nature and *preceding* and *accompanying defæcation,* it is generally caused by ulceration of the bowel. When of a dull *gnawing* character with exacerbations and continuing for a long period *after defæcation* it is caused by an irritable *ulcer* or *fissure* of the anus. Pain in the

region of the *sacrum* is often due to malignant disease of the bowel, and when to it are added pains shooting down the thighs, it indicates that the disease is implicating the sacral nerves. *Tenesmus* is particularly caused by polypus and foreign bodies in the rectum, constipation, dysentery, stone in the bladder, or hypertrophy of the prostate.

Diarrhœa, in the sense of the passage of the intestinal contents too hurriedly, and in a too liquid form, is not a symptom of rectal disease; but in the sense of a too frequent evacuation of the lower bowel it is a common symptom of rectal ulceration which induces it, either by the active peristalsis excited by the contact of fæces with the ulcerated surface, in which case fæcal matter of usual consistence and size is passed frequently in small quantities along with much mucus, and with colicky pains; or by the amount of mucus, serum, or blood poured out from the diseased surface. A frequent discharge of mucus, mixed with more or less fæcal matter, may occur in cases of fæcal accumulation in the rectum. Indeed, this symptom is so frequently associated with rectal obstruction that it should invariably suggest to the surgeon the necessity of a thorough exploration of the rectum.

Constipation is quite as often a cause as a consequence of rectal trouble; it appears to induce piles, certainly promotes thrombosis in external piles, and increases the hæmorrhage from internal piles, and it is regarded as leading to anal abscess, to fistula, and to fissure. The affections of the rectum which lead to it are painful fissure of the anus (owing to the dread with which the pain of defæcation is regarded), stricture of the anus or rectum, and atony of the bowel by which its expelling force is diminished; this last, leading to impaction of fæces, may then set up a spurious diarrhœa. The association of "diarrhœa" and "constipation," by which is meant the frequent

passage of fluid from the bowel containing no, or a mere minimum of, fæcal matter, is frequently met with, and should never be overlooked by the surgeon; it points to fæcal impaction, or to a tight stricture of the bowel. The shape of the motion passed is of little moment, as it is mainly determined by the contour of the anus; it may be flattened in stricture of the rectum or in enlargement of the prostate; it usually consists of small rounded lumps in cases of stricture; even the occasional passage of a full-sized motion excludes a tight stricture of the rectum.

Discharge.—*The time of its appearance:* if the discharge be constant and independent of the act of defæcation, its cause is extra-rectal, either mucous patches, eczema, and ulcer, or fistula; in the last case the discharge may be increased by the pressure of the fæces during defæcation. If, however, the discharge only attend an expulsive effort of the bowel, it comes from some intra-rectal affection, such as polypus, piles, internal fistula, fissure, ulcer, stricture; the only exception to this is seen in cases of very relaxed patulous anus where the sphincter muscle has so lost its power that the contents of the bowel can escape freely. The *nature of the discharge:* pure unaltered blood, in the absence of injury, points to internal piles, polypus, or to a ruptured varix or nævus of the rectum; hæmorrhage in a child is nearly always due to polypus, occasionally to intussusception; a streak of blood upon the motion is characteristic of anal fissure. A discharge of *altered blood*, brown or dark in colour, and having a peculiar penetrating fœtor, is met with especially in malignant disease of the bowel; *blood and mucus* mixed together may come from the congested mucous covering of an intussusception, or from a simple ulcer of the bowel. *Mucus* is discharged from the bowel in some cases of polypus and of ulcer, and

also from internal piles, and from congested or chronically inflamed mucous membrane. *Pus* points especially to abscess or fistula opening into the bowel, to anal ulcer, and it is sometimes seen in cases of rectal ulcer. A thin *watery discharge* attends the disintegration of malignant growths, being often mixed with more or less broken-down blood. The escape of *gas* (not through the anus) felt by the patient as a fine crackling or bubbling, is a sign of a complete fistula, as is also the escape of fæces mixed with pus from a similar sinus. If a fistula discharge much pus it shows that its cavity is extensive; if the discharge be intermittent it often indicates the presence of diverticula from the main path of the fistula.

