

directly from the ear trouble, with or without the intervention of meningitis, and these are more often due to this than to any other cause. The temporo-sphenoidal lobe is the common site of abscess. When the mastoid cells are implicated, the cerebellum is the usual seat; and this is more common in children, owing to the relations of the parts in early life. You know that in ordinary pyæmia it is rare to meet with abscesses in the brain, and you know that a cerebral abscess is often not diagnosed during life. It may exist and give no plain tokens of its presence till some sudden explosive symptoms arise, and rupture occurs into the meninges, or into the ventricles, leading to rapidly fatal issue. Cerebral abscess would perhaps be more commonly induced if these patients lived longer. The points in these cases I would bid you to take note of are—the recurring rigors and fitful pyrexia, at times mimicking attacks of true malarial ague, the symptoms at one time being indicative of pneumonia, at another of enteric fever, diarrhœa with ochry stools being very common. You have seen how pericarditis and peritonitis may supervene as part of the septicæmia. You must therefore be wary and summon all your clinical acumen to follow out and interpret the true nature of the particular case, remembering that the ear mischief is the *fons et origo malorum*.

Preventive medicine, then, warns you to treat no case of otorrhœa as a simple matter. Seek the cause and determine the locality of the discharge. Keep the ear clean with frequent antiseptic washings, and encourage the outlet of all festering stuff. Leeches to the front or back of the ear may be necessary at times if symptoms of fresh otitis arise. In any obscure cases of septicæmia you will do well to examine the ears and to smell the meatus. No more forget to do this than you would neglect to look for hernia in any given case of obstruction of the bowels, and you will not unfrequently find the clue to your difficulties. The secretions of the middle ear may be pent up mechanically, and so lead to absorption and mischief. Hence, the necessity of constant attention, out-washing, and cleanliness in these cases of purulent otitis. Measles and scarlet fever are the chief provoking causes of severe otitis, but it may be years afterwards that a neglected ear discharge suddenly becomes of perilous importance. The first case that impressed this matter upon my attention was that of a barrister I was called to see when sinking from purulent thrombosis and general pyæmia. He had had ear disease of long standing. He went on a yachting cruise that summer, and took each morning a plunge in the sea from the side of the yacht. The discharge from his ear ceased, severe headache came on, and his life was at once in danger. Nothing could save him. Such persons should never dive or bathe in open waters; and, even in ordinary ablutions, no one, I consider, with sound ears should fill their meatus with water. This practice is sometimes recommended by the laity in order to fortify the organs of hearing. Sufficient cleansing can always be secured with the corner of a damp towel. The details of treatment for otitis I leave for the aural surgeon to teach you. For the treatment of symptoms of neglected otitis due to septical impregnation, I fear I can tell you but little that is encouraging.

In two of our cases which recovered, assiduous washing with antiseptic lotions was practised. The pyrexia we treated by quinine in doses of forty grains daily with opium, more or less, according to circumstances. Cerebral vomiting at the onset of meningitis yields best to calomel purgation, and bromide of potassium in full doses is certainly indicated here, the more so if epileptiform convulsions supervene. Good nourishment and stimulants are needed for the typhoid or putrid state. When the mastoid cells are involved, as evidenced by pain and tumidity over the mastoid process, the surgeon will decide whether to puncture or trephine the bone. This was done by Mr. Walsham in a case from which I am sorry to show you this dry specimen of a temporal bone, and of which I need not specify the result. Early perforation, may, however, sometimes save life, even if a large part of the temporal bone becomes carious and demands removal. The operation is of course useless unless the mastoid cells are involved. The moral of this lecture, however, is *early detection of the cause and site of the ear mischief*, and my last injunction is to urge you to treat this diligently on general principles till you are satisfied that it is allayed. Failing to accomplish this, you must warn your patient of the perilous risk he runs if constant attention and cleanliness be not practised.

