SOME EXPERIENCES IN RECTAL SURGERY.*

BY

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I do not propose to weary you with statistics, to magnify my successes or to minimize my failures, but rather to demonstrate some of the difficulties and pitfalls in diagnosis and treatment I personally have encountered, and to comment on some of the interesting cases that I have dealt with. I remember a delightful address given by the late Sir James Goodhart entitled "Where memory sleeps," in which he urged the profession to record its failures. It is a good thing to review the past. Memory too often sleeps over failures, while we are wide awake to our successes. It is indeed strange, on looking back, to find that we have acquired in the past some experience which has failed to serve us in the present, over which memory has slept.

RECTAL PAIN.

The absence of sensibility to pain in the rectum has its advantages and disadvantages in health and disease. In the great majority of healthy individuals Nélaton's sphincter at the junction of the pelvic colon and rectum responds to the stimulus of the first meal of the day, or it may be to an early glass of cold water, and deposits its load into the rectum. The rectum when adequately distended gives the call for evacuation. When this call is neglected by careless habit or for other reasons the rectum becomes accustomed to a normal load and requires an extra load—that is, a greater distension—to excite the normal reflex. Those individuals who so assiduously dope their intestines with innumerable aperients upset this normal mechanism by repeated stimuli to the colon, and interfere with the regular daily supply in bulk, just as those who neglect the daily call in early life acquire the constipated habit.

It would be a most unfortunate thing if the normal distension of the rectum was a painful process; on the other hand, a man may swallow his clasp knife or his false teeth, and these may repose comfortably in the rectum; so, too, the native thief in the gold and silver mines may employ the rectum painlessly as a "safe depository." When we realize that a malignant growth, provided always it does not pass the boundaries of the rectum by invasion, may grow to a considerable size without the owner's knowledge, we can only regard this insensibility as a mixed blessing. When we consider the portals of the rectum it is another story. The anal canal is truly blessed with great sensibility and most enduring powers of contraction, for which we in health are truly grateful, though should it be our lot to endure a fissure our blessings may be turned to curses until the surgeon sets the sphincter at rest with the knife. This great muscular power combined with high sensibility is due to the abundant nerve supply, which comes from the parietal instead of the visceral nerves as in the case of the rectum. It often happens that rectal pain, which is really anal pain, is a reflex phenomenon. Many cases of rectal discomfort are due to simple prostatic enlargement.

Rectal pain sometimes proves to be due to prostatitis and vesiculitis—a diagnosis which is easily confirmed by massaging the prostate and obtaining a specimen of urine afterwards. These are not all cases of urethral infection; some are instances of *coli* infection met with in the overworked man whose resistance is below par—cases which often respond well to vaccine treatment.

Occasionally with patients who complain of pain along the sciatic nerve and in the gluteal region we are content to diagnose sciatica, and it may not occur to us to investigate the rectum. Now and then in cases of this sort

the cause of the pain is a rectal ulcer (in itself painless), and there is often much kudos to be gained in the diagnosis. Other examples of reflex irritation through the sacral plexus are met with in connexion with rectal complaints which give rise to bladder symptoms—sometimes irritability and sometimes retention. Last year I excised the lower four inches of the mucosa of the rectum from a middle-aged man who had a villous tumour involving this area. About a week afterwards, although to all appearance the patient was progressing quite normally, I found that his bladder was distended above the umbilicus and yet was causing him no discomfort. He had passed a moderate amount of urine daily. The bladder contained three pints of urine, and it was a fortnight before it recovered its normal tone. There was never any rectal or bladder pain. These cases are not uncommon, and are usually attributed to prostatic enlargement and the recumbent position, but do, I think, occur as a reflex manifestation without prostatic enlargement.

It is a matter of regret that pain is generally regarded by the public as inseparable from cancer. We know that cancer of the rectum is painless in the early stages and remains so until it either causes obstruction, encroaches on the sensitive anal canal, or by fixation to the sacrum or bladder irritates somatic nerves. We know that when carcinoma of the rectum is treated by radical operation in the early stages the percentage of cure is probably higher than for any other part of the body, except, perhaps, the lower lip, and we also know that the majority of the cases which give rise to pain have extended beyond the range of cure.

I often see patients who refuse to believe that they have cancer because they have no pain, and indeed I often see patients who have not been examined for carcinoma for the same reason.

Examination of the Rectum.

