

Seven weeks before admission an abscess had formed in the abdominal wall, and had burst by three openings, through which faeces had been constantly discharged. The abdomen was opened, and a growth, about 5 inches long, was found invading the transverse colon. Fortunately there were no adhesions except to the abdominal wall, where the bowel had given way on the proximal side of the obstruction. The growth was prolapsed through the abdominal incision, and fixed there. Four days later the whole growth was cut away, a Paul's tube being tied into the colon. The patient did well, but of course all the faeces passed through the opening in the transverse colon, and, as they were liquid, produced a considerable amount of excoriation. On January 24th, 1901, the patient was again put under an anaesthetic, the abdomen opened in the middle line below the umbilicus, and an ileo-sigmoidostomy performed. He passed a motion naturally for the first time on January 25th, and from that date the greater part of the motions were passed by the rectum, but a considerable amount still passed by the colotomy wound. In order to close this the abdomen was reopened on February 7th, and the ileum between the anastomosis and the caecum was completely divided, the two ends being invaginated upon themselves and closed with sutures. After this operation the colotomy wound quickly contracted, nothing but a little mucus occasionally escaped. The patient regained health and weight, and returned to work. When seen at the end of October, 1901, his general condition was perfect.

CASE V.—A female, aged 79, whom I saw with Dr. A. R. Fegan, of Blackheath, had suffered with some difficulty with the bowels and abdominal pain for about six months. During the later few weeks she had one or two attacks of almost complete obstruction, which, however, had been relieved by hot fomentations, enemata, and opium. When I saw her the abdomen was greatly distended, and coils of small intestine could be seen through the abdominal wall, while at intervals waves of active peristaltic contraction could be seen passing along them. On account of the former attacks of obstruction an operation was recommended, which was performed in the Blackheath Cottage Hospital on April 4th, 1901. By this time, however, the obstruction had become complete, and the abdomen was uniformly distended. An incision was made in the left iliac region; the sigmoid was found to be collapsed, and on passing my hand across the abdomen a hard, fixed growth was found invading the caecum. The small intestine was greatly dilated, its walls being much thickened. A loop of the ileum was then found and attached to the sigmoid by lateral anastomosis. The patient had a copious action of the bowels on being put back to bed, and the abdominal distention subsided. She made a perfect recovery; the bowels acted twice a day, and she has had no further symptoms of obstruction, having been in good health ever since with the exception of an abscess which formed in the right iliac region in connection with her growth.

CASE VI.—A married woman, aged 33, was admitted into the West London Hospital, suffering from vomiting and obstruction. Her symptoms dated back for over nine months, and consisted of pain in the back and at the bottom of the stomach. For eight or nine days previous to admission the patient had vomited eight or nine times a day, and the pain had been very acute. She had lost flesh. The abdomen was considerably distended, and enlarged coils of small intestine with active peristaltic movements could be seen through the abdominal wall. An indistinct tumour was felt in the left iliac region. Several enemata were given, but were returned unchanged, and as the obstruction was practically complete, an operation was performed on July 18th, 1901. The patient was put under an anaesthetic, and the abdomen opened in the middle line below the umbilicus. The sigmoid was explored and found to be empty. In exploring the caecum a hard tumour was found involving its walls. An incision was made in the right linea semilunaris and an anastomosis made between the ileum and ascending colon. The patient made a good recovery; the bowels acted naturally two days after the operation and daily after this. There was no further vomiting and she took ordinary food, the growth being removed three weeks later; the ultimate result, however, was unsatisfactory.

CASE VII.—A married woman, aged 58, whom I saw with Dr. P. Vivian, of West Kensington, on July 19th, 1901, had suffered from abdominal pain and constipation for six months, and during the previous few weeks the pain had been acute. She had frequent vomiting, and the abdomen had become distended. A very large quantity of food was vomited at one time, and in the vomit was found debris of food taken some days before. She had had no action of the bowels for four days, and enemata were returned unchanged. The abdomen was very distended, and well-marked peristalsis was seen in the distended coils through the abdominal wall. On placing the hand over these they were felt to harden and become rigid tubes; no growth could be detected. Although immediate operation was indicated the patient refused until July 22nd, and during the interval had no relief to the obstruction or vomiting. She was put under ether, and an incision was made in the right semilunar line. The caecum was found to be distended and the sigmoid empty. On following up the distended large intestine a small contracted growth was found in the splenic flexure. A lateral anastomosis was then performed between the ileum and the sigmoid. On the following day the patient had a liquid motion and passed much flatus but still had some vomiting. She recovered from the operation, and all her symptoms were greatly improved.

