A case of gastrointestinal duplication

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Objective
Signs of congenital obstruction of the gastrointestinal tract (GIT) may present on prenatal ultrasonography. The double bubble sign is strongly indicative of duodenal atresia. More than one half of fetuses with duodenal atresia have associated anomalies, especially trisomy 21, but there are other conditions that can be related to this finding.

Methods
This is a case report.

Results
A 30-year-old nulliparous patient was referred at 20 weeks’ gestation due to a fetal double-bubble sign on ultrasound scan with continuity between both images. The risk for trisomy 21 in the first trimester screening was low. Morphological ultrasound as well as echocardiogram and neurosonography did not find any additional abnormalities. An amniocentesis was declined and cfDNA testing returned a low risk result. Follow-up scans demonstrated neither polyhydramnios nor fetal growth restriction and a cystic image separate to the stomach. At 41 weeks, after induction of labour, a female fetus with birthweight 4200g and Apgar scores 9 / 10 was delivered vaginally. Immediately after birth the newborn was hospitalized in the neonatal intensive care unit. She was commenced on intravenous fluid therapy. Abdominal x-ray showed marked gastric dilatation, with images of distal air that did not suggest intestinal obstruction. At 12 hours of age, a study was performed with abdominal ultrasound and gastroesophageal transit showing a cystic image adjacent to the stomach with marked gastric chamber distension, suggesting a differential diagnosis of a gastric duplication cyst. Breastfeeding was started, which was well tolerated without vomiting and normal bowel movements, with good weight gain at discharge. A discussion with Pediatric Surgeons recommended expectant management and planned surgery at the most optimal time. Currently, the baby is 4 months old with no symptoms and waiting for surgery.

Conclusion
Gastric duplication cyst is a rare malformation, of probably embryonic origin around the 8th week of intrauterine development, caused by the failure of digestive tract recanalization. It usually presents only as chronic abdominal pain due to bloating caused by the cyst, often with associated complications. The preferred treatment is surgery presenting a favourable outcome. It should be considered when an abdominal cystic structure is seen on ultrasound.