NINE CASES OF INGUINAL COLOTOMY FOR MALIGNANT DISEASE OF THE RECTUM: RECOVERY.

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COLOTOMY must not be considered in any way as a rival operation to that of excision in cases of rectal cancer. In a large number of instances excision is quite impracticable, and it is in such cases that the question of colotomy arises. The advantages of the operation lie partly in the relief it affords to symptoms, partly as a means of retarding the growth of the cancer. The pain caused by the growth itself varies greatly, and is more influenced by the position than by any other factor. When the growth is near the anal margin the pain is often intense, whereas, when higher up the bowel, there is comparative immunity. Sooner or later the bowel becomes strictured, the symptoms of which are very characteristic, and often cause the greatest misery. The sufferer is troubled with constant calls to the closet, and generally believes that he is suffering from diarrhoea, and not infrequently has been told that his disease is chronic dysentery.

What is passed at such times is not a true motion, but rather a grumous mucoid discharge stained with blood and faecal colouring matter. This discharge arises from an accumulation of scybalous masses in the dilated bowel above the stricture, and what comes away is merely the overflow from this mass mixed with blood and mucus. As time advances the trouble increases, the anus becomes raw and excoriated, and the patient is perpetually tormented with tenesmus. Purgatives and enemata gradually become useless, and the whole attention is fixed upon getting a proper evacuation. The abdomen gradually becomes swollen and tympanitic, and the patient dies from fecal vomiting, or occasionally suddenly from perforation of the intestine.

Colotomy completely relieves all symptoms arising from the contracted state of the bowel, while it serves as a permanent safety valve against the risk of complete obstruction. The influence of the operation in retarding the growth is a debatable question. My own impression, founded upon considerable experience, is a strong one, that the progress of the growth becomes much slower after the bowel is set at rest by the operation. The return of strength and the gain of flesh are often well marked after colotomy, no doubt due to the increased appetite, the relief from pain, and the quiet nights following the operation.

To suppose that a patient after colotomy is in a miserable condition, with faeces constantly running away from the opening, is a delusion. If, as sometimes occurs, the opening is made too small, or allowed unduly to contract, the advantage of the operation is, in great measure, lost, and constant dribbling occurs from the wound. If, however, care be taken to make the opening valvular and of sufficient size, a motion generally passes but once a day, and there is a fair amount of control over the new anus.

The time at which the operation should be performed is a matter of some importance. I advise it without delay in cases where symptoms of stricture are present. If deferred, not only does the patient lose the advantage of the operation, but it may have eventually to be performed for complete obstruction under most dangerous and unfavourable circumstances. Colotomy on an empty bowel, when the patient is not reduced to death's door by unrelieved suffering, involves but slight risk to life. Up to the present time I have been sufficiently fortunate out of a large number of cases of lumbar colotomy to lose but a single patient, and have had hitherto no fatal result from the inguinal operation. On the other hand, the death-rate following the operation when performed for complete obstruction on a distended bowel is as high as 30 or 40 per cent.

The colon may be opened either in the lumbar or inguinal region. Until recently the lumbar operation was universally selected in this country, but the improved knowledge of intra-peritoneal surgery has led surgeons to reconsider the inguinal method; and amongst those who have done much to reintroduce this operation must be mentioned Mr. H. Allingham.

There are two considerable objections to the lumbar operation, both depending on the limited space in which the operator has to work. The first objection is the difficulty often found in cer-

tainly recognising the colon, and this difficulty has caused many good surgeons to fall into the error of opening the duodenum, or some other part of the small intestine, with disastrous results. The second objection lies in the variations or abnormalities occasionally occurring in the descending colon. Slight variations in the course of the bowel generally mean nothing worse than a somewhat prolonged search; but not infrequently the operator altogether fails to find the bowel. The cause of this failure, as pointed out by Mr. Lockwood, arises from the bowel taking a totally abnormal course, so that practically there is no descending colon on the left side. To send the patient back to bed unrelieved, with a deep and dangerous wound, is a most unfortunate circumstance, but one which, nevertheless, is sure to occur in a certain proportion of cases. It has never been my misfortune hitherto to operate upon a patient the subject of an abnormal colon, but on three occasions I have been present when the operation has failed from this cause.