Failure to make a routine examination of the rectum is responsible for many mistakes in diagnosis. A patient now under my care with carcinoma of the rectum suffered from iritis and was treated for a prolonged period with arsenic. While under this treatment the patient began to suffer from diarrhoea, which was attributed to the arsenic. Unfortunately for her the real cause was not recognized till six months later, when the growth was far advanced.

On one occasion I went out of town to see a patient with jaundice which was thought to be due either to gall stones or malignant disease. This patient had carcinoma of the rectum within reach of the finger, and secondary growths in the liver. Last year I performed colostomy for a patient with advanced carcinoma of the rectum who had been under medical supervision for some time, and had been treated as a case of colitis without rectal examination.

Unexpected mistakes occur sometimes when a rectal examination is made. A patient was sent to me once as a case of carcinoma who was suffering from impaction of faeces in the rectum; and my colleague, Mr. Mummery, was called in on one occasion with a view to operation and found that the supposed growth was the cervix uteri projecting into the rectum. Inflammatory strictures are constantly mistaken for malignant disease. I have mistaken a breaking down haematoma for a carcinoma of the rectum, and on one occasion operated for haemorrhoids and left an adenomatous polyp behind which I had to remove later on. I once saw in the *post-mortem* room an instance in which the patient had died from peritonitis a week after an operation for haemorrhoids; a growth at the recto-sigmoidal junction had perforated.

MORGAGNI'S PAPILLAE AND PRURITUS.

I should like to call your attention to cases of hypertrophy of the rectal papillae—Morgagni's papillae, the so-called "sense organs" of the rectum.

Nearly twenty years ago I recognized that they were often a factor in pruritus ani, and I have relieved, and in many cases cured, almost in the twinkling of an eye, cases of long-standing pruritus by cauterizing these papillae.

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In addition to causing pruritus, these papillae when hypertrophied often give rise to pain, and are, I am convinced, responsible for many of the cases of so-called "obscure rectal pain." The pain often comes on quite suddenly, and is of a sharp, shooting, intermittent character. It is especially liable to come on when the bowels act. In some cases the patient will complain of a dull ache in the sacral region, and more often than not of a sensation of a "lump in the rectum," which seems to protrude during defaecation, although nothing actually comes down.

I was consulted by a medical man on one occasion who told me that pruritus was ruining his life by destroying his sleep, playing havoc with his temper, and wrecking his practice. I cured him then and there in a few minutes with the electric cautery. I never heard from him, but his partner told me some time later that the result was miraculous.

Only the other day I learned that I had cured another medical man in the same way. I will quote some sentences from his letter in the *Lancet* of September 29th, 1923, which is headed "The causation and treatment of pruritus ani."

"Having been a sufferer from this complaint off and on for thirty-four years, it has occurred to me that my personal experience with regard to its treatment may be of value to those who have cases of this sort. . . .

"About twenty-four years ago I consulted Sir Charles (then Mr.) Gordon-Watson. He held the view that the cause of the trouble lies in the papillae of Morgagni, which, situated at the ano-rectal junction, are absent in the majority, yet present in a considerable proportion of individuals. . . . In my own case Sir Charles Gordon-Watson destroyed these hypertrophied papillae with the electric cautery. This was done without even a local analgesic and was not very painful. The itching, which had become unbearable, disappeared at once like magic, and I remained absolutely free for about five years. There was then a slight return occasionally, but carbolic vaseline kept it in check. About a year ago, as the pruritus had again become rather troublesome, I was examined by a surgeon, having first told him what he would probably find. He destroyed five or six papillae with instantaneous results, and has since treated four similar cases with equally good effects. The reappearance of a papilla is in my case always attended by a return of the pruritus and discharge of irritating mucus which rapidly causes the skin to inflame. . . . The patient should be warned that the papillae are likely to recur, and advised to return for their destruction immediately any fresh itching is felt."

Although in some instances, as just recorded, great success follows this treatment, in others results are often disappointing.

ABSCESS AND FISTULA.

