ON A CASE OF PANCREATIC PSEUDO-CYST.

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I must apologise to the members of the Surgical Section for the very imperfect manner in which this paper is laid before them. When I gave notice to the Secretary that I intended to make a communication on this subject I thought I should have at least a month in which to prepare it. It was only on Monday last I was told that it was the wish of the Council that I should present it at this meeting, inasmuch as Mr. Taylor's paper dealing with pancreatitis—a cognate subject—was to be brought forward this evening.

I shall first relate briefly the notes of the case, which seemed to me of sufficient interest to warrant me in laying it before you:—

I was called to the country to see a young man, aged nineteen, who had, about eighteen days previously, met with an accident when cycling. He ran into a horse and trap which were coming in the opposite direction and received a blow in the epigastric region, being struck, it is said, by the horse's collar. He was not going very rapidly at the time, probably about six or seven miles an hour, and the trap was travelling at a slightly less speed. He was rendered unconscious for a few minutes, and on recovering consciousness he vomited. He seems to have suffered rather profoundly from shock, and was conveyed home, a distance of about a couple of miles, in a collapsed condition. It is stated by his people that, when being put to bed, a tumour in the epigastric region was already visible. He was now seen by two medical men, one of whom suggested operation, while the other,

whose opinion prevailed, declared himself against it. The treatment for shock was administered, and the patient rallied; the bowels moved; food was retained without discomfort, and progress seemed on the whole to be favourable. About the end of a week some pain was complained of about the splenic region, for which the medical attendant, regarding it as indicating congestion of the spleen, applied three leeches. Relief was obtained, but all the time the tumour of the epigastric region persisted and steadily increased, and there was a corresponding steady emaciation of the patient in progress. About seventeen days after the accident pain was again complained of, vomiting came on, and some general distention of the abdomen made its appearance. The vomiting was repeated on the next day on two occasions. I saw him for the first time on that night somewhat after eleven o'clock. He was by this time considerably emaciated, with a very much swollen abdomen, the epigastric region being particularly prominent. The heart impulse was raised so that it was to be felt in the fourth interspace in the nipple line. There was considerable general tenderness over the abdomen, more especially over its left portion. The epigastric prominence was dull on percussion, the dulness being continued out towards the splenic region. Above could be made out gastric resonance, whilst the whole area below was tympanitic. The temperature was slightly elevated, reaching to nearly 100° F., and the pulse-rate was 106. The diagnosis which I made at the time, bearing in mind the rapid appearance of tumour, the suggestion of splenic tenderness, and the onset of peritoneal symptoms at a comparatively late period, was that some rupture of the spleen had occurred leading to considerable hæmorrhage, and that in the hæmatoma so formed, the entrance of bacteria from the intestinal walls was leading to peritonitis. After a considerable amount of deliberation I decided to await morning before undertaking the operation. With the conception of the case which I have just mentioned in my mind I made an incision about five inches long through the outer part of the left rectus, reaching to about an inch from the ribs. On opening into the abdomen the first thing especially noticeable was a marked bulging forwards between the stomach and the transverse colon. Below, the small intestines were considerably distended and somewhat injected. I now passed my hand under the ribs and brought

forward the spleen, which was perfectly normal in appearance. I again inspected the injected jejunum and found flakes of lymph between the coils, one mass of lymph measuring about three inches in length. I removed these, and washed this region with saline solution. It was, of course, obvious that my diagnosis of the splenic origin of the trouble was wrong, and I now came to the conclusion that the origin was to be sought probably in an injury to the pancreas. I returned to the swelling between the stomach and colon, brought the most prominent part into the wound, packed around with gauze, and incised it. Immediately there was a gush of a clear yellowish fluid, which continued to pour out through the aperture till at least about two quarts had come away. Towards the end there were traces of dark-coloured hæmorrhagic material, followed by some fresh blood. As the fluid flowed out I brought forward the edges of the aperture I had made, and stitched them to the margins of the wound. When the fluid had ceased flowing I examined the cavity with my finger, and could easily feel a soft mass, which I took to be the pancreas, at the back. Above I could feel the liver, and the deepest part of the cavity was above and to the left, in which direction I could not touch the posterior wall of the sac. A tampon of gauze was now introduced into the cavity and the external wound closed. The operation had been very well borne, and the patient was returned to bed in good condition, and with now a nearly flat abdomen.