Inguinal colotomy meets both of the objections referred to. Owing to there being plenty of space there is no difficulty in finding the bowel; for, should it run an abnormal course, and not present itself when the peritoneum is opened, the operator has only to pass his finger down towards the pelvis and feel for the upper part of the rectum, when the bowel can be easily traced upwards, and a portion of the sigmoid flexure hooked out. Moreover, there can be no possibility of mistaking the small intestine for the large, the three longitudinal bands, together with the glandulae epiploicae, being so clearly marked and easily recognisable as to render a mistake impossible. From the operator's point of view there can, therefore, be no possible question of the superiority of the inguinal over the lumbar operation, especially if it can be shown that there is no disadvantage in the position of the outlet, nor that opening the abdominal cavity increases the risk to life.

Sufficient time has not elapsed to speak positively as to whether the opening in the groin gives rise to any special inconvenience not met with in the lumbar operation; but at present I have observed no disadvantage in this respect. As regards the risk of the operation, it is probably less than in lumbar colotomy. The bowel is found with ease and certainty; a clean incision can be made through the abdominal parietes without the bruising or damage of the sub-peritoneal fat so frequently unavoidable in Amussat's operation. The parts thus unite by first intention, with scarcely a trace of constitutional disturbance. Indeed, in the nine cases appended to this communication, which embrace my entire experience of the inguinal operation, none of them gave any anxiety whatever, all rapidly convalescing without an untoward symptom.

Unless a wider experience should disclose some danger or difficulty not yet observed, I believe that the inguinal operation will be that generally performed in the future, and that in a few years lumbar colotomy will be a mere matter of history. It is as a guide to those who have not yet had an opportunity of performing the inguinal operation that I venture to call attention to a few details I have found useful, together with a brief history of my cases.

Method of Operating.—Different surgeons vary considerably in their method of exposing and attaching the bowel to the surface. The following is the plan employed in my cases: The abdomen having been thoroughly well washed with soap and water, antiseptic treatment as regards sponges, instruments, hands, etc., is carried out. An incision two inches and three-quarters in length is made one inch and a quarter from the anterior superior spine, one-third of the incision being above and two-thirds below an imaginary line drawn from the anterior superior spine to the umbilicus. In making this incision the skin should be drawn a little inwards, so that the opening through the transversalis fascia and the peritoneum is on a different level, when the skin is again relaxed, thus making the opening valvular, and rendering its subsequent closure with a pad easier. The peritoneum being reached, it is pinched up and a small opening made, which is subsequently enlarged to nearly the length of the cutaneous incision. The small intestine generally first presents, but, on pushing it back, the colon often shows itself; if it does not it can be readily found by passing the finger downwards into the pelvis, and following the rectum upwards till the sigmoid flexure is reached, which can be hooked out with the tip of the finger. With moderate care there can be no possibility of mistaking the small intestine for the colon. The three longitudinal bands are very conspicuous, which, together with the glandulae epiploicae and the regular convoluted

surface, establishes unmistakably its identity; not infrequently, moreover, hard, scybalous masses can be felt within it. A loop of bowel being drawn into the wound, two provisional silk ligatures are passed through a portion of the peritoneal coat opposite the mesenteric attachment. These provisional ligatures, the ends of which are six inches long, help to steady the bowel during subsequent stitching to the skin, and eventually serve as guides when the bowel has to be opened. They should be two inches apart. The bowel is now temporarily returned into the cavity. The parietal peritoneum is then picked up with forceps, and attached to the skin on each side of the incision one inch and a half apart by a couple of sutures of fine silk. The bowel is again drawn out by means of the provisional ligatures, and fixed to the skin and peritoneum by six fine ligatures on each side. These sutures are best passed by fine partly curved needles, the needle passing first through the skin an eighth of an inch from the margin, then through the parietal layer of the peritoneum, and lastly through the peritoneal and muscular coat of the bowel, great care being taken to avoid perforation of its mucous membrane. It is easier to pass all the sutures before tying them up. The wound being perfectly cleaned by gentle sponging, the threads can all be tied with moderate tightness. A suture should now be passed through the skin at each end of the wound, including a portion of the peritoneal layer of the bowel.