Fistula in ano, though a common complaint in hospital practice, is comparatively rare in the better-class practice. It is perhaps the most neglected disease in existence. Patients of the poorer class will endure the daily staining of their "linen" for years on end, while the fistula burrows up hill and down dale. Surgeons will pass the bed of a fistula case with a pious prayer for his speedy recovery, but with a hope deferred and with a heart sick at the long-occupied bed. These cases can be cured with certainty in experienced hands, but the operation is too often considered a minor operation and relegated to a resident, who lacks the special experience. Quite half the cases admitted to St. Mark's for fistula in ano have been operated on elsewhere, and often more than once. Operations for fistula in ano in general practice more often than not will fail to enhance the reputation of the practitioner as a surgeon, for I do not think there is any operation in surgery in which experience is so essential to success. Let me quote from Shakespeare (*All's Well that Ends Well*):

Countess: What hope is there of his Majesty's amendment?

Lafcu: He hath abandoned his physicians, madam; under whose practices he hath persecuted time with hope, and finds no other advantage in the process but only the losing of hope by time.

Bertram: What is it, my good lord, the King languishes of?

Lafcu: A fistula, my lord.

In treating these cases granulation tissue must be most carefully followed up to the bitter end; the tough fibrous tissue which surrounds the tracks must be dissected out or freely incised and all overhanging skin removed; and it is

essential to remember that the great majority of fistulae open into the bowel posteriorly just above the external sphincter. Although from time to time a great variety of foreign bodies have been removed from fistulae at St. Mark's—small bones, tin-tacks, grape stones, and the like—I do not think that foreign bodies are found at operation in more than about 3 per cent. of the cases. No doubt in some cases when an abscess bursts or is opened a foreign body escapes unrecognized.

A patient came to me suffering from agonizing rectal pain; the pain had commenced during defaecation on the previous evening and had continued with short intermissions until seen the following day, when it had become unbearable. I found a rabbit bone about 2 inches long impinged across the anal canal and penetrating the sphincter on either side, which I removed after cutting it in two. I warned the patient that abscess sometimes followed injuries of this nature, and several weeks later he presented himself with a large ischio-rectal abscess on either side.

It is well to remember that an ischio-rectal abscess may sometimes occur on both sides simultaneously, advancing rapidly on one side and slowly on the other. On one occasion I dealt with an abscess on one side which healed up uneventfully. The patient, who was a nervous individual, left the home some three weeks later, but when he left still complained of rectal pain, which I attributed to temperament. A few days later he came back to me still complaining of pain. I examined him and found nothing wrong, and attributed his symptoms to nerves. He had in fact an abscess on the opposite side, which, to my great regret, I had failed to recognize. As a rule pain is not a marked feature until the abscess begins to bulge either into the rectum or to the side of the anus in the ischio-rectal fossa, and I have opened abscesses of considerable size which have caused very little pain. On the other hand, pain may be a symptom of perianal infection before an abscess can be detected. I have recently met with a case of this nature that caused great difficulty in diagnosis. There are many pitfalls in connexion with abscess and fistula, both in diagnosis and treatment, and it is only when you have spent many years constantly dealing with these cases that you realize this. I am often amazed at the light-hearted way in which some of these cases are tackled by the inexperienced.

An abscess in connexion with the appendix or Fallopian tubes will sometimes make its way down to the pelvi-rectal space and bulge or burst into the rectum. It was the usual practice of the late Mr. David Goodsall to open and drain an appendix abscess by the rectum.

I was once asked to examine with the sigmoidoscope a patient who had been under treatment for several months because of a purulent discharge from the rectum which had been diagnosed as due to ulcerative colitis. I discovered a small pin-point opening in the lower rectum which admitted a probe and exuded pus. Bimanually there was marked induration in the pelvis. I cured the patient by removing an appendix which was embedded in adhesions in the pelvis and was responsible for a pelvic abscess draining via the rectum.

In 1911 a patient was sent to St. Mark's with a diagnosis of ischio-rectal abscess. Some years previously he had been operated on for ischio-rectal abscess. When I examined the patient in the kneeling position I found that the supposed ischio-rectal abscess was in reality a swelling connected with the ischium which bulged out into the ischio-rectal fossa. On palpation the diagnosis at once became clear. Wherever the tumour was pressed on with the finger well marked "egg-shell" crackling occurred. This was a large myeloma of the ischium, which in due course I removed, together with most of the ischium, after tying the internal iliac artery as a preliminary measure. The patient made an excellent recovery. It is, I think, the only case of myeloma that I have seen in which I have been able to demonstrate clearly the egg-shell crackling.

Tuberculous Fistula.