## Clinical Lecture

ON

### SIGMOID COLOTOMY AS A METHOD OF TREATMENT IN RECTAL CARCINOMA.

*Delivered at the General Hospital, Birmingham,*

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GENTLEMEN,—The operation of sigmoid colotomy is not new. It was proposed by Littré as far back as 1710, but it has been left to modern surgery to simplify the procedure, to lay down fixed rules for its performance, and to carry it, almost certainly, to a successful issue. Like the lumbar method, which in question of origin it preceded, and is, I believe, ultimately to supersede, sigmoid colotomy may be performed for the relief of rectal carcinoma under any of the following conditions. 1. When great pain exists during the act of defecation, or when urgent tenesmus is constant. 2. For obstruction due to narrowing of the calibre of the bowel by the growth of the neoplasm. 3. For the relief of recto-vesical or recto-vaginal fistulæ.

#### *Method of Operation.*

Whenever possible the proceeding is to be divided into two stages. The first and major step is undertaken with the view of securing the adhesion of the colon in the inguinal region and the shutting off of the general peritoneal cavity. The second consists in the opening of the adhering gut to allow of the escape of flatus and fæces. The operator's first care is that the skin of the whole abdomen shall be carefully cleansed with soap, a nail brush, and a carbolised solution. An incision two inches and a half long is made from below upwards, and one inch internal to the left anterior superior iliac spine, the middle of such incision to be opposite the anterior border of the spine. The skin, fascia, external oblique tendon, muscular wall of the abdomen, and transversalis fascia are divided in due order, and all bleeding vessels secured by pressure forceps as they become visible. The peritoneum is then raised with dissecting forceps, and a small opening, large enough to admit a director, made with a scalpel at a point about the middle of the incision. The two edges of this aperture are secured with pressure forceps, and it is then enlarged to the full size of the external incision, either with a pair of scissors or a knife and a director. A small piece of flat warm sponge is next gently pushed into the opening so as to prevent any of the contents of the cavity prolapsing. The divided peritoneum is then stitched to the edges of the skin incision by four catgut sutures, two at the upper extremity (one on each side) and two at the lower. This answers two purposes. 1. It affords a fixed surface for the speedy adhesion of the bowel. 2. It prevents the access of any discharge from the muscular planes until the general peritoneal cavity has been securely shut off.

Having thus attached the parietal peritoneum, the sponge previously inserted is withdrawn and the sigmoid flexure sought for. Frequently it appears at the external opening directly the left forefinger is introduced into the peritoneal cavity. If it fail to do so, an endeavour must be made to find it. Various ways have been suggested, but my own experience leads me to prefer the passing of the left forefinger upwards and slightly backwards in the direction of the left kidney; up to the present time, by this method, I have never failed almost immediately to find the portion of the gut sought for. Sufficient of it to fill the external incision, and to protrude an inch or more beyond it, is then drawn out of the abdominal cavity. There should be no difficulty in recognising the large intestine; the distinctly thick feel imparted to the thumb and fingers, the presence of the appendices epiploicæ, and of the longitudinal bands, will afford ample evidence.

The next step of the operation is to secure the gut that has been drawn out. The method of doing so will depend whether the malignant growth is causing complete obstruction or not. If so, then on each side three interrupted carbolised silk ligatures, passed through the peritoneal and muscular coats of the bowel, and secured to the edges of

the parietal peritoneum and skin incisions, will suffice. Should the obstruction not be complete, it is better to attempt to form a "spur," which shall cause, when the second step of the operation has been completed, a division of the sigmoid flexure into distinct upper and lower openings, from the former of which only the feces shall be evacuated. This can generally be readily accomplished, as shown by Mr. Herbert Allingham, by passing a carbolised silk ligature through the edge of the skin incision, half an inch from the lower end of the wound through the mesentery of the flexure, and back through the mesentery and skin, close to the point from which it started. A loop is thus formed, securing a portion of the mesentery, and the free ends are tied tightly. The intestine itself can be stitched to the skin as described before.

To conclude the operation I always pass a thin piece of silver wire through the two outer coats, about the middle of the protruded bowel, in a longitudinal direction, the points of insertion and exit being a quarter of an inch apart. This acts as a "guide" at the second stage of the operation. It is a small detail, but it will generally prove useful to the operator, as the condition of parts is visibly altered at the end of fifty or sixty hours. All the exposed surfaces are now carefully cleaned by a warm weak solution of corrosive sublimate, and a dressing of protective, corrosive sublimate wool, and a pad of wood wool applied and secured by a broad flannel belt. The one generally used here is broad enough to extend from the lower ribs to immediately below the iliac crests, not wide enough to meet in the middle line anteriorly by six or more inches, but secured by double folds of elastic webbing bandage (fifteen inches to make one fold), sewn to the free borders of the flannel; of such folds, three on one side and two on the other, at different levels, are sufficient. These are fastened by safety pins, and, as they stretch considerably, allow the bandage to be tightened or relaxed, as may be deemed expedient.

