Pediatrik Cerrahi Dergisi, 7:99-100, 1993

Double cystic duodenal duplication: A case report and review of the literature

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Summary

Duplications of duodenum are relatively rare congenital abnormalities of the gastrointestinal tract. Although duplications can occur anywhere in the alimentary tract, duodenal duplications are encountered only 5-10 % of the total. Up to date, only a single case of double cystic duplication is reported in the literature. A new case of this very uncommon abnormality is present.

Key words: *Double cystic duplication, duodenum*

Introduction

The majority of duodenal duplications are encountered at the first and second part of the duodenum. They could be cystic or tubular in structure and may communicate with the intestinal lumen. Most duplications are found on the mesenteric border of the bowel. The cystic wall contains smooth muscle layers and mucosal linning either duodenal or gastric [1,6]. To our knowledge, double cystic duplications are most uncommon; a single case is reported in the literature [1]. A new unusual variation of duodenal duplications is presented and discussed.

Case Report

A 23-day-old female was admitted to our department with complaints of jaundice and intermittant bouts of vomiting. The mother of the infant was on spiramycin therapy for toxoplasmosis during pregnancy. Abdominal palpation revealed a large mass extending from the liver down to the iliac crest. The total bilirubin was 8.7 mg/dl and tended to rise up to 10.1 mg/dl whereas, the direct bilirubin being stationary at about 0.2 mg/dl. The stool was acolic throughout. Plain abdominal roentgenograms showed a space occupying lesion in the right midabdomen. Barium meal showed delayed gastric emptying with a "beak sign" corresponding to the first portion of duodenum (Figure 1). Ultrasound revealed a double cystic mass below the liver anterior to the duodenum and the gallbladder. Intravenous urography (I.V.U.) gave normal visualisation of the urinary tract. Other laboratory estimations were normal.

At laparatomy two cystic structures (6 and 8 cm in diameters respectively) were found to arise from antimesenteric border of the first part of the duodenum, one on top of the other (Figure 2). The upper cyst had a common seromuscular wall with the duodenum, however the common wall between the two cystic structures was a thin serous partition. Tapping of the cyst yielded a yellowish white serous fluid. There were no communications between the cysts and the duodenum. Both of the cysts were excised and the mucosal surface of the common wall was stripped. Mucosal linings of the cysts were found histologically identical with that of the duodenum. The patient showed an unventful recovery and is still well 10 years after the operative intervention.

Discussion

Duodenal duplications are usually encountered during infancy and early childhood. The most common symptoms are abdominal mass, vomiting, jaundice and gastrointestinal bleding [1,4,6]. Vomiting and jaundice are due to near complete or partial obstruction. If gastric mucosa is present, ulceration may occur which may lead to bleeding or rarely perforation [6]. Barium studies are useful in showing the "beak

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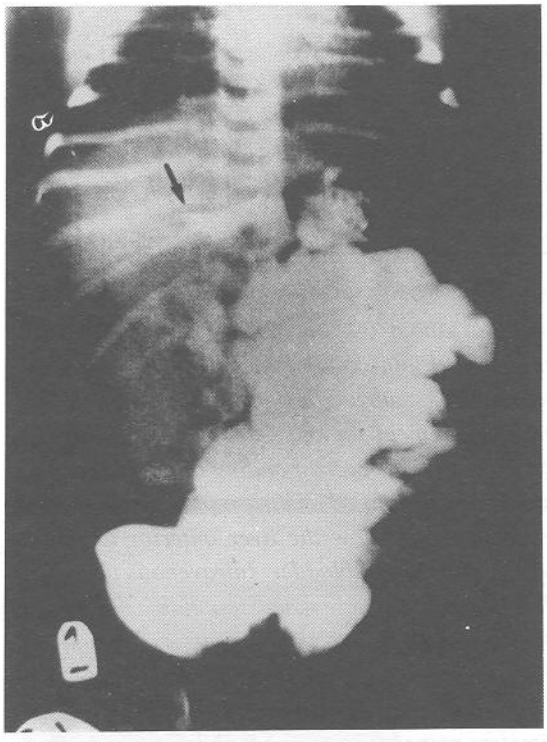

Figure 1. A double cystic duplication of the duodenum showing the "beak sign" at barium study.

sign" of the compressed duodenum, narrowed lumen and widened duodenal loop [7]. The true diagnosis is almost always impossible on plain roentgenograms, however ultrasound can be helpful. The double cystic character of the abnormality can be revealed by ultrasound as was the case in our presentation. Operative procedure which are recognized today are aspiration, marsupialization, external drainage, enucleation of the cyst, internal drainage to the stomach or jejunum, endoscopic and/or surgical resection [1-6].

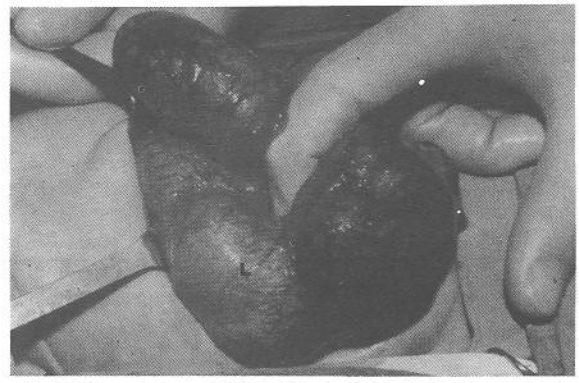

Figure 2. Two cystic structures one on top of the other seen under direct vision. U=upper cyst, L=lower cyst.

In conclusion, a double cystic duodenal duplication as a variation of duodenal duplications should be considered when ultrasound reveals a double cystic image of unknown origin in the duodenal region.

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