I am often asked what part tubercle plays in perianal abscess and fistula in ano. Mr. W. B. Gabriel, assistant surgeon at St. Mark's, when he was house-surgeon, investigated a series of 75 cases of fistula, cutting sections of

fistulous tracks in 45, and inoculating guinea-pigs with the pus and granulation tissue in the remaining 30 cases. Of these 75 cases no less than 10 proved to be tuberculous; 5 of them were victims of active pulmonary tuberculosis, and 5 showed no evidence of tubercle elsewhere and must be regarded as cases of primary tuberculous fistulae. Nine of these cases were operated on, and it is a noticeable and characteristic feature that after six months only one of them had healed. Mr. Gabriel is of opinion that the percentage of tuberculous cases in this series is higher than normal, and I agree. If similar investigations—which, I may add, are extremely laborious—were carried out over a series of some 500 cases I do not think the proportion of tuberculous cases would prove to be more than 5 per cent.

This summer I was asked by a physician to see a case of pleural effusion (Pempyema) in a man aged 62. The effusion turned out to be non-purulent and sterile. Subsequently we found the tubercle bacillus in the sputum although there were no physical signs of pulmonary tuberculosis. The pleural condition cleared up and the temperature settled, and the patient was about to leave the nursing home when the temperature again became unsteady without any change in the chest signs. Some days later there was rectal discomfort and pus appeared in the motions. On rectal examination I found a fairly large retrorectal abscess which had to be dealt with surgically. The patient died in a sanatorium about three months later from pulmonary tuberculosis. The retrorectal abscess settled down, though a small sinus remained.

Although in cases of tuberculous fistula pulmonary tuberculosis is more often present than not, fistula is a comparatively rare complication of pulmonary tubercle. Dr. Hugh Walsham found that, at the City of London Chest Hospital, in 891 cases of tubercle of the lung, fistula was present five times and ischio-rectal abscess twice, and that in 133 necropsies after death from phthisis there was only one fistula in ano.

A fistula occurring in a tuberculous patient is not necessarily tuberculous in origin, though liable to become so if neglected. If simple and treated early it may, and probably will, heal even though tubercle is active in the lungs; but if tuberculous it is much more intractable, especially if the lung condition is active.

It was a tradition in the past that tuberculous fistulae should not be operated on. It was contended that the fistula acted as a safety valve to the lungs, and relief or cure of the fistula accelerated the pulmonary mischief. At the present time no such belief as this holds ground. There can be no doubt that progressive ulceration, subcutaneous faecal extravasation, and painful defaecation can have no beneficial effect on the local condition in the lungs or on the general condition of the patient. On the other hand, considerable relief, both bodily and mental, can be obtained by operation if the cases are judiciously selected, and in a certain percentage a complete cure of the fistula will result.

If a patient is the victim of acute phthisis and cannot live long, no operation is advisable. The most that can be done is to relieve pain by simple incision under local anaesthesia. If a radical operation is attempted no benefit will accrue; it will be followed, not by healing, but by progressive ulceration, and the last state will be worse than the first. If a patient has been the subject of active phthisis, but is at the time of consultation on the road to or far advanced towards recovery, more active treatment may be employed and with more prospect of success.

I cannot leave the subject of abscess and fistula without a warning that some such cases are secondary to malignant disease. Many cases come to St. Mark's with a diagnosis of abscess or fistula which are really cases of carcinoma with secondary sepsis. These are hopeless cases from the first, but it is wonderful how much improvement can be secured with colostomy and free drainage. A patient of mine improved so much temporarily with the aid of x rays that he embarked on matrimony for a second time.

A chronic fistula may in rare circumstances become the seat of malignant disease. I have had one such case, which I reported at the Royal Society of Medicine. In spite of radical operation the fistula failed to heal. Induration round the area increased and ulceration commenced. A portion of the indurated area was removed, and it was found that carcinoma had developed in the track of the fistula. Colostomy was refused, and a modified local excision was performed so as to allow the anus to function.

Recurrence followed and was again dealt with, but ultimately death occurred from secondary growth in the liver.

Had this patient, when carcinoma was first recognized, consented to colostomy followed by a radical excision, I have little doubt that he would be alive to-day. As it was he survived for nearly three years. It is interesting to record that in this case there was a very strong family history of cancer, and that the patient, when he first consulted me, was in dread of the disease. Another point worth noting is that when healing was delayed silver nitrate was freely used, which increased the chronic induration rather than promoted healing.