The ligatures should be passed not far from the mesenteric attachment of the gut, so that about two thirds of the circumference of the bowel is external to the wound. I regard it as waste of time stitching the parietal layer of the peritoneum all the way round to the skin before drawing out the bowel; the four stitches mentioned are all that are really necessary at first to fix it, for it is subsequently included in the ligatures attaching the bowel to the skin. A piece of green protective is put over the exposed bowel, and the whole covered with a firm antiseptic dressing. Unless the protective is used, it will be found that the lymph thrown out from the bowel has attached the dressings with surprising firmness. I dress the case the next day to make sure that nothing has been displaced by vomiting, etc., the dressings being reapplied and kept on till the sixth day, when the bowel can be opened. By this time it is found firmly attached to the skin, and covered by a remarkably thick layer of organised lymph. In opening the bowel the provisional threads which have been left in afford a valuable guide. They are gently drawn upon, and the bowel opened between them with a sharp knife. The cut margins of the bowel can be pared off with scissors to the level of its attachment to the skin. No anæsthetic is necessary, the bowel being quite insensitive. The patient is convalescent in about three weeks.

For the notes of the following cases I am indebted to my house-surgeon, Mr. Bargarne.

CASE I.—G. G., aged 55, was admitted into St. Bartholomew's Hospital, October, 1887. For a couple of years he had experienced slight pain in defecation; he thought little of this till six months ago, when he began to pass blood in small quantities but very frequently, and he was compelled to go to stool ten or twelve times during the day. His motions were small and broken, and always blood-stained. He frequently was unable to pass anything but blood after painful straining. Lately he had had frequent micturition, and had lost flesh considerably. His aspect indicated constant suffering, and he spoke in a querulous dissatisfied manner.

Examination.—Anus natural; two inches and a half from it a hard nodulated growth completely surrounded the bowel, feeling not unlike a cervix uteri. The gut was so strictured that it would scarcely admit the tip of the finger. The liver was much enlarged, and obviously infiltrated with cancer.

October 26th. *Inguinal Colotomy.*—The small intestine presented, and on being returned the large was found without trouble, and stitched to the skin. On the following day, owing to some pain from distension of the abdomen, the bowel was opened and a large quantity of flatus escaped. The early opening of the gut prevented primary union to the skin, and the wound healed by granulation. He left the hospital within a month, he gained weight, his face had lost to a large extent the expression of constant suffering, and his motions were passed without difficulty from the artificial opening.

CASE II.—P. W., a woman, aged 47, admitted on December 1st. A few weeks before Christmas, in 1886, she experienced some difficulty in passing a motion, accompanied by the passage of a large quantity of clotted blood. This was soon followed by a constant

desire to go to stool, and a frequent discharge of bloody slime. In July, 1887, the rectum was partly excised at another hospital. On admission to St. Bartholomew's, she was a fairly healthy-looking woman, but with a careworn expression. On examination, the anus, partly from the contraction of the cicatrix and partly from recurrent growth, was completely obliterated. All her motion, over which she had no control, was passed by the vagina through a recto-vaginal fistula.

December 8th. *Inguinal Colotomy Performed.*—Large intestine at once presented, and was sutured to the skin. The bowel was opened on the third day. The wound was quite healed in three weeks. The opening, however, was not sufficiently large to be satisfactory, scybalous masses collecting, and causing constant diarrhoea from the wound.

The opening was enlarged by half an inch, with a very satisfactory result. The patient was discharged on February 7th. She complained of no pain, passed good nights, without narcotics, and her general health much improved.

CASE III.—J. M., a man, aged 43, admitted on January 11th. He had had good health till May of last year, when he was troubled by diarrhoea, accompanied by scalding pain. The attacks of diarrhoea alternated with constipation. He passed blood at first, but not lately. He had lost flesh.

Examination.—The anus and last two inches of rectum normal. Three inches up the bowel a growth completely surrounding it and firmly adherent could be felt. The bowel was tightly strictured.

January 16th. *Inguinal Colotomy.*—A large mass of omental fat at first presented, but the sigmoid flexure was soon found by exploring with the finger.

The bowel was opened on the third day. Most of the wound healed by first intention. He was discharged at the end of a month, though still weak; he had not much trouble with the new anus, which acted satisfactorily once or twice a day.

CASE IV.—E. C., a woman aged 43, was admitted January 17th. She had felt weak and unwell for a year. Five months previously she began to suffer from bearing-down pains, which were constant, and not aggravated by defæcation. The last two months there has been a considerable slimy discharge, but no blood.

Examination.—A large malignant mass could be felt about two inches and a half from the anus. The finger could not reach beyond the growth, and the lumen of the bowel was much narrowed.

January 30th. *Inguinal Colotomy.*—The sigmoid flexure presenting, the gut was opened on the third day, and the wound healed by first intention. At the end of a fortnight the opening seemed a little narrower than it should be. This was remedied by the patient wearing Cripps's colotomy dilator for a couple of hours every day for a fortnight. The patient left the hospital improved in appearance, but still complaining of some pain at night.