The after-treatment consists in starving the patient for twenty-four hours. If the pain be very urgent, half-grain morphia suppositories may be cautiously administered, but, if possible, in operations connected with the peritoneal cavity it is as well to avoid the administration of opiates. Small quantities of warm water may be given by the mouth; ice should be reduced to a minimum, and milk and effervescing waters are better shunned. Some of the numerous meat essences and good beef-tea are the best forms of nourishment until the second step of the operation has been performed.

The opening of the intestine depends upon the condition of the patient. I have successfully completed the whole operation at one time, and also at the end of twelve and twenty-four hours, but what is preferred is a delay until the third day. Its performance is practically painless, so no anaesthetic is required. With a tenotome an incision one inch long is made into the walls of the protruded intestine by the side of the wire guide. Care must be exercised not to push the point of the knife too deeply; if there be any doubt, a small opening should be made by the side of the silver wire and a director inserted, the wound being enlarged upwards and downwards by means of a pair of scissors. This having been accomplished, it is as well to snip off with scissors nearly to the skin level the protruded portion of the bowel; the consequent bleeding is readily restrained, and the subsequent false anus is less bulging, more slightly, and more satisfactory to the patient. By the end of the first week all the silk sutures should have been removed.

These various steps were undertaken in the case of the man before you. He is fifty-one years of age, and has had symptoms of rectal carcinoma for eighteen months. Obstruction is not complete, but, in the patient's own words, "there is a constant desire for a motion, bearing down, and great pain when anything does pass." The passage of blood and pus from the anus was of daily occurrence. You perceive there is a false anus with two openings divided by a protrusion of mucous membrane three-quarters of an inch long. The forefinger passed into the upper opening is gripped sphincter-like, and through this aperture all the feces are evacuated. The daily discharge of pus and blood have nearly ceased, and blood-stained serous fluid substituted. He expresses himself as greatly relieved by the operative procedure.

#### *The Advantages of the Sigmoid Operation.*

1. It is readily performed. This is exemplified by the following case. On Sept. 4th, 1884, I was hastily sum-

moned into a remote country district to see Mr. K—, aged fifty-two. The history was one of rectal cancer of eighteen months' known existence. A year before, Mr. Allingham had suggested colotomy, but the advice was declined, as the patient had heard of a cancer cure in the shape of Chian turpentine. The proper drug was procured from Messrs. Southall, in this town, and conscientiously and continuously taken, under correct supervision, for twelve months. The patient was a yeoman farmer, six feet in height, physically extremely strong, well built, and well nourished. When I saw him, there was a mass of carcinoma protruding from the anus the size of an ordinary clenched fist, the abdomen was greatly distended, subacute peritonitis existed, and complete obstruction of a week's duration. The facial expression denoted agonising pain. Dr. Wall, of Coleshill, administered chloroform, and, the patient's wife holding a lamp, there and then I cut down upon and opened his sigmoid flexure, giving exit to much flatus, and later on to faecal matter—in short, relieving the symptoms of obstruction. A recovery was not anticipated, and the patient died of exhaustion within a week. Now under these circumstances lumbar colotomy would have been an extremely difficult proceeding; the anterior operation was performed in a few minutes, just as the patient lay in his bed, and practically without the slightest assistance.

2. The patient is readily able to attend to his or her own wants in connexion with the false anus. You may remember the case of Mrs. B—, aged forty-four, who was operated upon on Feb. 21st (intestine opened on Feb. 22nd) for complete obstruction caused by rectal cancer. Dr. Thomas Duke of Rugby, who had charge of the case throughout, and who sent her to the hospital, kindly tells me that the patient died on August 10th. I quote from his letter, as impartial evidence on the point in question: "This is the first case I have seen of sigmoid colotomy. I have seen several lumbar cases, and think, if there is no more tendency in sigmoid to contraction than in lumbar cases, the sigmoid has many advantages in dressing &c. to the patient."

