cord was found to be paralysed some weeks after the operation, and in two other cases which I examined many years after the operation I found that there was some impairment in the movement of the cords, although neither patient had noticed any alteration in her voice, and neither was aware that there was anything at all the matter with the larynx. A very slight attack of pneumonia in one case (Case 14), and I have now mentioned every complication that has occurred in the whole 72 cases.

The ultimate results have been uniformly good. There is not a single case, so far as I am aware (and I have traced all except three) in which the operation has been followed by any remote complications; none of the patients at present have dyspnoea or any other trouble. I know of no class of patients so grateful to the surgeon as those from whom a suffocating gout has been removed.

NOTE.—Since this paper was read I have operated on 20 more cases, bringing the total number of operations up to 100. Of these last 20, 18 healed by primary union, and the patients were well within a week; in the other 2 a sinus formed (May, 1900).

A CLINICAL LECTURE

ON

SOME UNUSUAL SEQUELÆ OF EPITYPHLITIS

Delivered at University College Hospital.

By ARTHUR E. BARKER, F.R.C.S.,

Professor of the Principles and Practice of Surgery at University College.

GENTLEMEN,—Among the numerous routine cases of epityphlitis with which the modern surgeon has to deal wholesale, there crop up from time to time cases which illustrate more especially the many peculiarities of the disease and its more remote dangers. Of these I venture to think we require occasionally to be specially reminded.

The following cases serve to impress upon us that if we are disposed here and there to pause before operating in any given instance, such delay must not be too long. At the same time I confess I am one of those who believe that there is such a thing as unnecessary haste in operating in many cases of epityphlitis. But still, in numerous other instances delay is a terrible mistake. The study of any long series of consecutive cases teach us both these conclusions.

The first of the following cases illustrates the development of subphrenic abscess as the result of epityphlitis, a complication probably more frequent than is commonly supposed. Sonnenburg met with this complication 9 times in 600 cases operated on by himself.

The second case also emphasises the danger of lung complications from either extension of the inflammation around the cæcum upwards to the under surface of the diaphragm, or of infarcts lodging in the lung and producing an abscess there.

The third case shows the disastrous local results of leaving a perityphlitic abscess too long unopened, and the way in which the resulting "artificial" anus may be brought to heal.

The fourth case illustrates a form of ulceration due to concretion in the appendix with which I was before unfamiliar, and that it may open up adjacent small intestine without the formation of an abscess.

The fifth case shows almost the same course of events where an appendix inflamed, but without any concretion, and nearly ulcerated into the colon.

CASE I.—Some years ago a gentleman, aged about 30, called upon me from the country and gave the following history: He stated that some weeks before he had passed through an attack described by his medical attendant as acute typhlitis. In the course of this a large swelling had formed in the right iliac fossa, but though there was plain evidence of the formation of an abscess, the latter was not opened. In due time the swelling became smaller, but at the same time he began to suffer from night sweating and emaciation, with great enlargement, as was supposed, of the liver. When this condition had gone on for some time he came to consult me. He then looked very ill and thin. There was but little swelling now in the iliac fossa, but on examining the flank, fulness was found in the right renal region. The liver border was below the umbilicus, and the dulness behind extended upwards above the usual level on the right side. Just below the angle of the right scapula was a fluctuating swelling the size of half an orange. There were no signs of a general pleurisy or empyema.

On admitting him to a nursing home he was kindly seen for me by Dr. Sidney Ringer, who agreed with me as to the presence of a large subphrenic abscess on the right side which was beginning to point through the lower pocket of the pleura, and which was pushing down the liver. On incising the abscess over about the eighth intercostal space behind and putting in my finger between the ribs, I found a track leading down to the diaphragm and apparently through it. From this a large quantity of pus was evacuated and a drain tube was inserted. The relief was immediate and great. The liver border began at once to rise, and during the six weeks of his stay in the home resumed its normal position. Finally the wound closed, and he went convalescent to the South of England.

