A Clinical Lecture,

BEING

SOME DETAILS IN POSTERIOR GASTRO-ENTEROSTOMY, WITH TWO SUCCESSFUL CASES.

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GENTLEMEN,—The operation of *posterior* gastro-enterostomy being yet on its trial it appears desirable that all details which may facilitate its rapid and accurate completion should be carefully studied. If the procedure is ever to be of real use it must be shown to involve but little risk to the patient. Only in this way will it come to be employed either for cancerous or cicatricial stenosis of the pylorus at a stage when it is most likely to be of real service. Hitherto it has been reserved almost exclusively for desperate cases and consequently the mortality has been high. This latter point, again, has deterred many from employing the measure even in those cases where it would have given great relief from suffering and if successful have prolonged life. This is, of course, equally true of the anterior method as well as of the posterior. But I venture to think that we have been inclined to assume too easily that because the mortality from the first-invented anterior method has been high that therefore the *posterior* method, which appears at first sight to be more difficult, would be higher. This does not necessarily follow. As a balance to the assumed difficulty of the posterior operation we have in it the absence of several of the well-known risks of the anterior method, and notably of the kinking of the bowel and the tendency if a button is used that the latter will fall into the stomach. Statistics do not help us much in estimating the relative risks of the two procedures, inasmuch as the figures available in regard to the older method include many cases done while the procedure of gastro-enterostomy was in its infancy and was consequently imperfect and more dangerous. The figures relating to the much newer *posterior* method, on the other hand, are taken from a period in which surgical technique has undergone immense improvement and the mortality of all operations has greatly fallen. But this much may be said, that some operators of large experience who in the past have done many anterior gastro-enterostomies are now giving it up in favour of the posterior method. And one, Professor Carle of Turin, writing at the beginning of this year, claims to have done his last 23 posterior gastro-enterostomies consecutively without a death, and puts his gross mortality at 3·8 per cent. for non-malignant cases. It may be objected to this series that it only contains non-malignant and consequently less severe cases. But, on the other hand, it probably gives a better idea of the intrinsic risks of gastro-enterostomy *per se* than one including malignant cases, many of them probably operated on in the last stages of an exhausting disease. But if anything like Professor Carle's success comes to be the rule, and a mortality of from 3 to 5 per cent. is all that has to be feared, one of the strongest reasons against timely operations for gastric disease will no longer exist.

But for such results great attention will be necessary to every detail, in addition to the careful selection of cases. Foremost among these will come the preparation of the patient by careful washing out of the stomach beforehand. This should never be omitted and should be carried out for some days anterior to the operation. Next to this comes the cleansing of the skin of the abdomen. For this purpose I am inclined to depend, in addition to plentiful soap and water, chiefly upon washings with methylated spirit and carbolic acid, 1 in 20, alternately if possible, for at least forty-eight hours before the operation. Then the retention of warmth in the patient comes next. My own method to this end, employed for years past, is to envelop the patient from head to foot in hot wool secured by bandages, both now always sterilised beforehand by steam.

In cold weather hot bottles are placed round the patient on the operating table.

But it is to some of the details more immediately connected with the actual operation that I think attention deserves specially to be called. In the first place there appears to be a growing conviction among those who have the largest experience of plastic surgery in the abdomen that the less germicides are applied to the peritoneum the better for the result. Every irritant applied to the peritoneum is a most powerful depressant. Fully impressed with this view I have for a long time past carefully abstained from the use of any antiseptic within the abdomen in these cases and have been content to see that everything coming in any way in contact with the viscera is carefully sterilised by heat. Plain, sterile, warm dry gauze has taken the place of carbolised sponges and so on. If fluid for washing is required, which is rare, it is simply plain boiled water. Then special care is required by all and every means to save time and the manipulation of the abdominal contents. Much may be done in this direction by preparation of all detail before the abdomen is opened and much may subsequently be done as well. But in the first place it is very desirable to make the initial incision as small as possible until the exploration of the condition of the stomach has been completed. It is hardly ever necessary to make in the first instance an opening in the muscular wall of more than 2 in. The skin wound may be double that length. But with one or two fingers in the abdomen the stomach can in most cases be explored adequately, and during this exploration there is a minimum of exposure of the viscera and very little chance of prolapse of bowel. Of course, if this opening is not sufficiently large it can be increased with scissors. As a matter of fact, in the class of patients who require such operations emaciation is usually marked, and both exploration and the subsequent operation can be carried out through a relatively small abdominal incision.

