Lettsomian Lectures

ON THE SURGICAL DISEASES OF CHILDREN.

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LECTURE I. (*Concluded.*)

MALFORMATIONS OF THE ANUS AND LOWER BOWEL.

HAVING, then, satisfactorily arrived at the conclusion that the inguinal or Littre's operation is the soundest practice to carry out, when relief cannot be secured by any operation in the anal region, we have next to determine whether the intestine should be opened in the left side, in which it was originally suggested, and has hitherto been practised; or whether it would not be a more certain and equally effectual operation to open the colon in the right groin. After carefully reviewing the chief facts connected with this subject, I believe that the best practice lies in the performance of this last suggestion; and my opinion is based upon the following reasons.

Firstly: The large intestine will to a certainty be found in the right iliac region, whilst in the left this certainty does not exist; this has been shown by Mr. Curling even in normal subjects, in which no deformity exists. In two instances out of twenty in which he practised this operation upon the dead child, the colon could not be found in its natural position; and, on subsequent dissection, it was found to be lying on the right side.

In cases of maldevelopment, there is strong reason to believe that this irregular position of the descending colon exists in a larger proportion of cases; and that in such the terminal portion of the bowel will be found more frequently on the right side than in well developed and well formed children; or it may perhaps have assumed some median position. Under these circumstances, the attempt to open it in the left groin would necessarily fail, and the life of the patient be probably sacrificed.

It appears, therefore, to me to be a more certain and equally scientific practice to open the colon in the right groin; for if the descending colon pass in that direction, it can be opened; and if otherwise, the cæcum can readily be secured; and, without doubt, under both circumstances an equal relief will be afforded to the patient.

The difficulties of the operation in the right or in the left groin are the same; and the certainty of finding the large intestine on the right than on the left is much greater. The relief which is to be expected by either operation is the same; for I imagine, even if the cæcum or ascending colon be the part opened, there will be no difficulty in securing the emptying of the lower portion. At any rate, it will be no greater than is experienced in Callisen's or the lumbar operation.

In one case which I now bring before you, this

operation was carried out; and, although ultimate success was not secured, the following details will not supply any argument against the practice; but, on the other hand, I believe that they will materially tend to support the recommendation which I have just made.

CASE II. *Imperforate Rectum; Anus terminating in Cul-de-Sac; Exploratory Operation in the Anal Region failed; Operation in the Right Groin; Death of Patient.* Eliza S., aged 17 days, was brought to me at Guy's Hospital on July 31st, 1862. It was a well nourished and apparently healthy child; and, with the exception of the absence of any action of the bowels, had been free from all symptoms of obstructed intestine till the ninth day, when some slight vomiting appeared. Since that date, this symptom had returned at times, but was not in any way severe.

When seen, the abdomen was full, but not tense. The anus was perfect, and communicated with a *cul-de-sac*, which was about one inch long. On a careful examination of the part, no trace of bulging of the bowel could be detected, and no indication of granulation at the upper extremity of the *cul-de-sac* could be observed. An exploratory operation, however, in the region of the deformity, was at once performed by means of the fine trocar and cannula, but without success; consequently, the opening of the bowel in the groin was at once decided upon. Chloroform was, therefore, administered to the child, and a careful abdominal examination made, when a curious coil of intestine became visible on the left side. There was no projection of the distended colon in the left iliac fossa, but rather a deficiency; and marked tympanitis existed upon that side. There was, however, a distinct prominence in the right iliac fossa, with palpable dulness; and from the left loin the intestine apparently passed across the abdomen, and terminated in the centre beneath the umbilicus.

Having previously well thought over the operation which appeared to be the most applicable in cases of this description, and having determined that the opening of the colon in the right groin offered advantages which did not exist when the left was selected, I at once proceeded to carry out the practice; the case before me being apparently a good instance for the realisation of my views. I therefore made a vertical incision at the distance of one inch from the anterior superior spinous process towards the umbilicus; and, having divided the muscles and peritoneum, came down at once upon distended large intestine. Two thick ligatures were then passed through one margin of the integument, and carried completely through the intestine and integument on the other side; after which the bowel was opened, its thick clayey contents at once escaping. The walls of the intestine were observed to be considerably thickened, and felt quite leathery, being evidently much hypertrophied. It must be added also, that when the peritoneum was opened, a fimbriated growth, which turned out subsequently to be the Fallopian tube, made its appearance, which was, of course, at once returned.

The parents, contrary to all wishes, removed the child home; and some few hours afterwards, during a fit of coughing, the stitches gave way, and several feet of small intestine protruded. Medical advice was subsequently taken, but too late to afford relief, the child dying ten hours after the operation.

The following day, a *post mortem* examination was obtained, when the following appearances were observed.