Colostomy.

It is unfortunate that colostomy has got such a bad name both with the profession and with the public. It is a commonplace for patients to say, "I would sooner be dead than have an opening in my side." There can be no question that the irritating diarrhoea and mucous discharge, the tenesmus and incontinence, the loss of appetite and cachexia from toxic absorption, which are the accompaniments of advanced carcinoma of the rectum, can not only be relieved, but in many cases completely arrested, often for many years, by a colostomy properly performed and properly attended to.

A well managed colostomy acts but once a day if washed out regularly at a fixed time. The toilet involves perhaps half an hour, often less. Offensive odour can be eliminated by kerol internally, and custom soon overcomes sentiment. Many patients admit to a daily sense of "well-being" after the colon has been emptied by a wash out, such as they have not experienced in the past when the bowels were evacuated by the natural route.

There are members of our own profession, to my knowledge, in London going about doing their work and enjoying life with a colostomy, and it is the same in every walk of life. There are many patients leading active lives who come to see me periodically at the hospital on whom I have performed colostomy and often also excision of the rectum. I always ask them whether the colostomy causes them much inconvenience, and the reply is nearly always to the contrary. The secret lies in the fact that I always insist on a regular daily wash out, which trains the colon to act automatically, efficiently, and thoroughly once in the twenty-four hours.

Inoperable Cases.

The question is constantly asked after colostomy has been performed for an inoperable case, Can anything be done to diminish or destroy the growth?

My experience with radium has not been great, but I can record one striking case in a medical man. This patient, who had been my own medical man as a boy, was not under my care though I examined him. He had a fixed hard growth of the rectum causing a stricture which just admitted the finger. I had no doubt that it was a carcinoma, and this opinion was shared by several others who examined him. He would not consent to a colostomy and was treated with radium. The growth entirely disappeared, and he died more than ten years later, over 70 years of age, of an independent condition. In recent years several of my cases have been treated by intensive x rays. Reaction in these cases tends to be very severe, and improvement occurs after the reaction subsides, but I am not yet able to say that I have seen a growth disappear.

Injections of copper and selenium have been employed for many of my cases, and I have often noted that they produce an improvement in the general condition of the patient. How far this is due to physical effect and how far to mental I cannot say, but I can record two cases in which striking results were produced in the local condition.

The first case was a man, aged 73, seen in 1920. He had a typical circular carcinoma on the anterior wall of the rectum, 2½ inches from the anal margin, involving one-third of the circumference. The diameter of the growth was about 2 inches; it was not fixed to the base of the bladder. Operation was refused and treatment by copper injections once a week was commenced, and at the same time x rays were employed. Three months later I again examined him. Instead of an obvious growth I found a small projecting lump (diameter less than an inch) covered with normal mucosa. The lump felt

more like scar tissue than new growth. The patient, contrary to advice, discontinued treatment.

Three months later I saw him again. There was then definite ulceration and bleeding, the ulcer being about the size of half a crown. I did not see him again, but he ultimately died of the disease.

Recently we have had a remarkable case at St. Mark's.

A woman, aged 47, was seen with a fixed extensive growth within easy reach of the finger. I performed colostomy in October, 1920. On November 8th intramuscular injections of copper, alternating with intravenous injections of selenium, were commenced under Mr. Norbury's care in the out-patient department. The growth rapidly diminished in size. Injections were continued for over two years.

At the present time the patient remains in excellent health, and there is no evidence of a growth in the rectum.

Mr. Mummery has recorded the following interesting case of spontaneous cure of cancer of the rectum after colotomy:

The patient, a working man aged 48, was admitted to the hospital with a typical cancer of the rectum and anus. The growth was ulcerating, and had extended out on to the skin in one place. It occupied most of the posterior and part of the left lateral wall of the anus, and went up the bowel for about 1½ inches. Colotomy was performed as a preliminary to excision. The second operation was postponed for some reason, and before it could be done the hospital was closed for a month for the purposes of cleaning. The patient returned home, to be readmitted directly the hospital reopened. As a matter of fact, about seven weeks elapsed from the time of the first operation until he was readmitted. It was then discovered that the growth had almost disappeared. It completely disappeared in time, and after waiting another six months the colotomy was closed. At this time no trace of any growth in the rectum could be discovered.

RECTAL TUMOURS.