In this case there appeared to be clear evidence that the original suppuration (probably behind the cæcum) had crept up behind the peritoneum, forming ultimately a very large subphrenic abscess, which worked its way at last through the lower pocket of the diaphragm and presented through the ribs under the skin of the back. When this was opened the rapid return of the liver to its normal level was most marked. There was a tuberculous element in this case, and some years later I heard of the patient's death from phthisis in Madeira.

CASE II.—In May, 1896, I was asked by Dr. F. Rushworth, of Hampstead, to see a gentleman, aged 25, who for some fourteen days had been suffering from typhlitis. He was a strong man and an active football player. The attack had begun in the usual way, and was treated by the expectant method. Some days after the onset there was evidence of right basal pleurisy, for which Dr. Mitchell Bruce was asked to see the patient. When I saw him on the fourteenth day this was not a very prominent feature in the case, but there was obviously a large abscess in the right iliac fossa and flank. This I opened on May 27th, 1896 (the fifteenth day) and evacuated a large quantity of pus containing faeces from behind the cæcum. On May 31st the patient was suddenly seized with the most intense dyspnoea, and coughed up a large quantity of foul pus. The dyspnoea was extreme, with great cyanosis, and required the frequent administration of oxygen, which was kept at the bedside in a cylinder for use during the paroxysms which were frequent for some days, and then ceased. Our great fear now was that the other lung should become infected by inhalation of pus from the right bronchus into the left. This fear was justified, for on June 5th he began to complain of severe pain at the left lower base, where there was found to be evidence of pleurisy and consolidation. The next day he coughed up with the same severe dyspnoea a considerable quantity of foul pus, the right side of the chest in the meantime having greatly improved.

From this on there was steady improvement, and although a faecal fistula lasted for some weeks it ultimately closed, and convalescence in the end was complete, and the patient was able to undertake a sea journey.

Here, too, I felt justified in the conclusion that the suppuration from the cæcum had extended up to the diaphragm on the right side and finally burst into the lung. From this it had infected the left lung, the abscess bursting into the bronchi finally, each attack nearly costing the patient his life.

CASE III.—On September 12th, 1899, a woman aged 42, was admitted into University College Hospital with a large abscess in the right iliac fossa and flank, dating apparently from an attack of suppurative epityphlitis. When this had been opened it was found not only to have run riot in the extraperitoneal areolar tissue of the flank, but also to have spread widely among the lateral abdominal muscles. The incision was made by Mr.

FIG. 1A

A. Fistula from sloughing of the cæcum. B. Anastomosis of ileum and transverse colon. C. Artificial kinking of ileum below anastomosis. d.d. Line of division of colon. f.f. Line of division of ileum.

Pollard above the crest of the ilium obliquely from above and behind downwards and forwards between the last rib and the iliac crest. The contents of the abscess were pus and faeces which evidently escaped from a wide opening in the large bowel. In due time the general cavity of the abscess began to contract, but practically all the faeces continued to be discharged from the opening in the loin, only a small fragment of solid material coming away at intervals *per rectum* when an enema was given.

This condition of things went on to the end of November, the patient's general condition improving, but the discharge of loose irritating faeces from the loin continuing to such an extent as to render the woman and all who attended on her very miserable on account of the constant discharge of liquid faeces and great fetor and excoriation of skin. As there appeared to be no prospect of this artificial anus in the groin closing, I opened the abdomen on November 23rd and made a lateral anastomosis between the ileum some 2 feet above its termination and the transverse colon (Fig. 1 B). Then fearing that the faeces might still reach the cæcum without going through the new short circuit I kinked the ileum on itself a few inches below the latter and stitched the kink in such a manner as to try to make it permanent and so prevent the faeces from passing beyond it. (Fig. 1 C). The ascending colon was not kinked or otherwise closed, as I expected there would be very little reflux from the anastomosis in the transverse portion towards the opening in the loin.