Protrusion from the anus, if constant, points to the presence of a malignant growth at the anus; if it only attend the act of defecation or other straining effort, it is more probably internal piles, polypus, or prolapse; the greater the ease and frequency with which the descent occurs the greater the probability of the affection being prolapsus, with or without either of the above affections superadded.

Before making a thorough and complete examination of the parts, the rectum should be cleared out by an enema carefully given, unless the symptoms point to a stricture; and where there is any reluctance on the part of the patient to submit to the examination, or a satisfactory examination cannot otherwise be made, an anæsthetic should be administered. This examination may be made in one of three positions: (*a*) with the patient lying on his side with the thighs well flexed and the perineum directed towards a good light; (*b*) with the patient on his back with the hips raised on a pillow above the level of the shoulders, and the thighs well drawn up and separated; or (*c*) in the case of men to whom an anæsthetic is not administered, the patient may be

made to stand close against the back of a chair, and then bend down over it to the full extent; in this way the anus and the parts around it can be very conveniently explored, and if the patient be tractable the interior of the bowel can be readily examined.

The parts around the anus should first be explored by gently holding aside the gluteal folds; then the anus itself should be examined by everting its edge and getting the patient, if conscious, to "bear down" as in the act of defæcation; and lastly, the interior of the bowel should be examined by the finger, or the speculum, one or both. In many cases the surgeon should himself examine the evacuations of the bowel.

1. **Examine the parts around the anus,** noticing particularly any redness, swelling, ulceration, or discharge. If there be a diffused bright redness of the surface extending all around the anus, and on to the buttock, or forwards to the scrotum, without any swelling or discharge or pain other than itching, it is *erythema*. If in a young child, this is due either to want of cleanliness or to congenital syphilis, and the surgeon should look carefully for mucous patches here and elsewhere, and for other evidences of syphilis. In adults it is mostly seen in stout persons, and the part may be moistened with perspiration which cannot evaporate. If the surface around the anus be of a duller red colour, not swelled, but thinly covered with fine yellowish scales or scabs, it is *eczema*. If the redness be not in the form of a diffused patch, but of an annular eruption, and if it be chronic and attended with much itching, a portion should be well rubbed with glycerine, then a scraping removed and examined microscopically, a drop of weak solution of potash being added to clear up the specimen; and if bright highly refracting ovoid cells be seen (spores), it shows that the disease is parasitic erythema

or *erythema marginatum*. If there be a limited area of bright redness, which is swelled, very painful and acutely tender, it points to acute inflammation of the skin and subcutaneous tissue, and if fluctuation can be detected in it, it is an *abscess*. If the abscess be quite close to the anus and superficial, it is an *anal abscess;* if the swelling be deep, attended with much induration, and the finger introduced into the bowel feel the ischio-rectal fossa filled up, and fluctuation can be detected between the external swelling and the finger in the bowel, it is an *ischio-rectal abscess*.

If there are one or more circular or oval flat elevations of the surface, of a milky-white or opalescent appearance, with a moist smooth surface into which the probe does not sink, they are *mucous patches*, and the surgeon will, of course, look for other evidences of secondary syphilis. Finely papillated outgrowths from the skin, in between the branching divisions of which a probe sinks, are *warts*. *Sebaceous cysts, dermoid cysts, fatty tumours*, and *tumours growing from the coccyx* are occasionally found in this situation.

If small clear vesicles are seen, which either dry up into thin scabs, or burst and leave superficial abrasions, attended with much heat and itching of the part, they may be diagnosed as *herpes*. If, however, one or more sharply-cut ulcers be found with depressed greyish yellow base, examine the genital organs and the inguinal glands, and if similar sores be found on the genitals, or the inguinal glands be enlarged, painful, and tender, the sore should be diagnosed as a *soft chancre*. Soft chancres are rare in this situation, and the patients are generally women.