Some of my earliest memories in rectal surgery are associated with my work in the Metropolitan Hospital. I cannot forget a youth of 17 who came to the out-patient department with a story of troublesome diarrhoea; he was a victim of advanced carcinoma of the rectum, and died within three months. Or a young woman of 20 with a carcinoma of the rectum which filled up the pelvis and rapidly became disseminated over the peritoneal cavity, causing intestinal obstruction and death. Since that time I have met with four other cases under 30, and I have learnt that carcinoma of the rectum under 30 is a disease so rapid and so malignant that surgery, even in the early stages, is practically hopeless.

Practitioners sometimes forget that tumours of the rectum are not always malignant. I have on several occasions been able to bring great cheer to a patient, who has come with a terribly long face, when I have been able to make a diagnosis of simple rather than malignant tumour. In this respect great caution is needed, and a positive diagnosis should be withheld till the result of the microscopic examination is known. Recently I removed a pedunculated rectal tumour from a man, aged 50, which appeared to be an adenomatous polyp the size of a chestnut. After I had burnt my boats in diagnosis the microscope revealed definite evidence of malignancy, and much subterfuge has since been required by the doctor to keep the patient under observation. In another instance this year I removed a simple adenoma from a man of 66, and he presented himself with an apparent recurrence three months later. In this case both tumours proved to be innocent, and I have no doubt that these were separate and independent adenomata, though occurring in close proximity.

From time to time cases of multiple adenomata of the colon are met with. Sometimes the adenomata are so numerous and cause so much distress from diarrhoea and haemorrhage that colectomy offers the only hope of cure. Multiple adenomata, apart from the serious symptoms of frequent haemorrhage and diarrhoea, present an added danger from a liability to malignant changes.

Nearly twenty years ago a police sergeant was admitted to the Metropolitan Hospital with a tumour of the pelvic colon, which I resected, performing an end-to-end anastomosis. The specimen when examined showed an ulcerating carcinoma and several innocent polypoid adenomata above and below the carcinoma. The sergeant was anxious to remain in the police force and to qualify for a pension which was due in eighteen months' time. This he was able to do, as he made an excellent recovery. He lived nearly four years, and finally died in St. Bartholomew's Hospital

of haemorrhage from the bowel due to a recurrence, or, as is more probable, from another carcinoma arising from another adenoma.

I have met with several instances of multiple carcinomata of the colon. A patient was admitted to hospital with acute intestinal obstruction, from which he died. On rectal examination a carcinoma was felt. When I opened the abdomen to perform colostomy I was amazed to find that the cause of obstruction was a constricting growth of the pelvic colon which existed concurrently with a rectal growth. It seems probable that the rectal growth was the result of implantation from the pelvic colon growth.

The following case is worth recording as illustrating multiple carcinomata and the conversion of an adenoma to carcinoma.

A man, aged 65, came to the out-patient room in the summer of 1908 with a simple polypoid adenoma of the rectum. This I removed by transfixion after dilating the sphincters, and the patient returned to the country. A year later he again came to the hospital complaining of pain, the passage of blood in his stools, and of having lost flesh rapidly. On examination I found just within reach of the finger, at the site of the original polypus, an ulcerating growth of the rectum, which was fixed beyond hope of removal. I performed an inguinal colostomy. Subsequently he developed symptoms of obstruction, and on digital examination by the colostomy wound a second growth could be felt in the descending colon above the colostomy opening. I again opened the abdomen and performed a transverse colostomy, verifying the existence of the second growth in the descending colon. The man eventually died at home, so that we had no opportunity of a *post-mortem* examination. But I think there is little doubt that this was a case of multiple adenomata of the large bowel, developing into carcinomata.

In 1910 I excised the lower six or seven inches of the rectum, and the specimen illustrates the important dictum that innocent tumours of the rectum of a certain size in a certain situation require to be treated as if they were malignant. The tumour is a villous papilloma involving four-fifths of the circumference of the rectum and about four inches of its long axis. It is situated in that part of the rectum which is in direct relationship with the prostate and base of the bladder. There is no ulceration of the surface, and no constriction of the lumen of the bowel, nor has the growth extended through the muscle wall.