About six inches of small intestine were extruded from the abdominal wound; these were dry, and of a dark colour. Upon opening the abdomen, it was at once detected that the *descending* colon had been opened by the operation; that some of the stitches had given way, and had allowed it to fall from the abdominal wall, small intestine passing in front of it, and protruding through the wound. The cæcum was situated to the outer and upper portion of the descending bowel; the transverse colon was placed in its natural site, and passed towards the left loin; to this it was connected by loose tissue and a distinct mesentery, proving that all attempts to open it by Callisen's operation would have completely failed. From this point it diverted from its natural path, and, instead of passing downwards over the left ileum to the pelvis, it took a transverse direction obliquely across the abdomen over the sacral promontory, to terminate at the brim of the pelvis on its right side. The intestine terminated by a distinct pouch at the brim of the pelvis; and it was, therefore, a considerable distance from the anal *cul-de-sac*. The exploratory operation had done no harm, not having touched any of the pelvic viscera or the peritoneum. The trocar had only passed into the cellular tissue at the posterior portion of the pelvis. It was then seen that it was the right Fallopian tube which had protruded from the wound during the operation; it was resting at its lower border.

It thus appeared that, by the operation in the right groin, the descending colon had been unexpectedly opened; and, had proper care been taken of the child, there is every reason to believe that a good result might have been secured.

This case must certainly be brought forward as a good one to illustrate the wisdom of selecting the right groin for the inguinal operation in preference to the left, and well supports the arguments in its favour which have been given in another portion of this lecture.

Should another opportunity offer, I shall follow the same practice, believing it to be the best. I have since seen that this suggestion was made some time since by M. Huguier at the Imperial Academy of Medicine in 1858-59; but I believe that it has not been put into practice until the present occasion.

It would appear, therefore, that in both classes of cases to which our attention has been directed, a primary exploratory operation in the anoperineal region appears to be the best practice which can be followed. Great care and caution in the attempt being absolutely essential; should it fail, as past experience has proved that it will in nearly half the cases, the inguinal operation is to be preferred; and I believe that the right groin is the preferable seat.

In the subsequent treatment, constant dilatation is a necessary point of practice in order to prevent the recontraction of the part which will otherwise to a certainty take place.

Treatment of the Third Class of Cases. We will now pass on to the consideration of the third and last division of cases: in which the anus is imperforate, and the rectum terminates either in the urethra, vagina, or some other abnormal position.

It will scarcely be necessary to occupy your attention by describing all the vagaries of development which have been seen in practice at different times; for I believe that there is hardly a point in the median line of the perinæum, from the coccyx to the pubes, in which the rectum has not been seen to open; and that the vagina from its orifice to its end, the urethra from its vesical termination to its close, have at different times been found to have received the contents of this malformed and ill-directed intestine.

The difficulties which are experienced in the treatment of these cases are peculiar to each; and although every example must be treated on its individual merits, some general rules of practice may be laid down. It would appear, from Mr. Curling's researches, that it is into the urethra that the rectum most frequently finds an outlet; for out of forty-three cases which he collected, the bowel terminated in the urethra in twenty-six, in the vagina in eleven, and at some other part of the perinæum in six examples.

There is a practical point connected with this subject which claims our notice; and that is, in these cases of maldevelopment, the rectum, as a rule, is present, although misplaced. As a consequence, there is always a good hope that an operation in the seat of the natural anus will terminate with success.

When the urethra is the part implicated, the exploratory operation must be conducted in the anal region in precisely the same way as it has been recommended to be practised in the first class of cases which have been related, and in which no outlet exists; and judging from past practice, the bowel will be reached in nearly two-thirds of the cases operated on. The intestine must, however, be forcibly brought down and firmly stitched to the integumental margin; for, if this point be disregarded, the opening will subsequently contract, and disappointment will, to a certainty, be eventually experienced. Should success follow this effort for relief, it is unfortunate, however, that nothing can be done in the way of closing the urethral orifice; if the anal opening be a free one and remains permanent, there will always be a solid hope of the abnormal passage in the urethra closing; but unless the former be kept open by surgical means, a double passage may remain for ever; the freedom of the flow of the fæces through the normal channel being the only condition upon which the slightest hopes of the ultimate closure of the unnatural channel can be based.

When the vagina is the canal into which the rectum passes, a much better prospect of ultimate relief can be offered to the sufferer, than in the last class of cases to which we have alluded. In these the outlet is often free, and, as a consequence, there is but little immediate danger to life arising from this maldevelopment; but the private and social disadvantages which the subjects of this deformity experience render any operation which offers a probability of relief, not only justifiable, but necessary.

In the majority of cases which have been operated upon, no difficulty has been experienced in opening the rectum in the anal region; for in eleven cases in which a record has been preserved, the gut was opened in all; and, in like instances, this same result can be readily secured by making a free section in

the anal region upon a bent probe with a button end made to project in the perinæum, after being introduced through the vaginal orifice.