If a bead of pus or discharge be seen welling from a point of skin, a fine probe should be carefully pressed against it, and it will probably enter a sinus; or the opening of a sinus may be at once conspicuous, or may be found beneath a small firm elevation or fold

of the skin. The surgeon having found a *sinus*, he must carefully pass a probe along it and determine its nature; if fæcal matter or flatus be seen or known to pass along it, or if the probe pass in towards the bowel and its point be felt by the finger in the rectum, it is a *complete fistula*. If, however, the probe pass towards the bowel but cannot be made to enter without forcing its way through the mucous membrane, and the finger in the bowel fail to detect any internal aperture of the sinus, it is an *incomplete external fistula*. The surgeon may find the probe pass circularly round the anus, or in more than one direction, showing that it is a *horse-shoe fistula*, or a *branching fistula*. But the thin skin quite close to the anus is so loosely fixed to the subjacent parts that the probe can be very easily made to pass beneath it round the anus when no sinus previously existed there; when the part is laid open by the knife, the difference between an old sinus lined by granulations on a base of firm fibrous tissue is at once distinguishable from the track a probe has forced for itself in cellular tissue. Fistulæ are often multiple, and their external orifices may be very small, even minute, far too small to admit a common probe; and where there is any constant moisture of the part or other sign of fistula, a most careful examination with a fine probe must be made and even repeated; the neighbourhood of small papular elevations must be specially explored, as the orifice of a fistula is often hidden in or under such a nodule. But the sinus may pass quite away from the bowel towards the sacrum or ischium, or up into the cavity of the pelvis, in which case bare bone, *necrosis*, or disease of the *sacro-iliac joint*, or of the *hip joint*, must be sought for. The examination of this region should be completed by the surgeon pressing with his finger on each side of and all round the anus; if he detect any

unusual resistance or induration, and particularly if the skin over it be slightly reddened or livid he should suspect an *incomplete internal fistula*. By pressure pus may be made to ooze from the anus, may be seen flowing into the rectum when a speculum is passed, or the internal orifice may be felt and a probe passed into it and made to present under the skin; any one of these signs will make the diagnosis certain. *Ascarides* may be seen around the anus.

2. **Examine the anus.**—If the anus be found retracted and tightly closed by the sphincter with deep radial folds around it, the spasm is probably due to an irritable ulcer, and the patient should be encouraged to force down as in defæcation, and at the same time the surgeon should gently evert the opening, when a *fissure* will probably be seen with a small fleshy nodule of thickened skin at its outer end. This fissure is most common at the posterior border of the anus; there may be more than one. If the finger, well-greased, be now passed into the anus it may be able to detect a small soft depressed *ulcer* at the inner extremity of this fissure. The symptoms of this very important affection are severe gnawing pain during and especially after defæcation, the pain being in the anus, and spreading from it down the thighs, and a streaking of the fæces with pus or blood with a slight purulent discharge. Whenever there is severe pain after defæcation, or the passage of the finger into the anus causes acute pain, suspect fissure.

There is another condition liable to be mistaken for spasm, and that is *stricture of the anus;* in this the anus is not retracted, anæsthesia in no way lessens the resistance offered to the passage of the finger, and the rectal evacuations are always small. This is seen in children as a congenital affection, and in adults as the result of badly devised operations in which the cicatrisation of the wounds has narrowed the orifice.

Epithelioma of the anus may obstruct the outlet. Patulous anus, offering no resistance to the entrance of the finger, or to the escape of flatus, fæces, or discharge, may be the result of constant stretching of and pressure upon the sphincter by prolapsus of the bowel, or of operation, particularly of a double complete division of the sphincter, or it may be due to the presence of a stricture in the rectum of such a nature as to act the part of a sphincter.

Swellings at the verge of the anus must be carefully and critically examined. The lining of the orifice may be swelled more or less uniformly, of a somewhat bluish-white colour with very superficial abrasions, the condition being attended with itching and smarting; this is known as *eczema of the anus*. *Mucous patches* may be found at the verge of the anus resembling those seen on the skin around it. Of the remaining swellings, three forms of isolated, distinct little tumours must be distinguished. First and most common is a solid flaccid fold or tab of skin, incompressible, and not tender (*anal tabs*); then there are rounded, soft, smooth, compressible swellings of a bluish colour, which are dilated hæmorrhoidal veins covered externally by skin (*external hæmorrhoids*); the third form is a tense firm globular very painful and tender swelling, deep blue in colour on its innermost surface, with more or less redness and swelling of the skin; this is known as the *inflamed external hæmorrhoid;* it is a thrombosis of a hæmorrhoidal vein. The swelling, however, may take the form of an indolent infiltrating swelling without marked projection of the surface, and more apparent to touch than to sight. If it be an ill-defined thickening of the skin and subcutaneous tissues, indolent, painless, with slight livid red discoloration of the skin, or the skin be ulcerated with a firm yellowish-white slough forming the floor of the ulcer; or if there be