3. The patient is able to lie on his back without discomfort.

4. Four or five inches more of the colon are left for it to perform its duties.

5. Being nearer the seat of the disease, the operator is able, if necessary, to ascertain the precise limits of the growth. As a matter of practical experience, I have always found that the opening in the sigmoid flexure has been sufficiently remote from the neoplasm as not to become implicated during life. Malignant disease of the flexure, except at its juncture with the rectum, is of rare occurrence.

6. The wound in the soft parts, being small and superficial, generally readily heals.

#### *Disadvantages of the Operation.*

1. The peritoneum is laid open. This was a step greatly dreaded by a former generation of surgeons; but, although an exceedingly bad master, this serous membrane is a good servant if properly treated. When, therefore, you have to deal with the peritoneum bear in mind the following rules. (a) All bleeding points are to be secured before the cavity is opened, and before it is finally closed. (b) Leave it clean and dry. (c) Apply no irritating antiseptic. (d) Sponges and fingers to be aseptic and warm. (e) Handle the contents as little and as gently as possible. (f) Permit no other fingers than those of the operator inside the abdomen. In the majority of cases (seven or eight out of every ten) in which I have performed lumbar colotomy, or seen it performed by others, I am sure that the peritoneal cavity is inadvertently or designedly opened. The space behind it is so limited, the distribution of the membrane somewhat erratic, and the colon occasionally so difficult to find, especially when collapsed (although Mr. Lund's insufflator is of great assistance) that the operator can seldom be certain that an opening of uncertain dimensions has not been made. Doubtless, if it be done, the mischief is not very serious, and the drainage effected by the position of the wound is all that can be desired. I am aware that this view is not the generally accepted one; but possibly you know that my colleague, Mr. Bartleet, who has been surgeon to this hospital for twenty years, and has had a far larger experience of lumbar colotomy than I can claim, holds a somewhat similar opinion. It may be, then, that the main advantage claimed for the lumbar method is more theoretical than practical.

2. Tendency of false anus to contract. This is cer-

tainly more marked in inguinal than in lumbar colotomy; but, as a rule, the opening can be kept patent readily enough by the occasional insertion of an oiled finger, a rectal bougie, or a tallow candle. At the first stage of the operation, if the sigmoid flexure be drawn well out of the peritoneal cavity and secured in that position, it is probable that the subsequent tendency to contraction is diminished. Frequently, in the lumbar method, as time goes on, the bowel becomes more prolapsed and uncomfortably bulging. This is the inguinal operation I have never yet seen.

*Results.*—I have now performed sigmoid colotomy thirteen times for malignant disease of the rectum, and can say that no patient has died as the result of the operation. The most unfavourable case was that of Mr. K—, but in this instance the bowel was opened, practically *in extremis*. The most successful, as regards duration of life, was a personal friend, aged thirty-eight. Inguinal colotomy was completely performed on Nov. 9th, 1884, and death took place on Feb. 12th, 1886; but it must be borne in mind that this gentleman's social position enabled him to command every attention with regard to diet, nursing, medical supervision, and other details which make life bearable under such circumstances. In hospital practice, unless the operation is performed very early in the disease, the duration of life is much shorter than this.

To sum up, if life is to be prolonged and rendered as comfortable as possible, sigmoid colotomy should be performed at an earlier stage of the disease than is now customary; that is, when defecation becomes painful or difficult. The operation should not be postponed until obstruction is complete. To render it most successful, divide it into two stages and pay every attention to small details. It is desirable so to operate that two distinct and separate openings are formed in the flexure, and all sources of irritation removed from the malignant neoplasm.

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REMARKS ON THE  
PERIL INCURRED IN ALPINE WINTER  
CLIMATES OF RENAL COMPLICATIONS  
IN PHTHISIS.