The most difficult step of the operation, however, remains to be performed; and that is, to fix the walls of the intestine to the integument. This must be done by means of sutures; lateral incisions through the skin and tissue being made should any difficulty be experienced. If success follow this operation, an attempt to close the vaginal orifice may be made by a plastic operation; but this latter hope appears somewhat vague; for, judging from past experience, there is not one case on record in which it has been realised. In one instance, the ultimate closure was secured; but this closure was spontaneous, and it took place two months after the new one was established.

Two instances of this deformity have fallen under my care; and the following brief records of the cases may be read with interest.

CASE III. Henrietta D., aged 8 months, was brought to me at Guy's Hospital, on Nov. 8th, 1857, with an imperforate anus, and a small orifice communicating with the bowel at the mouth of the vagina. The child was well nourished, and apparently quite healthy.

Upon examination, this abnormal opening was found to be directed backwards, and to communicate directly with the bowel; and a bent probe, when introduced, was readily observed in the perinæum, in the position in which the natural anal outlet should have existed. A puckering, as of an anus, was also to be detected; and it appeared as if the orifice were closed by integument alone. An incision was therefore at once made in the site of the anus, the bent probe acting as a guide, and fæces at once escaped. In a week's time, when I next saw the child, the fæces had passed freely the right way, but little coming through the vaginal opening. There was a good control also over the action of the bowels; and in other respects the child appeared well.

She remained under my observation for three months; and, when she disappeared, the original vaginal orifice had completely closed, and the artificial and normal anus was firmly established. The control over the bowels' action was complete; and no signs of subsequent contraction had taken place. Indeed, the anus appeared to be as natural as if it had always existed.

This case cannot but be regarded as being most satisfactory. It is true that an anus apparently existed, although it appeared to be closed with integument; and no great thickening of tissue had to be divided. The spontaneous closure of the abnormal opening, after the reestablishment of the natural outlet, with an absence of the subsequent contraction of the anus, are points also of considerable interest.

CASE IV. Ellen H., aged 8 months, was brought to me on May 14th, 1862, with the following congenital defect. The perinæum was altogether absent; there was not more than a quarter of an inch between the extremity of the coccyx and the median fissure, which fissure extended forwards to the pubes, and was bounded by labia. In this fissure were the orifices of three canals. Each canal was divided by a membranous septum, and their extremities were most distinct. The posterior canal was small, not being larger than a swan-quill; it was also the most

prominent. The vaginal tube was large and very patulous, its anterior wall apparently falling forwards; the orifice of this canal being evidently less advanced than the anal; and above this passage, and more deeply placed, was the opening of the urethral canal. In other respects the child appeared perfectly sound and well developed. There was no control, however, over the bowels' action; fæces were always passing with perfect facility, complete absence of sphincter being very apparent.

In this case nothing could apparently be done. The outlet of the bowel was sufficiently free to allow of its complete evacuation; and there was nothing to lead one to hope that the least benefit could be obtained by an operation. The peculiarity of the case, indeed, appeared to consist in the complete absence of the superficial perinæal muscles, and the distinct presence of the three canals—the rectal, the vaginal, and the urethral.

As a general summary of the subject, the following conclusions may be given.

1. In all cases (with some rare exceptions), whether of imperforate anus, obstructed rectum, or misplaced anus, an exploratory operation in the normal anal position is perfectly justifiable; and it may be attempted with the fair hope that, in nearly half of such cases, primary success will be secured.

2. Such exploratory operations, however, to be successful, must be conducted with great caution; and that the exploratory puncture or incision is to be made upwards and backwards towards the sacrum.

3. If these measures fail, or if from some peculiarity in the case they appear useless and unjustifiable, the intestine is to be opened in the groin; the lumbar or Callisen's operation being quite inapplicable.

4. In the inguinal operation, the right groin appears to possess advantages over the left; as the intestine is found with more certainty, and the benefits to be expected from the operation are equally great.

5. The treatment of these cases does not terminate with the success of the primary operation; for constant dilatation of the artificial anus is a necessity to preserve life.

A BELLIGERENT DOCTOR. At the conclusion of the Cork Medical Protective Association, the following incident is reported:—Dr. Wall said, "Before you leave the chair, sir, I would wish to make a few observations. I saw by the *Medical Press* a while ago, some observations creditable to a countryman of ours in London (hear.) Some distinguished graduate of Heidelberg (laughter)—an individual named Dr. Rogers—had the temerity, the audacity to asperse the Irish medical profession—he had the impertinence to do so; but it was well that in his own immediate vicinity an Irishman was placed in juxtaposition with this graduate of Heidelberg (laughter.) That Irishman is Dr. O'Connor of London, who is a Kerryman (great laughter), and therefore he is in truth an Irishman (hear, and continued laughter.) I now take the present opportunity of introducing this matter, and of proposing that the thanks of the meeting be given to Dr. O'Connor for his manly stand against this asperser of the dignity and attainments of our Irish profession (hear.) It was well for this man from Heidelberg that I was not near him, for I would make him know what Paddy could tell him (hear, and laughter)." (*Cork Constitution*.)