To make the record of my cases of ileo-colostomy complete I should like to mention the first case in which I performed this operation. It was that of a man on whom I had performed transverse colotomy for supposed irremovable tumour of the transverse colon. The discomfort of the artificial anus in this position was so great that the patient demanded a further operation at any risk. An ileo-sigmoidostomy was performed, followed by an occlusion of gut as described in Case iv. The patient made a perfect recovery, the colotomy wound healing completely and the supposed tumour of the transverse colon disappearing. I saw him over three years after the operation in perfect health and doing his ordinary work as a carpenter. This case had con-

siderable influence in deciding me to urge ileo-colostomy in every case of irremovable tumour of the large intestine.

Consideration of my cases will prove that the operation is a safe one, that it gives immediate relief to the obstruction, and that the patient's condition afterwards is in every way more desirable than after a colotomy. The number, of course, is small, but a series of 8 cases without a death is, I think, favourable in acute obstruction. One of the most interesting points in the history of these cases after the operation is that they do not suffer from diarrhoea, although at first sight the only portion of the large intestine available is that situated between the middle of the sigmoid and the rectum; I believe, however, that the sigmoid and descending colon above the anastomosis may act as a sort of reservoir for the faeces; in fact, in the two cases in which the operation was performed after complete division of the transverse colon, a small amount of faecal matter occasionally escaped from the old colotomy wound during the first few months after the operation. This could only have happened by faeces finding their way up the descending colon.

In surgery of the large intestine much of our work must still be considered on its trial, and many recommendations will depend on individual success; thus, although my results after ileo-colostomy have been invariably good, the results of removal of the growth in the two cases in which it was effected after the anastomosis were disappointing, and I should not again employ that method of treatment; but, as my cases have done well after primary removal followed by anastomosis, I am strongly in favour of this method. Another surgeon may have precisely opposite results, and so will recommend a contrary procedure, and until more cases have been published it will be difficult to arrive at a definite conclusion.

The important conclusion which I would draw from these cases is that colotomy should never be performed for any growth which is situated above the middle of the sigmoid flexure, and that an artificial anus formed in such a case should be only a temporary one left after the removal of the growth, and subsequently to be closed by ileo-sigmoidostomy.

TWO CASES OF RECOVERY AFTER OPERATION FOR DIFFUSE PERITONITIS FROM PERFORATION OF THE APPENDIX.*

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At a meeting of the Bristol Medico-Chirurgical Society a few months ago I reported a case of recovery after operation for diffuse peritonitis from perforation of the appendix.¹ Since then I have had two more cases of the kind, and these I propose to bring before your notice this evening.

In my previous paper I defined exactly what I meant by diffuse peritonitis. It is not a general peritonitis, but an infection far beyond the limits of an ordinary appendix abscess. Probably in all my three cases it was confined to the lower part of the abdomen. For its successful treatment early operation is of the greatest importance. But, as I have before pointed out, its signs are not always distinct from those of severe localised appendicitis, and this is one reason why I believe the safest course to adopt is to operate early in all severe cases of appendicitis. It is entirely a mistake to suppose because a patient's pulse is under 100, his temperature hardly raised, and his belly not distended and not generally rigid, that diffuse infection of the peritoneum is not present.

In the case which I recorded in April, 1901, the patient's pulse did not rise above 80, and the temperature did not reach 100°, and there was a complete absence of vomiting. Increasing abdominal distension and tenderness alone indicated the severity of the attack, but I must say I was not prepared to find as widespread an infection as I discovered at the operation. In the first case, which I am about to describe this evening, there was little doubt that a widespread infection of

* Read before the Bath and Bristol Branch of the British Medical Association.

the peritoneum was present; but in the second case, a few hours before operation, the patient's pulse was only 100, there was no rise of temperature, and the tenderness and rigidity of the abdomen were confined to the region of the appendix, and there was no distension at all. Yet the lower abdomen was full of pus. Severe pain and frequent vomiting were the prominent symptoms, but they are often very marked in well localized forms of appendicitis. When I operated there certainly was general rigidity of the belly wall, but at the time when I decided to advise operation as the safest course to adopt, six hours earlier, there was not.