Whether this method of blocking the bowel below an anastomosis has been put in practice before by others I cannot say, but it appeared to have many obvious advantages if effectual, such as saving of time and absence of risk of infection, over the method of dividing the gut and turning in the ends with sutures. At all events, it answered its purpose very well up to a certain point and for a time in this case, and was easily and rapidly accomplished.

For some time there was still a little escape of liquid faeces from the fistula in the loin, especially when the bowels were relaxed. This I think I was justified in attributing to a slight reflux from the transverse colon, which now received the liquid faeces from the new ileo-colic opening. It must be remembered that a prolonged inflammation in and around the cæcum and ascending colon as well as in the abdominal wall would necessarily be followed by paresis of all these structures. It is natural to suppose that, owing to this condition, the ascending colon would not contract as firmly as the transverse, and consequently a contraction of the latter on fluid faeces would cause a regurgitation of a small quantity towards the cæcum. As the latter recovered its tone this reflux ought to be prevented; and, as a matter of fact, this occurred, and the escape of faeces became less and less, and the fistula, which before my operation for anastomosis showed no signs of closing, became smaller and smaller but little came away. But after some weeks sufficient faeces began again to discharge from the fistula to prevent the latter from healing, although most of the motions came away now *per rectum*. I began to suspect, therefore, that the kinking of the ileum which I had made at the time of anastomosis was not effectual, but was allowing some of the contents of the small bowel to pass into the cæcum.

As the patient's condition had improved but was still so uncomfortable on account of the faecal fistula that she could not have got about without much leakage, I again opened the abdomen through the former median scar. I then found the anastomosis most satisfactory, but that the kinking, although still existent, was not preventing the flow of faeces and gas through the doubled parts. The small bowel was therefore cut across just below the anastomosis (*ff*), its edges turned in and sutured, and the colon was similarly dealt with (*dd*). There was now no possibility of faeces reaching the cæcum from either direction. The recovery was uneventful from this operation. Henceforth no faeces appeared in the fistula. The latter still discharged a good deal of pus and some foul mucus from the abscess and bowel, but is now, as you see when the patient is dressed, very insignificant and is healing steadily. The patient has been getting up for some time past, and will soon leave hospital. A fistula will of course remain for a time, if not for good. This is inevitable, as some provision has to remain for a certain amount of gas and mucus to escape from the excluded portion of the colon, but this escape in similar cases has proved to be trifling, and to have caused but little inconvenience.

CASE IV.—Mr. F., aged 29, was always healthy until January 27th, 1898, when he had for the first time a typical attack of epityphlitis, with vomiting of green fluid. There had been looseness of the bowels previously, and during the attack the temperature rose to 101°. There was tympanites and tenderness over the whole abdomen, but most in the right hypochondrium. No tumour was felt at this time, owing to the distension; but later on Dr. A. Browne found a swelling in the right iliac fossa.

This attack passed off under Dr. Browne's treatment with opium and bismuth in a few days. On February 8th, 1898, the patient was sent to me with a view to decide whether it would not be well to forestall a possible second attack by removing the appendix. As the patient was looking well, and had but little remains of the tenderness, and only a suspicion of swelling, I was inclined to wait, and explained the matter to him. As he led an active life, and wanted to be able to hunt again soon, he decided, however, to have the operation performed. This I did for him on February 15th in the usual way. When the cæcum was exposed and drawn forwards it was found that the appendix was ulcerated completely through at its base, leaving a hole in

the cæcum. This was at once stitched up with two rows of Lembert sutures. A mass was then found consisting of small intestine and the remains of the vermiform appendix wrapped round by adherent omentum. When this was unravelled, a concretion the size of a large filbert was found in its centre. It was dry, and lay in a mass of granulation tissue without any visible pus. On wiping away the granulations round the spot where the concretion had lain, it was found that a large hole had been ulcerated into the small intestine some considerable distance above the ileo-cæcal valve owing to the irritation of the concretion. This hole was closed by a row of stitches placed in the axis of the bowel, but with difficulty, owing to the rotten state of the surrounding bowel. The omentum was cut away, the whole area of operation dried, and the wound was partially closed, only leaving room for a gauze drain. A healthy piece of omentum had been first laid over the sutured points. Convalescence was steady and complete, and there was no trouble from the narrowing of the bowel where it was sutured. Dr. Browne tells me that the patient remains well, and has had no further trouble up to March, 1900.

