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Annular pancreas associated with duodenal obstruction

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DESCRIPTION

A preterm neonate weighing 1360 g was born at 33+2 weeks' gestation with severe polyhydramnios. She was transferred, directly after delivery, to our neonatal intensive care unit presenting with distended upper abdomen and vomiting. A plain film of the abdomen (figure 1) was performed with the suspicion of duodenal atresia and showed a markedly distended stomach (S) and proximal duodenum (D) with no evidence of bowel gas distal to the duodenum. This finding, known as double bubble sign, is pathognomonic for a number of pathologies that cause duodenal obstruction, for example, duodenal web, duodenal atresia, midgut volvulus or annular pancreas^{1–3}. At laparotomy (figure 2) the stomach (black arrowheads) and the duodenum were markedly dilated due to a complete annular band of pancreatic tissue that surrounded and constricted the second part of the duodenum (white arrows); distal to this site, the jejunum (black arrows) was collapsed and atrophic.

Figure 1 Plain x-ray of the abdomen: distended stomach (S) and proximal duodenum (D) with no evidence of bowel gas distal to the duodenum.

Figure 2 Intraoperatively: dilation of the stomach (black arrowheads) and the duodenum due to a complete annular band of pancreatic tissue that surrounded and constricted the second part of the duodenum (white arrows); distal to this site the jejunum (black arrows) was collapsed and atrophic.

was collapsed and atrophic. A duodenoduodenostomy was performed without any postoperative signs of gastrointestinal obstruction.

Learning points

- First clue of an intestinal atresia will often be finding hydramnios on prenatal ultrasound.
- Following delivery, vomiting is most common early symptom.
- Double-bubble sign on postnatal plain x-ray without evidence of distal gas is essentially pathognomonic for duodenal atresia.

Competing interests None.

Patient consent Obtained.

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