being so, it seems a mistake to expend time and to disturb the parts more than is absolutely necessary. If the appendix is firmly bound down, probably the best plan is to leave it and trust to drainage alone. Some form of sponge should be used for cleaning away pus or the contents of the appendix, irrigation being avoided for reasons already mentioned.

There are still advocates for exploration by median abdominal incision. Everything is so much in favour of the lateral one when the caecal region is clearly the starting point of the mischief, that the median opening appears to me only justifiable under two conditions: (1) When the diagnosis is not clear, the operation being really an exploration; and (2) when general peritonitis exists, the addition of a median opening (in addition to the lateral one) for flushing and drainage adding to the patient's chance of recovery.

Chart 3.

Class 3: Relapsing Cases.—None of these requiring operation have fallen under my own care, so that I only bring them under your notice to state completely the case for operation as it presents itself to me. The first point which arises is, What is a relapsing case? A fair definition appears to be, a case which, after apparent complete recovery, lights up again into active disease within days, or at the outside weeks of the date of convalescence. The second question needing an answer is, Does every such case call for operation? This will be answered differently by different observers. Personally I should wait for a second relapse before resorting to operation, unless the symptoms in the first relapse were of a severe kind. In reference to this question of relapse, it is necessary to emphasise the fact that insufficient rest is responsible for many cases. These are really incomplete recoveries, as apart from relapses, and in them the inflammatory condition has never become really quiescent.

Operation in relapsing cases appears to be best deferred until the acute symptoms have passed away, and the method of carrying it out is similar in detail to those of the acute perforative cases, the appendix being removed whenever it is found distorted, perforated, or the subject of any other pathological change.

The cases tabulated in my paper from the hospital records brought the date up to about the end of March, 1892. Since then I have had under my own care a girl who had a history pointing distinctly to three attacks of inflammation in the right iliac fossa during the last year. Rest in bed, blistering, leeches, salines, and careful dieting failing to remove the pain

and tenderness in the region of the appendix, and as, moreover, there was fever of two or three degrees at times, especially on getting up, I came to the conclusion that there was some condition of the appendix causing the relapses. Since my paper was written, I have opened the abdomen in the right iliac fossa, and found simply adherent omentum. This was attached to the parietal peritoneum and to the front of the cæcum to a slight extent, but no other morbid change was found. The appendix was found after a long search, to the front and outer side of the cæcum, and it was brought up into the wound and examined, but nothing abnormal was found in it, neither thickening of its walls, dilatation of its cavity, nor contained concretion. Just above its free end there was a slight narrowing, but nothing that could be spoken of as pathological. I hope to publish the case in full at some future time, as at present it seems to me that we are in need of accurate records of cases to set at rest many points in dispute.

A SUCCESSFUL CASE OF ILEO-COLOSTOMY.¹

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R. W., aged 57, a colour maker, was admitted to the Royal Infirmary, Newcastle-on-Tyne, under my care, on July 29th, 1891. His chief complaint was of constipation, with recurring attacks of abdominal pain.

History.—Fourteen months earlier, while leaning over a cask, he was seized with a pain in the lower part and right side of the belly, which rendered him unable to work for the rest of that day, but gradually passed off. A month later, without evident exciting cause, pain returned in the same position, and spread from it upwards to the navel down to the testicle, and he had also a feeling of cramp in the heel. This attack lasted for a week, during the first three days of which he was unable to pass either flatus or fæces, but the obstruction was eventually overcome by strong purgatives. He never vomited. Since then he had had similar attacks from time to time, never going for longer than a month without one. Since the first seizure he had never had the bowels moved without purgative medicine, and had lost more than a stone in weight. He had been unable to work for six months, on account of this illness.

Condition on Admission.—The patient was a sallow, poorly-nourished, depressed-looking man. His pulse was 84, strong and regular. Except for the abdominal condition, he appears to be healthy, there being no evidence of disease in any other organ. On deep palpation of the abdomen, one inch internal to, and three fingers' breadth above, the right anterior superior spine of the ileum, an indistinct, rounded, solid-feeling mass was discovered, lying against the back wall of the abdomen. It moved a little upwards and downwards on respiration, and, though not tender on pressure, caused a "sensation" when manipulated.

None of my colleagues who saw the case or myself were able to form any definite conclusion as to the nature of the abdominal tumour, but all agreed with me that the case was one requiring an exploratory operation.

Operation.—On August 7th, 1891, assisted by Dr. Hume, I opened the abdomen by a 4-inch incision in the right linea semilunaris, and drew forward the tumour for inspection. The ileo-cæcal region was found to be involved, the tumour being about 3 inches long, rounded, and like a thick sausage, and firm in consistence. From the character of the tumour and the in-folded appearance of the ileum at its junction with the colon the case was regarded as one of chronic intussusception at the ileocæcal valve. An attempt was made to reduce the intussusception, but the density of the adhesions and the free bleeding which followed tearing them soon warned me that no success was likely to reward perseverance in this direction. A loop of the emptied ileum and ascending colon was now drawn out of the wound, isolated by sponges, and each opened in their convexity between two constricting india-rubber bands passed through their respective mesenteries. By means of Senn's

¹ Read in the Section of Surgery at the Annual Meeting of the British Medical Association at Nottingham, July, 1892.

decalcified bone plates and an outside row of Lembert's sutures I made an anastomosis between the ileum and ascending colon, and, before replacing the intestine, drew the omentum out of the abdomen, rolled the bowel in it, and stitched it round the whole.