Reviewing the case when the operation was concluded, it still seemed to me that the pancreatic origin of the fluid was the most probable one. The presence of inflammation of the greater sac of peritoneum I then attributed to beginning leakage from the cyst, probably through a thinned transverse meso-colon. This explanation still appears to me the most probable one.

The subsequent progress of the case is of considerable interest:—

I saw the patient next on the evening of the day following the operation, when I removed the gauze tampon and inserted another smaller one. There had been but little discharge from

the wound, and the boy's condition was very good. Next day I heard from the doctor in charge that there had been a great oozing of clear fluid alongside of the gauze, and he asked me to come to see the patient again. On visiting him I found the dressings soaked, although they had been on only about two hours, and the skin around the margin of the wound becoming a little reddened. I inserted a drainage tube into the aperture, and gave directions to have the dressings changed as soon as they became moist. I also asked to have some of the fluid kept and sent up to me, but my directions in this respect were not carried out. The progress of the case subsequently, as I learned from the doctor in charge, was as follows:—At first the dressings required very frequent changing, especially after he had partaken of food. The skin became excoriated all round the wound wherever it came in contact with the discharge. About a fortnight after the operation considerable pain was complained of internally, which disappeared on shortening the drainage tube. At the end of four weeks the discharge, which had been gradually lessening, was very small in quantity, and the drainage tube was removed. In another ten days it had ceased altogether, and the wound closed up completely. The skin around at once began to recover its normal appearance, and from this on the patient remained perfectly well. He began to increase in weight soon after the operation, and is now as strong as before the accident.

The points on which I wish to lay emphasis are the rapid appearance of an epigastric swelling, its subsequent gradual increase, the steady emaciation, the relation of the swelling to the stomach resonance, the elevation of the heart, the character of the fluid, which presented but slight traces of old blood effusion, the irritating qualities of the subsequent discharge and its increase some time after taking food, and lastly, the evidence of beginning peritonitis.

In describing the case as one of pancreatic pseudo-cyst I have adopted the term first suggested by Jordan-Lloyd, and made use of by Mayo Robson in his work on diseases

of the pancreas. When attention was first called to cystic swellings in the neighbourhood of the pancreas it was usual to describe them all as pancreatic cysts, and it was thought that they had their origin in the substance of the pancreas. Jordan-Lloyd, from the study of two cases which came under his notice, was the first to suggest that most, if not all, which follow soon after an injury do not arise inside the pancreas. His views are as follow:— The pancreas is a soft, easily lacerable organ, running across the first lumbar vertebra, and projecting into the lesser sac of peritoneum, receiving a covering from this which is closely adherent to its anterior surface, from which it is never separated, by a layer of fatty tissue even in the most corpulent. Violence applied to the epigastric region, if it overcome the resistance of the abdominal muscles, may press the pancreas against the vertebræ and tear its friable substance and with it the peritoneum, which is closely adherent to its anterior surface. Blood and pancreatic fluid escape into the lesser peritoneal cavity. I may here remark that in the records of *post-mortem* examinations quoted by Mayo Robson on cases dying after injury to the pancreas, the hæmorrhage was slight when the pancreas alone was injured. The effusion of these fluids excites an inflammation in the lesser sac, which seals the foramen of Winslow, and leads to an outpouring of serum. The mixture of serum, blood and pancreatic fluid still continues to irritate, and very soon the cavity becomes completely distended. The walls then resist further distention, so that the subsequent increase in size is slow. When the cyst is opened and drained pancreatic fluid will still continue to flow from the rent in the gland, and will accordingly make its way through the drainage aperture. The chief points on which he relies are the mode of increase of the swelling—at first rapid, subsequently slow—suggest-

ing the outpouring of fluid into a pre-existing space, and the shape of the cavity, which corresponds with that of the lesser sac of peritoneum, being deepest above and towards the left in the direction of the spleen. These two conditions were present in my case; and I might add a third—that the membrane stretching from the stomach to the colon which I incised was scarcely, if at all, thicker than the normal gastro-colic omentum, suggesting the absence of a cyst-wall as a distinct structure. On the whole, the explanation given above seems to me a reasonable one, and one which best accords with the facts of my own case.

I regret that I am unable to lay before you the results of an examination of the discharge. Without this I am aware that the history of the case is very incomplete. I asked on more than one occasion to have the fluid sent to me, but failed to get it. I have no doubt that I should have found some, if not all, of the pancreatic ferments in it, but, as it is, the only evidence that it was pancreatic juice is the markedly irritating qualities it possessed, as shown by the widespread excoriation of the skin.