independent ulceration of the bowel, *gumma of the anus* or *ano-rectal syphiloma* is to be diagnosed; a history or evidence of constitutional syphilis and the favourable results of treatment will afford substantial support to the diagnosis. If, however, the induration be more nodular, or assume the form of an ulcer, with thick everted edges, and depressed indurated uneven base, with small polypoid excrescences, and the inguinal glands be enlarged, and especially if the patient be past middle life and not the subject of constitutional syphilis, and the disease be unaffected by any medicinal treatment, and show no tendency to heal but steadily advance, it is *epithelioma of the anus;* this may extend up the rectum and form considerable masses infiltrating the bowel and obstructing the passage of fæces.

Lastly, the surgeon may find that there is a *protrusion from the anus;* or if none exist he may evert the orifice and get the patient to strain and see if this cause any protrusion; he must examine any such protrusion carefully to notice whether it consist of the everted mucous membrane of the bowel, and whether there is or is not a groove or sulcus between the protrusion and the anus. If the mucous membrane be directly continuous with the skin of the anus it is either simple prolapsus or prolapse of internal hæmorrhoids, and this must be decided by detecting low, soft, sessile, deep red or livid projections from the surface of the membrane, which prove the case to be one of *prolapsed internal hæmorrhoids;* if no such vascular outgrowths are seen it is a case of *simple or partial prolapsus*. If, however, the finger or a probe can be introduced into the rectum into a more or less deep sulcus around the base of the protrusion, it is a case of either complete prolapse or of polypus, and this can be decided by noticing whether there is an orifice at the extremity of the projection or not. If, therefore, the projection have

an orifice at its extremity, be covered by normal mucous membrane, and project through the anus with a groove or sulcus running round between its base and the anus, it is a *complete prolapse* or *procidentia recti.* This will be distinguished from the *partial prolapse* or prolapse of mucous membrane only, by the sulcus round its base, by the fact that it is marked by circular folds in the mucous membrane, by its greater size, and often by its greater length; when of old standing, and one that has been habitually down, the mucous membrane becomes drier than normal, approaching the condition of skin. If the finger passed into the sulcus round its base can feel the reflection of the wall of the rectum on to the prolapse, it is usually called *prolapsus or procidentia*, but if the finger cannot reach the bottom of the sulcus, or feel this reflection, it is spoken of as an *intussusception.* When the projection is large the surgeon may be able to feel the gurgling of coils of small intestine within its anterior part. If two apertures are found close together at the extremity of the projecting mass, the case is known to be an intussusception starting at the ileo-cæcal orifice. In rare instances a stricture of the rectum may be forced down through the anus; the character of the orifice, its induration or ulceration, might indicate the nature of the case, but after reduction the diagnosis would be readily made. If the patient complain of severe pain and of inability to replace a projecting mass, and if it be œdematous and swelled, livid in colour, or perhaps even black and gangrenous in places, it is a *strangulated prolapsus*, in which strangulated internal piles may or may not be recognised.

Where the projecting mass is solid without any terminal orifice it will be recognised as a *polypus.* The most common variety of polyp is a bright red soft

pedunculated growth, about the size of a cherry, found in children and young persons, consisting of adenoid tissue, and called the *glandular polyp;* it causes hæmorrhage, and is *the* great cause of hæmorrhage in children; it sometimes leads to the production of a fissure, and so may be associated with acute pain; when it is strangled by the sphincter ani it also gives rise to pain. Much more rare is a *soft fibrous polyp* formed of a pedunculated outgrowth from the mucous membrane like the common mucous polyp of the nose. *Firm fibrous polypi* are found only in adults in the form of smooth rounded growths with a slender, and often a long stalk. *Villous polypi*, recognised by their velvety surface, rarely protrude from the anus. *Cancerous* masses are recognised by their hardness, their association with ulceration, and the fact that they infiltrate the wall of the rectum. Polypi are to be distinguished from internal hæmorrhoids by their being more distinctly pedunculated, while piles are sessile, and also by the fact that their pedicle is attached above the sphincter ani; piles are anal growths, or if found higher up in the bowel are associated with similar growths at the anus.