And now I desire to call attention to two small modifications of the usual operation which I know will save much time and a good deal of unnecessary manipulation of the field of operation. And first let me say that, although by no means an enthusiastic believer in the wholesale use of Murphy's button, I think that in this particular case of *posterior* gastro-enterostomy it has great advantages. Its use certainly makes an operation which without it is very difficult and tedious comparatively easy and short. And, besides, some of the objections to its use in the anterior operation have less weight in the posterior. Two drawbacks to the use of the button in the *anterior* operation occur at once to any surgeon who has done many of these operations. One is the probability that the button will fall back into the stomach rather than pass into the bowel. This has been known to occur in several cases. It can be explained both by the weight of the metal body tending to drag it back from its position in the anterior wall of the stomach into the cavity of the viscus and from the narrowing of the jejunum due to the dragging of the colon preventing the button from passing into the gut. But when the button is placed in the posterior wall of the stomach behind the colon and in the jejunum behind the latter, where it does not kink, the contractions of the stomach and gravity both tend to carry it into the gut, which is at its greatest size and in no way displaced.

But again I have to note two small details in the method of applying the button in the posterior operation which I observed in my last two gastro-enterostomies, which I think materially shorten the procedure and further minimise the chance of the button falling into the stomach. The first is Professor Carle's method of closing each viscus round the central tube of the button, which differs materially from that recommended by Dr. Murphy. The incision in each viscus was made only just large enough to get the button into each. Then, instead of the usual purse-string suture round the edges of the opening to close it on the central tube Professor Carle simply puts a stitch at each end of the slit by Lembert's method and so reduces it. This saves much time, as he says, and as I know from my own cases, and is equally effectual. It also saves much handling and dragging of the parts.

The next point to which I wish to draw attention I have not seen noticed elsewhere. It is a departure from von Hacker's procedure in his operation. He recommends that when the stomach has been reached through a slit made in the transverse meso-colon it should be secured there by stitches before being made to anastomose with the jejunum.

Now I believe that this stitching, although I have done it in my own operations, may be dispensed with altogether where the button is used. That this will save much time is obvious. In my last case the operation had lasted seventeen minutes before this stage had been completed, the whole procedure lasting thirty-six minutes. From what I have seen in the last two cases I have operated on I believe that all that is necessary is to make a small hole in the meso-colon and draw the posterior wall of the stomach through it to a sufficient extent to give room for the insertion of the metal button. When the latter has been placed in position it will prevent the stomach from slipping back through the slit in the meso-colon and there will therefore be no reason for stitching the latter to the stomach. There might be some fear perhaps that the funnel of the stomach-wall thus made might be strangled by the edges of the hole in the meso-colon did we not know that under similar conditions where the stomach is drawn out through small apertures in the most recent operations for gastrostomy no strangulation takes place. In my first posterior gastro-enterostomy, though the stomach-wall was tightly grasped by the hole behind the button, no evil result followed and the button was passed on the fourteenth day, the patient making a perfect recovery. In my last case of the posterior operation done with the same button I stitched the stomach to the meso-colon. But though the patient made an uneventful recovery and the button was passed on the twelfth day I could see that I had lost at least ten minutes in putting in stitches in a very inaccessible part which might have been avoided. Everything which gets rid of the necessity of stitching within the abdomen appears to me to deserve a very careful consideration as a means of saving time and the irritation of manipulation.

In conclusion, I may say that I was struck with the very small amount of general disturbance produced by the posterior operations as contrasted with a much larger number of anterior gastro-enterostomies which I have done. The operation in every way left a very favourable impression on my mind. And if further experience shows that it can be done in a still shorter time and with equally rapid and satisfactory recovery we may hope that many sufferers may be relieved at a much earlier stage of their ailments than has hitherto been the case. The cases are briefly as follows.

CASE 1.—A patient, aged fifty years, was sent to me by Mr. Smith of Tavistock with a history that he had just arrived from Italy. He had been a healthy man until some six or eight months before, when he began to suffer from dyspeptic symptoms accompanied by pain and great dilatation of the stomach. Some seven years before he had had somewhat similar symptoms but had recovered and become very stout, weighing usually about 15 st. The last attack was followed by rapid emaciation, so that when I saw him he only weighed 10 st. 8 lb. He had been treated by careful dieting and washing out of the stomach daily and under this treatment the dilatation of the organ disappeared but with increasing weakness. No tumour could be made out. In the uncertainty as to diagnosis an exploratory operation was done on Aug. 27th, 1898, in which I discovered a hard, thickened pylorus, possibly cicatricial, but presumably carcinomatous. I turned up the colon, made an opening in the transverse meso-colon, and united the stomach through this to the first part of the jejunum about 18 in. from its origin. Murphy's button was used, as above described. The patient bore the operation, which lasted fifty minutes, well. He was troubled for the first two or three days by regurgitation of bile from the mouth. After this he had no trouble and soon began to put on flesh at the rate of 3 lb. every two days. He left the nursing home looking well and very cheerful, having passed the button on the fourteenth day.