CASE V.—L. F., a woman aged 50, admitted January 24th, first commenced to suffer pain about three years ago. Twelve months since the pain became worse, and blood appeared for the first time, and she had continued to pass it ever since, in amounts varying from a few drops to a wineglassful. She was subject to frequent attacks of spasmodic diarrhoea, only dark-coloured slimy discharge generally coming away. The patient was in a condition of extreme cachexia and anæmia, and unable to walk without assistance. Lately all the motions had been passed through the vagina. The urine was albuminous.

Examination.—The anus and lower part of the rectum were completely occluded, the motions passing through a hole in the septum high up in the vagina. The patient, on admission, was so weak as to forbid the idea of any operation. After three weeks in bed, however, she improved.

Inguinal colotomy was performed, the small intestine presenting. The gut was opened on the fifth day, the wound having healed by first intention. She improved immensely after the operation, put on flesh, slept soundly at night, and expressed herself as entirely free from pain. She was discharged a month after the operation.

CASE VI.—G. A., a man aged 50, admitted into St. Bartholomew's Hospital, first noticed rectal trouble about six months before. His motions were smaller than usual, and accompanied by blood and slime. During the last month or two his calls to the stools had been very frequent, amounting at times almost to incontinence. He was a well-nourished, fairly healthy-looking man.

Examination revealed a healthy condition of the mucous membrane for the first two inches of the bowel. The finger then met with a projecting hard mass of new growth completely encircling the gut. The lumen of the bowel in the centre of this mass would hardly admit the tip of the finger.

March 19th. *Inguinal Colotomy.*—The small intestine presented. The sigmoid flexure was subsequently found without difficulty, and was filled with hard scybalous masses, which had to be pressed further down the bowel to enable it to be sutured to the abdominal parietes. The bowel was opened on the sixth day, and was firmly united to the skin. The patient subsequently convalesced without any untoward symptom.

CASE VII.—C. S., male, aged 64, admitted into St. Bartholomew's Hospital in March. He dated his symptoms from three months previously, when he began to be troubled with the constant desire to go to stool. He had much painful straining, but very little motion came away, and it was liquid and blood-stained. He had become very emaciated, and weighed only 6 stone 10 lbs. He was much troubled with bronchitis.

Examination.—The finger met with a tight fibrous stricture just within the anus, and, upon dilating this, the finger passed into the bowel some two inches and a half up, when a hard irregular mass could be felt entirely surrounding and stricturing the bowel.

Owing to the patient's chest trouble, the operation was delayed for ten days. Inguinal colotomy was then performed, the sigmoid flexure presenting. The following day the bronchitis became very bad, and he had considerable dyspnoea. However, this soon cleared off, the bowel was opened on the sixth day, and the patient convalesced without further trouble.

CASE VIII.—A gentleman, aged 65, brought to me by my friend, Dr. Laurie, of Essex, had for some time been suffering from malignant disease of the rectum. The height to which the disease extended, together with its fixity to surrounding parts, rendered excision impossible. For some months the patient had suffered severely from the effects of stricture.

Inguinal colotomy was performed on January 31st, Mr. Bowlby assisting me. The small intestine presented, and after a little search the sigmoid flexure was found. The bowel was opened on the sixth day. All the wound healed by first intention, and the patient returned home within three weeks. I have since heard from Dr. Laurie that the new opening acts in a very satisfactory manner.

CASE IX.—Mrs. N., a lady, aged 50, sent to me by my colleague, Dr. Godson, had had some trouble with the bowels for over a year. During the last few months it had increased; she was perpetually tormented with calls to the closet, and she had passed no solid motion for over six months. Lately she had become thinner.

On examination, a considerable mass of cancer could be felt high up, completely surrounding the bowel, nearly obliterating its calibre.

January 12th. Ether being administered by Mr. Mills, inguinal colotomy was performed. The omentum first presented, then the small intestine, but the sigmoid flexure was easily found with the finger. The bowel was opened on the sixth day, the parts having united by first intention, without any constitutional disturbance. At the end of a fortnight there seemed to be some tendency for the opening to contract, and a spring dilator was kept in for some hours each day. The patient returned home at the end of three weeks. The parts had soundly healed, and there appeared to be no further tendency to contraction.

CLINICAL MEMORANDA.

INTESTINAL OBSTRUCTION: RECOVERY.