The verge of the anus should be carefully examined for *fistulæ;* minute fistulæ in this situation are said to be not unfrequent in syphilitic disease of the rectum. Where a hæmorrhoidal tumour is found partly covered with skin, and partly with mucous membrane, it is spoken of as an *intero-external hæmorrhoid.*

3. **Examine the rectum.**—For this, the right forefinger should be well greased after the nail has been filled with soap, and gently introduced into the bowel, while the patient "strains down" to relax the sphincter muscle; in this way the tone of this muscle is at once determined. The finger should then be passed in to its full length, and gently swept round the

bowel, feeling especially for any narrowing of its calibre, any induration of its walls, and any breach in the smooth velvety mucous surface; by sweeping the finger round, a mucous or soft gelatinous polypus may be caught and felt, or even have its pedicle torn across. It is necessary to remember to use the utmost gentleness in this examination, especially where there is any ulceration of the surface, or stricture, as forcible pressure has been known to rupture the thinned and infiltrated bowel. Where a polyp is being sought for it is sometimes useful to have the patient standing up with his right foot raised on a high stool, and to make the examination in that position, as in that way the finger can reach higher than when the patient is recumbent. When the patient is anæsthetised, it is convenient to commence by dilating the sphincter, by inserting the two thumbs and separating them widely until the resistance of the sphincter is lost; by that means the interior of the bowel can be thoroughly explored, even without a speculum. In the male the prostate, base of the bladder when full, and the vesiculæ seminales, can be felt in front of the rectum; in the female the cervix uteri projects back towards the sacrum and is plainly felt through the rectal walls; in both sexes, the sacrum and coccyx are felt behind, and the ischial spines and tuberosities at the sides. These parts, either in their natural condition or enlarged, must not be mistaken for disease of the rectum. By means of a speculum the interior of the bowel can be examined with the eye, and the characters of any ulceration or new growth, or projection from the surface, as well as the condition of the vessels of the membrane can be determined. The base of all ulcers should be carefully explored with a probe to detect any sinus leading from them. Other means of exploring the rectum have been from time to time recommended, such as passing a bougie,

or a bullet-probang, or inflatable balls of different kinds, for the purpose of the diagnosis of stricture of the bowel; none of these can be recommended, each may be productive of mischief, and may also deceive the surgeon by appearing to pass when really curling back, or by being arrested by a natural fold or bony prominence. The entire hand may be passed into the rectum and up along the colon; this can only be safely done when the hand is small and the introduction is accomplished very slowly and gradually.

It will be most convenient first of all to discuss the diagnosis of those lesions which are revealed by the speculum, but which are not detected by the finger. Immediately within the anus the submucous veins may be found congested, tortuous and enlarged, but visible as a venous plexus beneath the mucous membrane; this is best described as *hæmorrhoidal varix:* it is common, and gives rise to itching about the anus, sometimes to hæmorrhage, and may run on to the formation of piles. A *nævus of the rectum* may be met with as a livid raised soft compressible circumscribed swelling of the lining of the bowel; the only symptom it occasions is severe hæmorrhage from time to time; being a congenital disease it will be usually found in children and young persons; these two affections will be distinguished by the position of the dilated vessels, the diffuse character of the one and the circumscribed character of the other, and by the one forming a distinct soft bulging of the surface in which individual vessels are not perceived, while the other does not form a tumour, and individual veins are seen with clear spaces between them. A very different condition is that in which the mucous membrane is found of an uniform deep red colour without its normal glistening look, and is hot to the touch, and occasions an aching or burning pain to the patient, and an increased secretion of