The following is a description of my two last cases. They were both seen with Mr. F. E. Peake, and their successful termination is due to his recognition of the need for early surgical treatment.

CASE I.

History.—A woman, M. E. M., aged 26, was first seen by me with Mr. F. E. Peake at 5.30 on August 25th, 1901. She had been taken ill two days before with abdominal pain and vomiting. At first the pain was across the abdomen, about the level of the umbilicus, and then spread to the right iliac region. Vomiting began early and persisted.

State on Examination.—She seemed in great pain, and her face was drawn and anxious. The lower two-thirds of the abdomen was distended and very tender, and the breathing was entirely thoracic. The pulse was not more than 100. There was no history of any previous attack. The persistent severity of the pain and vomiting, and the abdominal distension and tenderness, together with the absence of abdominal movement with respiration, indicated a widespread infection, and immediate operation was strongly advised. It was done as soon as she could be removed to the hospital (at 0.30 that evening).

Operation.—Directly I divided the peritoneum almost an ounce of pus, which lay just beneath, escaped, and then some very red and distended coils of intestine were seen. I passed a sponge on holder into the pelvis, and it came back covered with very offensive pus and lymph, and so did several other sponges used to clean the cavity. I allowed several coils of the inflamed and distended small intestine to protrude, and wrapped them in a warm carbolic towel. The appendix was then seen hanging down into the pelvis, and was easily detached from slight adhesions and brought to the surface, and was found to be very swollen and red, and in parts covered with lymph, and a large perforation was noticed in it. I removed it, replaced the coils of bowel within the abdomen, and left in four glass drainage tubes containing strands of iodoform gauze, and brought the edges of the wound in the abdominal wall together around these as far as possible. She bore the operation very well. An examination of the appendix after removal revealed the presence of a large concretion and a perforated ulcer. She was a good deal better on the following day, August 26th.

Progress.—The abdominal pain and tenderness were much less, and when I saw her at 2.30 P.M. she had not been sick since the previous night. The distension persisted, though some flatus had been passed after one of several turpentine enemata. She was fed only by nutrient enemata, and 3 grs. of calomel were given, and the turpentine enemata continued. On the following day—the second day after the operation—she was frequently sick and passed no flatus. There was, however, no increase of the abdominal pain and tenderness, and the pulse did not exceed 112. She was clearly suffering from intestinal paralysis which the calomel and turpentine enemata, and $\frac{1}{16}$ gr. strychnine administered hypodermically every few hours, had failed to overcome; but a further administration of very hot turpentine enemata was followed by a discharge of gas from the bowel and the vomiting ceased. Next day, when I saw her, the improvement in her condition was very marked indeed. The bowels then acted naturally, the abdominal distension gradually subsided, and four days after the operation the glass tubes were replaced by rubber ones. At this time the nutrient enemata were stopped, as she was able to take a fair amount of peptonised milk by the mouth, and ten days later she was able to take some fish. I did not see her again for three weeks after this, but by that time there was only a superficial line of granulations on the abdominal wall, and no sinus. She has now left the hospital, but when I saw her last she still had a small patch of surface granulations.

CASE II.

The second case was a young man, A. W., aged 21, seen with Mr. F. E. Peake at 3 P.M. on October 1st.

History, and State on Examination.—During the previous night he had had a little uneasiness in the abdomen, and early in the morning severe pain and vomiting set in. The pain was more severe in the region of the appendix but was also present in the epigastrium. The vomiting occurred at frequent intervals all the morning. There was marked tenderness and rigidity of the belly wall in the region of the appendix but not over the rest of the abdomen. There was no abdominal distension, but the breathing was almost entirely thoracic. His pulse was only 80 and his temperature normal. Three months before he had a previous attack. Immediate operation was advised, but as the pain was then easier and he had not vomited for an hour or two, he was not willing to have any operation. However, the pain and vomiting quickly returned, and the whole abdomen became rigid but not distended. He was removed to the hospital, and at 9 P.M. the same day, that is, fourteen hours after the onset of the severe pain and vomiting, I operated.