After-Progress.—From the date of operating till August 14th his progress was uneventful. He had no sickness, pain, or rise in temperature. On the evening of August 14th his temperature suddenly rose to 102°, and, though he made no complaint, he did not look so well. On August 15th the sutures were removed. Some foetid pus escaped when this was done. From this date he had no further trouble, and, though still weak, was discharged, at his own request, on August 21st, 1891.

For the first month after operation he had a tendency to diarrhoea, but afterwards his bowels acted regularly and naturally, his appetite returned, and he felt no abdominal trouble whatever. On October 17th, 1891, he died of bronchitis, and I am indebted to Drs. Arnison and Angus for obtaining this specimen for me.

Post-mortem Examination.—There was a firm healthy cicatrix in the abdominal wall, and some old omental adhesions in its neighbourhood. The omentum was firmly adherent to and wrapped all round the bowel, and on removing this the condition shown in the accompanying drawing was displayed. A portion of ileum about five inches from its termination is seen attached to the inner side of the ascending colon, about four inches from the caput caecum. One small silk suture firmly buried in organised lymph is all that remains of the numerous sutures used. The whole connection is secure and strong. On opening the colon the faecal fistula connecting it with the ileum admitted the end of my thumb. Its edges are smooth and round, and faeces must have passed through it with ease.

The ileum at its normal junction with the colon is completely blocked, and here and in the caecum a firm ulcerated surface exists. Dr. Drummond has kindly made a section of this for me, and finds it to be a cylindrical-celled carcinoma. The pathology of the case has been malignant stricture at the ileo-caecal valve, chronic intussusception.

A CASE OF GASTRO-ENTEROSTOMY.¹

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GASTRO-ENTEROSTOMY for cancer of the pylorus belongs to that class of palliative operations for malignant disease of which it is difficult to estimate the true value. Apart from its direct mortality the question always remains to be answered with reference to each case, whether the operation has given such relief of suffering and such prolongation of life as to make the undergoing of it from the patient's point of view worth while. It will be hardly possible to obtain and construct statistical data for a decision, because the natural course and duration of the disease when uninterfered with surgically are so varied and uncertain. The impression upon the minds of surgeons as to the value of the proceeding must at any rate in the meantime be formed from a careful consideration of individual cases. It is as a contribution to the formation of this impression that I report the following case.

The patient was a miner, aged 53, who was admitted into the Newcastle-on-Tyne Royal Infirmary on August 31st, 1891. He complained of pain and vomiting after food, and of progressive loss of flesh. His illness had been of eight months' duration. At the time of his admission he was much emaciated. He had pain after everything he took, and always once in twenty-four hours he vomited a very large quantity of frothy food and mucus. A hard mass was very plainly to be felt to the right of the epigastrium. As although much wasted the man's general condition was not unfavourable, an operation was advised and agreed to.

After a few days' preparation, which consisted chiefly in twice a day washing out the stomach with salicylate of soda solution, the operation was done on September 8th. The abdomen was opened by a free incision in the middle line between the ensiform cartilage and umbilicus. The pyloric mass was found to be fixed. The portion of the anterior wall of the stomach selected for opening was drawn out of the wound, and by turning up the colon and omentum to the right, and passing the fingers down to the left of the vertebral column, the first part of the jejunum was found without difficulty. The area of the operation was packed with sponges. For holding the stomach wall and intestine during the subsequent manipulations no clamps other than the fingers of a skilful assistant were used. Openings from an inch to an inch and a-half were made in the stomach wall and in the intestine opposite to the mesentery. A continuous suture of catgut was run round the margin of the opening in the stomach, attaching the mucous and peritoneal coats. Senn's plates were then adjusted and secured by silk threads, which were passed close to the margins of the respective openings. To make more secure a series of Lembert stitches was placed between the gastric and intestinal walls around the outer margins of the plates; and to make still more secure a large piece of omentum, completely detached, was wrapped round the junction of the two viscera and fixed in position by two or three stitches. Before laying it down the surfaces of the graft and of the viscera which were to be in contact were lightly scarified with a fine needle.

The patient did not suffer in any way from the operation. Feeding with milk and soda-water was begun at the end of twenty-four hours. The food in both quantity and quality was increased day by day, there being no vomiting and no pain from the first. The bowels acted regularly, but no part of the plates was found in the motions.

On October 3rd, nearly a month after the operation, the patient was discharged, having improved greatly in appearance and in weight. He was taking a carefully regulated

¹ Read in the Section of Surgery at the Annual Meeting of the British Medical Association held at Nottingham, July, 1892.