rectal mucus; this is *chronic catarrh* of the rectum; it has been spoken of as one form of internal hæmorrhoids, but is to be distinguished from that disease. Sessile deep-red projections from the mucous membrane are to be recognised as *internal hæmorrhoids;* these vary somewhat in appearance, some being very livid, others being of a bright red colour and bleeding very readily; they are usually too soft to be detected by the finger, but if of long standing and occasionally prolapsed and strangled, they may become firmer and distinctly palpable. The various forms of *polypi* already mentioned may be seen by the speculum; the *villous polypus* forming a sessile warty or papillated tumour, or consisting of numerous detached villi, and then called *polyadenoma*, will only be detected by this means of examination; it will be distinguished from cancer by the absence of induration of the rectal walls. The inner orifice of a *fistula* may be seen, and a probe introduced to detect the course of the sinus; generally the orifice will be felt. The surgeon will recognise two forms of blind or incomplete internal fistula, in one of which the sinus passes outwards under the skin causing some induration and lividity by the side of the anus; and in the other the probe passes up along the gut, either in the submucous tissue, or outside the bowel in the superior pelvi-rectal space; upon the thickness or thinness of the tissues overlying the probe in the sinus the surgeon will distinguish between the latter two. In some cases of *simple stricture* of large calibre, the finger fails to detect the narrowing owing to the absence of induration, but the contraction is rendered visible by the speculum, the size and shape of the opening as well as its lack of dilatability will at once enable the surgeon to diagnose it. The speculum will of course expose to view the anal fissures and irritable ulcers we have already mentioned.

The affections of the rectum which the finger detects may be grouped into ulcers and fistulæ, stricture and malignant disease of the rectum and new growths, etc., projecting into it.

An ulcer is detected by the absence of the perfect smoothness of the mucous lining of the bowel. The features to be specially recognised in reference to any rectal ulcer are (*a*) whether it is the internal orifice of a *fistula* (this can only be rightly determined by making an effort to pass a probe along it); (*b*) whether single or multiple; (*c*) whether attended with stricture or infiltration of the coats of the bowel; (*d*) and whether there is a history of syphilis or struma. The ulcer may be found on an internal pile or polypus from injury done in the act of defæcation. If the ulcer be single, circular in outline, without induration of its edges or base, and if the only symptoms to which it gives rise be the frequent passage of lumpy motions with excess of mucus and colicky pains, it is a *simple ulcer;* this is of the same nature as the irritable ulcer of the anus, and the nearer it approaches the anus the more pain does the patient experience. Such an ulcer found in a person known to be strumous is to be diagnosed as a *strumous ulcer;* this variety may be multiple, and there may be slight thickening of the edge of the sore; or the affection may be very chronic, and when it heals leaves bands of firm cicatrix narrowing the gut. If the ulcer be irregular in outline, with a sinuous sharply-cut edge, and be surrounded by a low flat ill-defined induration, it is a *syphilitic ulcer;* the surgeon will seek confirmation of this diagnosis in the history of the patient, in the existence of any other signs of late syphilis, and in the presence of irregular cicatricial narrowings of the bowel, or of small fistulæ opening at or close to the verge of the anus. *Soft chancres* and *phagedœnic chancres* are

occasionally met with in low prostitutes or the victims of pæderasty; the former are recognised by their sharply cut edge and depressed sloughy base, and by their being generally associated with similar sores around the anus and on the vulva; the latter is distinguished by the sloughy base and edge, and the extent and rapid increase of the ulcerated surface, *Hunterian chancre* may be met with in the rectum. and the induration of the edge and base together with the enlargement of the inguinal glands if the sore be at the anus, and of the pelvic glands if it be placed higher up, followed by the usual sequelæ, enable the diagnosis to be made. For the diagnosis of *cancerous ulcer* see below.

Lastly we must speak of the diagnosis of the conditions leading to narrowing of the calibre and induration of the walls of the rectum; these are often associated together and are recognised by the finger. The rectum may be displaced or compressed by swellings or other pathological changes outside it; the commonest instance of this is hypertrophy of the prostate, which is recognised as a firm rounded mass bulging into the front of the bowel and causing troublesome tenesmus; abscess of or around the prostate forms a fluctuating tumour in the same position, and malignant tumours may develop in this situation eventually infiltrating the walls of both the bladder and the rectum, and at their late stage not to be distinguished from primary cancer of the rectum. The enlarged vesiculæ seminales associated with strumous testicle bulge into the bowel higher up, and tumours springing from the pelvis may compress the bowel. In the female a retroverted uterus, or a tumour of the uterus or ovary, may have a similar effect. In both sexes, but more often in women, on account of the greater frequency of pelvic inflammation in that sex, the bowel may be bound

down by firm fibrous adhesions. The surgeon will recognise these conditions by the position of the compressing masses, and the other signs and symptoms occasioned by them, and particularly by noticing that the rectal walls are not indurated or fixed, but glide more or less freely over the compressing structures.

