**A CASE OF LEFT DUODENAL HERNIA IN
A CHILD.**By **FREDERICK C. PYBUS, M.S., F.R.C.S.,**SURGEON TO THE HOSPITAL FOR SICK CHILDREN,
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CASES of duodenal hernia are sufficiently rare to warrant the publication of individual examples. Some idea of their frequency can be gained from Barnard's¹ figures. Out of the 669 cases of intestinal obstruction occurring during thirteen years at the London Hospital, 13 were due to internal herniae, and of these 2 were the result of hernia into the duodenal fossae.

The fossa into which this hernia occurred corresponds to the paraduodenal, as described originally by Landzert. Of the peritoneal fossae in this region, Moynihan² insists that the paraduodenal is the only one capable of forming a hernial sac. There is still considerable confusion in the nomenclature of these fossae, and this type of hernia is frequently alluded to as the duodeno-jejunal.

The paraduodenal fossa lies to the left side of the spine, and to the left side of the ascending part of the third portion of the duodenum, which forms the inner border of its orifice. The remainder of the orifice is bounded above, below, and on the outer side by a fold of peritoneum containing the inferior mesenteric vein. The left colic artery lies in the peritoneum of the anterior wall. The sac extends towards the left, and lies behind the descending mesocolon.

The anatomy of the sac in the case described below corresponds exactly with this description. So far as I have been able to gather from a perusal of the cases it is the first in which a portion of the large intestine formed part of the contents of the sac.

The patient had been ill five days when I saw him, and being the child of poor parents attempts had been made to get him admitted to a general hospital, children's hospital, and fever hospital without success, either on account of these institutions being full or their having no accommodation for dealing with such a case. It is, perhaps, fortunate that the condition was not one of urgent strangulation, or the result might have been very different.

Dr. Maclean of Ashington has kindly written me a history of the case, which is as follows:

Note by Dr. Maclean.

E. T., male, aged 5 years, developed scarlet fever on December 15th, 1913. He did well until the evening of December 25th, when he complained of abdominal pain, which was then considered due to the eating of a banana. On Friday morning, December 26th, I saw him. His temperature and pulse were normal; the pain resembled colic. On abdominal examination there seemed a resistance and fullness on the left side. The bowels had not been moved for two days, and castor oil was prescribed. I had a suspicion that there might be an intussusception, and asked my locum tenens, Dr. McKenzie, to see him in the evening, and he reported him better, though the bowels had not moved. Next morning (December 27th) Dr. McKenzie again saw him, and found a definite mass in the left flank. We both examined the boy in the afternoon, and diagnosed an intussusception.

On account of the boy having scarlet fever we could not get him admitted to hospital, and tried soap and water enemas and large injections of water, without benefit.

On December 28th the temperature was normal, pulse rather rapid, sickness was stopped, no blood had been passed per rectum, and nothing abnormal could be felt per rectum, but the mass in the abdomen could be easily palpated. On December 29th Mr. Pybus operated at the boy's home, and on opening the abdomen found a large internal hernia. Peeling commenced a few days after the operation. The boy has made a splendid recovery, and is now running about the streets.

Operation by Mr. Pybus.

When I saw the patient on December 29th, 1913, there was no fever, the pulse was 104, the tongue was furred but moist, and there was a decided acetone smell in the breath. The child was peevish and restless, but when asked where the pain was the hand was passed over the epigastrium. The abdomen was slightly distended, and a mass was found on the left side. Rectal examination was negative.

Under the anaesthetic distended coils of small intestine could be seen in the right side of the abdomen. There was a rounded visible swelling on the left side of the abdomen about the size of an ostrich egg, situated to the left and chiefly below the level of the umbilicus. The lump was tense, slightly movable, and resonant on percussion. The left loin was free of any swelling.

I opened the abdomen in the middle line below the umbilicus. Some clear fluid escaped from the peritoneum. The first

noticeable point was the small amount of small intestine present; this was limited to the right side of the abdomen and pelvis. The intestine itself was congested and slightly distended. On drawing the intestine aside the mass was seen covered by peritoneum, in which could be seen the left colic artery. The swelling appeared to contain intestine. No collapsed intestine could be found, so a coil of small intestine was traced upwards and the appendix was seen projecting from the mouth of a retroperitoneal sac. By means of traction on this part combined with pressure on the sac the contents were reduced with ease; they were congested but not damaged. The reduced intestine consisted of the caecum, part of the ascending colon and a considerable amount of small intestine, probably most of the ileum. The caecum, ascending colon, and termination of the ileum had a long mesentery.

The orifice of the sac was situated to the left side of the duodeno-jejunal flexure, and this intestine formed its inner margin. It was bounded elsewhere by a fold of peritoneum, which was thick at its free edge. Although the contents of this edge could not be definitely seen, the inferior mesenteric vein could be traced up to it. The orifice was oval in shape, the longer diameter being 2 in. and in the vertical direction; the transverse diameter was about 1½ in. Three fingers could be inserted into the aperture, which looked towards the right side. The sac was limited to the left side of the spine, and extended outwards towards the descending colon, upwards to the kidney, and downwards, in a longer direction, to the left iliac fossa, the left colic vessels being seen in its anterior wall.

In order to prevent recurrence I thought of attempting to drag out the sac and remove it, but as this might have proved a long undertaking I obliterated the orifice by suturing the free edge to the side of the duodenum by interrupted catgut sutures. Some saline was introduced into the peritoneum, and the abdomen closed.

The scarlet fever seemed to have no ill effect on the course of the recovery. The anatomical details were investigated as far as possible, and I noted the absence of at least the superior and inferior duodenal fossae at the side of the duodenum. The large size of the orifice accounted for the absence of any strangulation, although there was complete obstruction, brought about possibly by the terminal entrance of the caecum and ascending colon. There was no sharp colic accompanied by crying and curling up, such as is frequently seen in children suffering from intestinal obstruction. A diagnosis of duodenal hernia was not made before operation, although on exploration the condition was immediately recognized. The absence of blood or mucus contraindicated intussusception, and our diagnosis was intestinal obstruction, due to adhesions over a tuberculous focus covered by resonant intestine.

REFERENCES.

- ¹ Barnard, *Contributions to Abdominal Surgery*, London, 1910.
² Moynihan, *Retroperitoneal Hernia*, London, 1899.

**REDUCTION OF OLD ELBOW DISLOCATION
BY OPERATION.**By **FRED. D. BIRD, M.S., Hon. F.R.C.S.,**
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It is seldom that a dislocated elbow is left unreduced long enough to negative reduction by manual means. When, however, operation is necessary, the following measures which I practised recently on a dislocation three months old seem to me adequate to produce a good result.

A rounded flap is turned down, as in the operation for suturing or plating an ordinary fractured olecranon, which fracture is then achieved by the very large cutting forceps used by veterinary surgeons to split down a horse's molar tooth, previous to extracting it in two parts. Care is taken that the bite of the forceps does not invade the integrity of the shaft of the ulna; the section, which with this very powerful forceps is a clean one, is made a very little above the junction of the olecranon with the shaft. Some freeing of the lateral tissues allows of the turning up of the olecranon process. The joint is not seen now, as it would be in a recent fracture, because there is a large amount of adventitious tissue in the enlarged joint area. This material is very dense—dense enough to throw a not unimportant shadow on the skiagram, as I have several times observed, and requires cutting with a knife for its removal, after which the back part of the trochlear surface of the humerus can be seen. The large lever devised by Lane for use in plating the thigh bone is now inserted with its point beneath the trochlea. This, with manipulation of the forearm, exercises leverage sufficient to replace