Operation.—On operation I found a very large quantity of pus in the pelvis and right loin. There were flakes of lymph on the caecum, but the inflammation of the small intestines was not intense. The perforated appendix lay between the caecum and the parietal peritoneum. I removed it, freely sponged out the pelvis and lower abdomen, and inserted several large glass drainage tubes with gauze wicks. He bore the operation very well.

Progress.—For the first twenty-four hours he was very easy and did not vomit; then he vomited several times, and we had great difficulty in getting any passage of flatus by the administration of purgatives and

enemata, but at last succeeded. With this paralytic condition of the bowel he had no return of abdominal pain or tenderness, and his pulse was not increased in frequency. After the bowels once began to act he made uninterrupted progress towards recovery. Rectal feeding alone was employed until the fourth day, when feeding by the mouth with peptonised milk in very small quantities at one time was commenced. Two days later he was taking 3½ hourly, and very soon after this light solid food. The glass drainage tubes were removed a few days later. Only serum drained away at any time, but there was a moderate amount of this. The wound has now so nearly healed that there is only a small superficial patch of granulation tissue and no sinus, and he is able to get up.

Since operating on these two cases I have operated on a young man with a condition which was certainly not a well walled-in abscess, nor yet one of diffuse peritonitis. I operated thirty hours after the onset of an acute attack, and on lifting up the head of the caecum a collection of about a couple of ounces of pus escaped. The pus lay around a perforated appendix in a cavity on the inside of the caecum, which was not bounded by definite adhesions, but only by the proximity of surrounding coils. It had not extended into the pelvis. Before operation the whole abdomen was as rigid as a board and did not move with respiration. I think it is possible adhesions would have formed around the pus, but very probable that the pus would have become diffused over the lower abdomen and into the pelvis. I removed the appendix and sponged out the whole of the infected area, and drained with a large rubber tube. This was ten days ago, and the young man has made steady progress towards recovery since. Only serum ever came from the drainage tube, which was left out several days ago.

NOTE.—November 20th. Since this paper was read both this case and the previous one, A. W., have left the hospital—the former quite well, the latter, A. W., with a small patch of granulation tissue on the abdominal wall.

REFERENCE.

¹ *Lancet*, April 20th, 1901.

ON INTRACRANIAL THROMBOSIS AS THE CAUSE OF DOUBLE OPTIC NEURITIS IN CASES OF CHLOROSIS.

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THE object of this communication is to support the suggestion that double optic neuritis occurring in patients the subjects of chlorosis is due to intracranial thrombosis. The evidence I have to submit, so far as my personal observation goes, consists of the facts of a single case, but these, if not absolutely conclusive, are at least highly significant, and certainly add weight to testimony having a similar direction and derived from other sources. The patient was a girl aged 17 years, distinctly, though not extremely, anaemic, and admitting some measure of menstrual irregularity. She was free from all evidence of disease in the thoracic and abdominal viscera, and ultimately made a complete recovery. In short, with the exception of two facts yet to be related, there was nothing to separate the case from the numerous examples of chlorosis seen by every practitioner. These two facts were diplopia and double optic neuritis. The double vision was of sudden and recent origin (fourteen days), and was found to depend on a paralysis of the external rectus muscle of the right eyeball. Visual acuity was normal, there was a slight degree of hypermetropia, and the ophthalmoscope revealed considerable optic neuritis in each fundus. Still later there were retinal changes in each macular region, with some depreciation of the visual power. After a few weeks treatment by rest and the administration of iron normal vision was regained, the optic neuritis subsided, and the ocular paralysis entirely disappeared.

The question now proposed to be raised is whether the occurrence of an ocular paralysis in association with double optic neuritis in a chlorotic girl, throws any light on the causation of the optic neuritis known to occur in a small but recognised proportion of patients free from all evidences of disease other than chlorosis. The proposition that it does so can scarcely be argued unless it first be admitted that the two