If the surgeon find a firm nodular thickening of the mucous and submucous membrane without ulceration, or with ulceration just commencing, he should gravely suspect that he has to deal with a *commencing cancer*, and he should remove a small nodule for microscopical examination to render the matter certain. But if the surgeon find its walls infiltrated, thickened and hardened, of irregular contour, with puckered contractions and scattered ulcerations, he will diagnose *syphilitic stricture;* fistulæ which may open into the vagina or urinary bladder are common in this affection. A closely similar condition of the bowel is occasionally met with as the result of *dysentery* affecting the rectum; the diagnosis will rest upon the history, in the one case of syphilis, in the other of dysentery of long standing and marked severity. If the surgeon discover a hard nodular mass infiltrating and inseparable from the wall of the rectum, narrowing or even altogether occluding the canal of the bowel, and fixing the gut to the sacrum behind, or to the bladder or uterus in front; and if this mass continuously increase in size, be ulcerated on its free surface, with more or less of polypoid outgrowth from the ulcer, and be attended with pain in the sacrum, and frequent evacuation of mucus or of fœtid broken-down blood, a diagnosis of *cancer of the rectum* is to be made. This will be supported if the patient be over thirty years of age, if he be emaciated, pale, and sallow, if the pelvic glands be found to be enlarged, or if nodules of cancer can be felt in the liver.

The relative proportion of growth and ulceration differs much: in some cases the bowel becomes completely blocked by the nodular masses of growth, while in other cases the neoplasm quickly ulcerates, and the rectum may be then converted into a cancerous chasm with firm irregular walls, often extending into the bladder or uterus or vagina. Cancer is not unfrequently complicated with complete external fistulæ which may open into the bowel above or below the constriction; recto-vesical fistula will be recognised by the escape of flatus and fæces with the urine, associated with great pain during and after the act of micturition. Cancerous disease of the rectum is most commonly found about three inches from the anus, the rectum below it being healthy; but it may start at the anus and gradually spread up the bowel, or be met with at any higher part of the gut.

Of quite distinct appearance and nature is the remaining variety of stricture commonly spoken of as *simple stricture*. This is usually a circular or crescentic narrowing of the bowel, feeling like a ring or cord around it, lined with healthy mucous membrane, and situate about two inches from the anus, although it may be met with higher up. It is generally found in young persons, and in women more often than in men, and is considered to be due to a congenital malformation of the bowel; some simple fibrous strictures are probably due to the cicatrisation of a strumous ulcer. The simple stricture does not fix the bowel.

The finger may impinge upon an *intussusception* in the rectum; this will be distinguished from a polypus or other form of tumour by its characteristic shape, but especially by the orifice at its extremity; the symptoms attending it (a discharge of mucus or blood, tenesmus, colic, and intestinal obstruction) will also aid in the diagnosis.

The finger in the rectum will readily detect masses

of *impacted fæces*, or *foreign bodies* that may have been swallowed or introduced through the anus. If after an enema have been given and returned the finger find the bowel empty, with its walls not collapsed, nor contracting upon the finger, a condition of *atony* of the bowel exists.

If after a thorough examination of the bowel no local lesion can be found, and the patient complain of severe burning, stinging or shooting pain of a paroxysmal nature in the bowel or anus, and if there be no disease of the urinary organs, nor tumour in the pelvis, and particularly if the patient be subject to neuralgia elsewhere, the affection may be described as *neuralgia of the rectum*. This must only be diagnosed after the most patient exploration under an anæsthetic has failed to reveal any local lesion.

The congenital deformities of the anus and rectum, with one exception, are all attended with a failure to pass the meconium, and have been considered in chapter xxxv. (page 462).

A congenital malformation, which may be overlooked for some time, is *narrowing* of *the anus;* in this case the meconium escapes, but after a time attentionis drawn to the fact that the fæces are passed with difficulty and that they are of very small diameter. The anus at birth should readily admit the surgeon's little finger.

CHAPTER XXXVII.

DIAGNOSIS OF DISEASES OF THE PENIS.

Diseases of the urethra are considered in chapter xlii.

The prepuce.—If the prepuce cannot be drawn back over the glans with ease and without pain the