I excised the lower six or seven inches of the rectum by removing the coccyx and exposing the bowel from behind by an incision extending from just behind the anus to the sacro-coccygeal junction. The peritoneum was opened on either side of the bowel, and the rectum freed all round. The patient was then placed in the lithotomy position, and an operation commenced corresponding to the first stage of a "Whitehead," the lining membrane of the anal canal being dissected free of the sphincters. The muscular wall of the rectum was then cut through above the level of the sphincters and the bowel with the growth drawn through the anus and cut through well above the growth. The proximal cut edge was then sutured to the skin of the anus, and a drainage tube with gauze packing passed into the sacral incision.

This may seem a somewhat severe operation for an innocent tumour, but experience shows that these tumours frequently become malignant and commonly recur if not freely removed. No operation short of an excision could secure removal of this growth and leave the lumen of the bowel intact.

In a recent case of villous tumour not so extensive I dissected up the mucosa, starting at the anus, and removed as much as five inches of the circumference. I sutured the cut margin to the anus, and the patient retained perfect control.

Sarcomata in this region are so rare that the following case is worth recording:

A middle-aged lady was sent to me with symptoms of occasional rectal haemorrhage, sacral pain, and troublesome constipation. On examination I found that she had a small villous tumour in the ampulla of the rectum and that there was a huge, smooth, hard swelling in front of the sacrum bulging into the rectum, and obviously not a tumour of the rectum. The differential diagnosis seemed to lie between a sarcoma of the sacrum, a large dermoid cyst, or a sacral chordoma. The papilloma of the rectum was removed and proved to be innocent. The retrorectal tumour was removed with great difficulty after partial resection of the sacrum, and proved to be a round-celled sarcoma. Metastasis soon occurred in the liver, followed by intense jaundice, ascites, and death within three months of the operation.

Excision of the Rectum.

Opinions still differ as to the best methods to employ in excising the rectum. I will repeat the views I expressed at a discussion on this subject in 1920 at the Annual Meeting of the British Medical Association.

When the British Association of Surgeons met in London in May, 1920, I asked Sir Berkeley Moynihan what operation he employed for excision of the rectum. He stated in reply that he had changed his mind more often with regard to the surgical treatment of cancer of the rectum than with regard to any other surgical subject. This statement is, I think, good evidence that the surgical treatment of carcinoma of the rectum is not yet stabilized. There is no doubt that the operative treatment of cancer of the rectum is one of the most important outstanding surgical problems of the present time. I think we are all agreed that the conclusions at which Mr. Miles has arrived on pathological grounds are most convincing, and that the method of operation which he advocates represents a high surgical ideal, and one which we would all willingly employ if the mortality could be further reduced. Unfortunately the human equation plays havoc with high surgical ideals.

It was early in 1909 that my friend Mr. Ernest Miles invited me to visit the Cancer Hospital and see his new method of excision by the combined route. I went, I saw, I admired, and I was convinced; the operation appealed to me as an ideal radical method. In April of that year I performed my first abdomino-perineal operation by Miles's method, and from 1909 to August, 1914—that is to say, until I went to the war—I excised the rectum by this method 32 times, with 11 deaths.

When I returned to civil practice after the war, and had ascertained that the abdomino-perineal method with its heavy operation mortality did not confer a high immunity from recurrence, I felt that it was time to reconsider my attitude towards the operation. I consulted my colleague at St. Mark's, Mr. Lockhart-Mummery, and found that during the period of the war he had given up the abdomino-perineal method for growths below the recto-sigmoidal junction, and had adopted a very free excision from below after preliminary colostomy. His operation mortality was about 7 per cent., and the recurrence mortality of his early cases appeared to be no worse than after the abdomino-perineal operation. I then argued that if 93 patients out of 100 recovered after this operation, and that if one-third of these escaped recurrence, 31 would ultimately survive. On the other hand, if 100 patients were operated on by the abdomino-perineal method, unless the mortality could be improved only 66 would survive the operation, and if one-third of these escaped recurrence only 22 would ultimately survive—that is, a final mortality of 78 per cent. against 69 per cent. Even if the recurrence mortality of the perineal operation is as high as 75 per cent., the final results of the two methods would be about the same. It is well known that many operable cases are unsuitable for the abdomino-perineal operation on account of age or fat, or some other disease. Many of these can be dealt with by the perineal method under spinal anaesthesia with comparative safety. I therefore decided to employ the perineal method with preliminary colostomy until it could be shown that the final results of this method were not so good as the final results of the abdomino-perineal, reserving the abdomino-perineal method for all growths at or about the recto-sigmoidal junction which could not be satisfactorily removed by the perineal method.