This is the only case in which I have seen a stercolith causing quiet ulceration without visible suppuration. And it is very remarkable that not only had the concretion ulcerated through the base of the vermiform appendix, but it had later caused ulceration nearly into an adjacent adherent coil of small intestine. It appears probable that an earlier operation would have prevented this accident, and that any delay might have been followed by the most serious consequences; for the concretion was held from dropping into the pelvis by little more than the entanglement of the omentum.

CASE V.—A young lady recently returned from the colonies to have her appendix removed gave a very clear history of repeated attacks of epityphlitis with vomiting and rigidity of the abdominal wall. The last attack had been severe, and had determined a preventive operation. This was done on May 10th, 1900. On drawing out the cæcum the vermiform appendix was easily found as regards its proximal end, but when I tried to draw the whole organ out it seemed fixed by its distal end. Running my finger along it was found to enter a ring-like constriction, which held it fast. Firm traction, however, brought it eventually out of the wound still grasped by the constriction, which proved to be formed by the wall of the hepatic flexure of the colon. Into this the end of the appendix had thrust itself like an intussusception, and the edge of the ring was thickened, and adherent to the swollen appendix. It required some care to separate and draw it out of the deep pocket in which it lay. This, however, was done, and the organ, which was very long, was removed at its base by the usual method. As the wall of the colon looked softened round the pocket, the edges of the latter were brought together for safety's sake. Convalescence was absolutely uneventful, and when the first dressing was removed on the tenth day, perfect primary union was found.

In this case a very curious condition was found, which probably would have led to perforation either into the colon or general cavity of the abdomen.

Other cases illustrate the dangers from adhesions following inflammation of the vermiform appendix. Indeed, there is one now in hospital who very nearly fell a victim to them. She was admitted some weeks ago with symptoms of intestinal obstruction. It appeared that last Christmas I operated for a epicæcal abscess and drained. She left hospital well, but was suddenly seized with the usual symptoms of intestinal obstruction, at Easter, during my absence from town. Mr. Godlee opened the abdomen, and found extensive adhesions round the old seat of mischief. These he released, and recovery followed. This is alluded to here as an "unusual sequel," and perhaps justly, for it is remarkable among the countless cases of suppurative epityphlitis which recover after drainage, how few suffer subsequently from obstruction due to adhesions.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual general meeting of this Association took place on July 3rd at the Café Royal, Regent Street. Dr. Gabe was elected President and Dr. Achard Vice-President. Drs. Younger and Greenwood were unanimously re-elected respectively Treasurer and Honorary Secretary. The following gentlemen were appointed members of the Council:—Drs. Snape, Haydon, Walter Smith, F. H. Edwards, E. Furniss Potter, Cowburn, Norman, Maughan, Sayres, and Langton. The members and their friends afterwards dined together to the number of fifty-five. Among the guests were Drs. Vivian Poore, Gilbert Smith, Dawson Williams, Ball, Clement Godson, Morgan Dockrell, Frederick Smith, and Mr. Howard Marsh. After the usual loyal toasts Mr. Howard Marsh proposed that of "The Brussels Medical Graduates' Association." This was responded to by Dr. Major Greenwood, the Honorary Secretary, who said that the Association was not in favour of the recent reciprocity scheme brought before the General Medical Council at its last session, and that although their members claimed the right to register foreign degrees in addition to English qualifications, they were strongly opposed to the registration of practitioners possessing only foreign ones. The President proposed "Our Guests," and this toast was responded to by Dr. Vivian Poore and Dr. Gilbert Smith.