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EVERYONE acquainted with the natural history of pulmonary phthisis knows that in a certain small proportion of cases, when the disease is advanced, albumen appears in the urine. But, judging from the accessible literature of the subject, no one seems to have pointed out that the frequency of this renal complication varies according to the anatomical form assumed by the malady. This, nevertheless, is the case. For in what one may be still permitted to call the "tubercular" variety of phthisis the percentage of albuminuric cases is small; in the "pneumonic" or "caseous" variety it is larger; and in the "fibroid" variety it is the largest of all. And, indeed, if I might presume to speak from my own experience alone, I should feel constrained to say that in every case of extensive fibroid induration or fibroid disease of the lung, albumen sooner or later in some amount or another makes its appearance in the urine. Whilst the frequency of the albuminuric complication in phthisis varies according to the anatomical form of the malady, so also does its influence and importance. In the tubercular variety, appearing late and in small amount, the renal trouble exercises but little influence upon the progress or upon the peculiarities of the disease. But in the fibroid variety, appearing late and lasting long, the renal trouble enters, as it were, into the constitution of the disease, and plays an active part in developing its characters, shaping its course, and settling its issues. In the beginning, and in favourable circumstances for an indefinite period, the urine exhibits no conclusive evidences of serious renal inadequacy, and the patient does not sensibly suffer in any way. But under the adverse influences of an unsuitable regimen, of cold, or of prolonged mental anxiety or tension, the amount of albumen in the urine increases, the discharge of urea and of its congeners diminishes, excrementitious matters accumu-

late in the blood, the patient's health fails, and the perils to life, passing to the kidneys from the lungs, draw near.

I have been led to make these observations by reading in THE LANCET of May last an account of the paper on "The Treatment of Consumption by Residence at High Altitudes," communicated to the Medico-Chirurgical Society by Dr. Theodore Williams. This paper, which appears to me to have been in all respects an admirable one, was fully discussed by several physicians, distinguished alike by their general ability and by their long practical acquaintance with the subject. But, nevertheless, both in the paper and in the discussion which it provoked, there is a remarkable and an inexplicable omission; for in neither the one nor in the other is any notice taken of one of the gravest perils to which phthisical patients dwelling in Alpine altitudes are during winter exposed. I allude to the peril of renal complications; and it is to this peril that I desire, in a few words, to draw the attention of my professional brethren. In carefully selected cases of phthisis the value of treatment by residence in high altitudes seems now to have been placed beyond the reach of any just question. It is indeed true that some cases do well at our English health resorts, and it is just as true that some cases do well anywhere, in crowded cities, or in country solitudes, by the seashore, or on mountain sides. But, in my experience, it is not true that, with every advantage which can be given to the patients, the percentage of recoveries from phthisis, treated in indifferent localities, is much the same as the percentage of recoveries from phthisis treated in high altitudes. It is quite otherwise than true. For I am as sure as I can be about anything at present incapable of actual demonstration that the recoveries from phthisis, judiciously treated in high altitudes, are much more numerous and much more lasting than those treated by any other method at any other place. But, as I have said before, the patients must be carefully selected; and, if disaster and reproach are to be avoided, if the just value of high altitudes in the treatment of phthisis is to be maintained, then it is certain that many cases now without due knowledge or due consideration sent to winter at Alpine winter resorts must be kept back. With exemplary accuracy and with considerable fulness Dr. Theodore Williams has drawn out a list of cases which are suitable, and also a list of cases which are unsuitable, for treatment at high altitudes. Both lists I think might be added to or modified; but for the present I am concerned exclusively with the one chief class of cases which ought never to winter in Alpine climates.

From a critical study of the accessible histories of patients whom I have sent, on account of phthisis, to winter in Alpine altitudes, I have learned two important facts which deserve to be known. The first is that patients who go to those regions suffering from albuminuria seldom do well; and the second is that patients who whilst dwelling there become albuminuric almost always do ill.

From these considerations, and also from others unnecessary to be recorded at present, I venture to suggest, for so long as our knowledge now stands as it does, that no phthisical person with albuminous urine should be recommended to winter at any Alpine height; and that everyone beginning to have albuminous urine when dwelling there should be immediately sent away.

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ON THE  
DIAGNOSTIC VALUE OF "BALLOONING OF  
THE RECTUM" IN CASES OF STRICTURE  
OF THE BOWEL.

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To assert that the safe treatment of any disease must be based upon a correct diagnosis is a truism which needs no enforcement. Hence any aid which tends to make the diagnosis of a local affection more certain is always of value, and is sure, in professional circles, to be hailed with satisfaction.

It is with such a feeling as this that I now call attention to a condition of the rectum, which is frequently found associated with a stricture of the lower bowel, and which, when present, is of great diagnostic value. I have