Annular pancreas associated with duodenal obstruction

Michele Pansini,1 Olaf Magerkurth,1 Frank-Martin Haecker,2 Sergio B Sesia2

1Department of Pediatric Radiology, University Children’s Hospital, Basel, Switzerland
2Department of Pediatric Surgery, University Children’s Hospital, Basel, Switzerland

Correspondence to Dr Sergio Sesia, sergio.sesia@ukbb.ch

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 pancreas1–3.

At laparatomy (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. 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.

REFERENCES


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.