CASE 2.—A man, aged forty-eight years, was admitted into University College Hospital in the last week of September, 1898. He was much emaciated and suffered severely from pain and dilatation of the stomach and there was a tumour to be felt in the pyloric region. Here I did the operation of posterior gastro-enterostomy precisely as in the previous case but more rapidly, finishing it completely in thirty-six minutes. The stenosis was undoubtedly cancerous. The patient was none the worse for the operation, was fed from the first, and soon began to put on flesh rapidly. He had no bad symptom of any kind and returned home on Oct. 26th, 1898, without any of his old pain and eating ordinary food. The button was passed on the twelfth day.

A FURTHER CONTRIBUTION TO THE SURGERY OF STONE IN THE BLADDER,

BASED ON A RECENT SERIES OF CASES IN HOSPITAL AND PRIVATE PRACTICE.

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FROM time to time I have passed under notice¹ and compared with my own experience various processes which have in recent years been employed in the treatment of stone in the bladder and have endeavoured to illustrate their applicability to individual cases in practice. The record of additional cases which forms part of this paper will enable me to offer some further remarks on various points still open to consideration. The cases here referred to have all been operated upon by me either in hospital or private practice during the interval of 1890-97 and include every instance thus dealt with during this period. It will be convenient to divide my subject-matter into three parts: (1) a tabulated record of all my operations during the period referred to, with special reference to litholapaxy as the procedure now generally adopted; (2) observations relative to the prevention and treatment of recurring stone; and (3) some remarks on certain operations for stone in the bladder which may be regarded as supplementary to litholapaxy.

I.—A TABULATED RECORD OF OPERATIONS DURING THE PERIOD 1890-97, WITH SPECIAL REFERENCE TO LITHOLAPAXY AS THE PROCEDURE NOW GENERALLY ADOPTED.

To proceed with my first division it will be seen on reference to the table of cases that it comprises 101 litholapaxies, 3 perineal lithotrities by my method, 2 suprapubic lithotomies, and 4 median lithotomies, making a total of 110 persons operated upon.

Litholapaxy.—Since 1878, when I was in Boston and spent some time with Bigelow watching his earlier operations by this process, which he was then developing, I have continued to practise it, using with but slight modifications the appliances which I showed for the first time in England at the annual meeting of the British Medical Association in 1878² on my return from the United States. No more striking testimony to the completeness of Bigelow's work could be found than the fact that the instruments of his day, after a lapse of over twenty years, have undergone no important change. It is rare to find an invention so perfect in its initiation as this in all its details. On reference to the table of cases it will be seen that 6 of the 101 litholapaxies terminated fatally. 1. A man, aged sixty-five years (No. 6), who was operated upon successfully on the first occasion, died on the third day after the repeated operation which was performed thirteen months subsequently. The kidneys were extensively involved in suppurative nephritis. The stone was a phosphatic one weighing close upon 2 oz. The repetition of the operation had clearly been delayed too long. 2. A man, aged sixty years (No. 13), died on the twenty-eighth day after operation from chronic suppurative nephritis and syncope. 3. A man, aged seventy-two years (No. 32), died on the sixth day after operation from pelvic cellulitis probably due to suppuration within a vesical sac or pouch. 4. A man, aged fifty-four years (No. 70), who was operated upon successfully on the first occasion, died after a similar operation repeated fifteen months subsequently from suppurative nephritis caused by a chronic urethral stricture which had gradually contracted. Had on the second occasion a perineal lithotripsy with division of the stricture and drainage of the bladder and ureters been practised he would have had a better chance of recovery. The patient derived so much relief from the first operation that he wished it repeated on precisely the same lines. 5. A man, aged sixty-two years (No. 88), died on

¹ Observations on Lithotomy, Lithotripsy, and the Early Detection of Stone in the Bladder (Churchill, 1883). Surgical Disorders of the Urinary Organs (4th Edition, Churchill, 1893). Diseases of the Bladder in Twentieth Century Practice of Medicine (Wood and Co., New York, vol. i., 1895).

² Brit. Med. Jour., vol. ii., 1878