If we are to make real progress in the operative treatment of this disease it is essential that the general practitioner should endeavour by more frequent rectal examination to establish a diagnosis at an earlier stage than is usually the case. During the year 1919, 47 new patients attending the out-patient department of St. Mark's Hospital were diagnosed as suffering from carcinoma of the rectum, and in no fewer than 42 of these—that is, 89 per cent.—the growths were diagnosed as fixed and inoperable. Until the result of our experience can be based on the operative treatment of comparatively early cases, not only will the material be insufficient on which to draw safe conclusions, but we shall always be handicapped in arriving at conclusions from the final results of any particular method of excision by the uncertainty of the existence of metastasis at the time of operation.

My views on this subject have not altered since the above mentioned discussion in 1920. Since the war the mortality of the abdomino-perineal operation has improved in expert hands, but the nature of the operation is such that the

mortality must be high for the average type of case requiring the operation. It can only be kept low if the cases are carefully selected. I have now performed considerably more perineal than abdomino-perineal excisions.

I am not yet able to refer to recurrences, but the number of cases that remain alive and well is most encouraging. I have one patient, who was 72 when I operated on him late in 1920, who is still extremely flourishing.

DIVERTICULITIS.

It is only in recent years that we have become familiar with an inflammatory condition, most commonly met with in the pelvic colon, known as diverticulitis.

Hernial pouches of the mucosa through the muscular coats harbour faeces. Stagnation is followed by inflammation, which when acute may give rise to gangrene, perforation, and peritonitis, or to acute suppuration and its sequelae. The acute phases simulate the acute manifestations of appendicitis, and were originally described by Rolleston under the title of "pericolitis sinistra."

A number of these interesting cases have been under my care, and I have had the singular good fortune to carry out a successful resection in three cases—one primary and two secondary. I say good fortune because, as a rule, the degree of inflammation renders resection impossible or unsuitable. More often than not when any degree of obstruction obtains colostomy is the only possible measure, though in one instance I was able to short-circuit the pelvic colon. When the inflammation takes a chronic course we get a remarkable mimicry of carcinoma. Chronic inflammation surrounding several inches of the pelvic colon gives rise to increasing fibrosis and stenosis, and so we get a sausage-shaped tumour which is often palpable. The sequel to stenosis is often intestinal obstruction of varying degrees.

Differential diagnosis may be very difficult even when the abdomen is opened. A positive diagnosis may sometimes be obtained with a barium meal and enema. The diverticula will fill with barium, and long after the barium has been evacuated from the general cavity of the colon little black blobs may be seen remaining in the diverticula, and when stenosis has occurred a long tunnel stricture, as opposed to a "string" stricture, at one point in the canal will be very suggestive.

When there is no definite obstruction but the symptoms are troublesome constipation and flatulence and a diagnosis is established by x rays, the question of treatment is rather a problem. Unless the involved area is put at rest the condition is sure to progress, and at any time acute symptoms may intervene. Many patients are quite unwilling to consent to colostomy even as a temporary measure, and the local condition may preclude a short-circuit. Faced with this condition last year I made use of the great omentum, wrapping up the whole of the involved area within it, and I sutured the margins of the omentum to the mesentery of the pelvic colon. In this way I felt that I was guarding against acute complications, though I was powerless to relieve the mechanical factors. It is interesting to note that the success of the operation has exceeded my expectations. The patient has experienced great relief from her previous symptoms of troublesome constipation and flatulence.

There is no doubt that diverticulitis, under favourable conditions, can, so to speak, clear up—that is, inflammation may subside and normal function return, especially when colostomy has been performed. In the past, before this condition was recognized, such cases, when chronic and obstructive, were no doubt styled malignant after exploration, and it seems certain that many recorded recoveries from malignant disease in this situation have been cases of diverticulitis.

It is seldom that diverticulitis can be diagnosed with the sigmoidoscope. Usually the affected area is beyond the reach of the sigmoidoscope, but recently I was able to demonstrate the mouths of diverticula in this way which were seen to open up when the sigmoidoscope was inflated. Although I convinced the doctor I did not, unfortunately, convince the patient. She was apparently so frightened, either at the diagnosis of diverticulitis or at my sigmoidoscopy, that neither of us has seen her again.