IN the JOURNAL of July 7th a case of intussusception with favourable termination was reported, which was to me suggestive in relation to a case which came under my care soon afterwards, and I feel indebted to that report for a hopeful expectation I felt in the issue of my case.

J. D., aged 54, stout, was brought home at noon, July 16th, from the town, where he had been suddenly attacked with violent abdominal pain. His health had been good to this time, and his bowels right. He had during the afternoon five or six most severe paroxysms of gripping pain, one of which occurred during my visit, the pain being referred to the umbilicus, and passing down into the scrotum. No vomiting occurred. The attacks ceased gradually at night.

On July 17th he was free from acute pain, suffering only general discomfort and some little flatulent distension, and he vomited a little in the evening. The temperature was 100°.

On July 18th he vomited several times bilious-looking matters. Liquid nourishment was taken at this time. Enemata were

quickly returned with slight admixture of faeces. From this time the patient refused to take any nourishment, swallowing nothing but ice and water. He was usually moaning, but complained of no severe pain. The abdomen became more tympanitic. A long rectal tube was passed about three-fourths its length and gruel thrown up, but it was rejected at intervals during the operation, the only result being the passage of one or two bits of faeces, very pale, and with a peculiar odour.

On July 19th the attendant gave, by the advice of a neighbour, a dose of castor-oil and some yeast, which produced such violent vomiting that the patient was dangerously prostrated on my arrival, and seemed to be sinking, but he rallied. The vomiting occurred at intervals of three or four hours, and was now distinctly faecal in odour. The abdomen was as distended as it well could be, but nowhere very tender, and the temperature was normal.

On July 21st Dr. Mackenzie saw the patient, and abdominal section was mooted and decided against.

On July 23rd the patient said he passed flatus.

On July 24th a little soft-formed motion was passed, remarkably pale in colour, but there was no perceptible reduction of the tympanites.

On July 26th a similar very pale, soft motion was passed, larger in quantity. The vomiting still occurred occasionally.

On July 27th a thin, copious, and very pale evacuation occurred. The patient now took liquid food, barley water, milk and water, and a little brandy. What vomiting there was gave no faecal odour. The evacuations became free and darker in colour gradually. There was gradual recovery, the motions remaining fluid. No sphacelus of intestine was found.

The medicine used was tr. belladon., π lxxx; liq. morphin., 3iij; aqua ad, 3ij; 3j every two hours, and one-sixth of a grain of morphine by the skin at night.

It seemed to me that the case pointed with strong probability to invagination of some portion of the colon as the cause of obstruction, and is of interest as illustrative of the advantage of waiting. At any rate, I do not think that laparotomy adds an element of advantage in the treatment. Even discounting the risks attendant on section, to attempt a reduction of an invagination which would almost certainly be ulcerated, must be very risky.

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THERAPEUTIC MEMORANDA.

LIQUOR SODII ETHYLATIS IN THE TREATMENT OF LUPUS.

MISS —, aged 58, was first seen on May 1st. She has suffered from lupus of the face for fifty-four years. During this time no local means of removing the disease appear to have been adopted. The right side of the face was covered with cicatricial tissue and the lower eyelid was everted. The surface over the masseter muscle down to the angle of the jaw was covered with a patch of lupus exedens. The whole of the nose was similarly affected, and there was another patch above the inner canthus of the same side. On May 9th chloroform was given by Mr. Pearse, and I scraped the lupoid surfaces with a small oval-shaped Volkmann's spoon, taking care to thoroughly remove the whole of the diseased tissue, and then applied nitric acid with a glass rod. The wounds healed in a fortnight. After a little time, however, several small patches appeared, one above the inner canthus, one over the prominence of the right malar bone, another immediately in front of the ear, and others on the left side of the nose, on the right half of the upper lip and immediately external to the right angle of the mouth. An anæsthetic was again administered on June 28th, and these patches treated as in the first operation. These soon got well, with the exception of the patches near the mouth, which were prevented from healing by the constant movements of the lips. Shortly after this second scraping several small patches appeared, and in the course of a day or two grew so rapidly that every time the patient was seen they were much larger. I then decided to treat them with the liquor sodii ethylatis. This was applied to the patches with a glass tube, which had a very small bore, once a day for three consecutive days. Two or three days after the last application of the solution the patches were covered with dry scabs, which either fell off themselves or were easily removed with a pair of dissecting forceps, leaving a perfectly healthy surface beneath. Since this time other small patches have appeared, and