Abstract title

Appendiceal perforation in a fetus with trisomy 21

Authors

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Abstract objective

Intrauterine appendiceal perforation is rarely reported to occur and may be overlooked during pregnancy. This very unusual gastrointestinal finding may appear as meconium peritonitis on ultrasound examination.

Abstract methods

A case report of fetal appendiceal perforation as well as the ultrasound features and additional information will be presented.

Abstract results

The 31-year-old gravida 2 was referred at 22+3 weeks of gestation to our tertiary centre for evaluation of fetal ascites. Ultrasound revealed nuchal and prenasal edema and hypoplastic nasal bone. The most notable finding was a large abdominal fluid collection which did not appear to be typical ascites since it did not surround the abdominal organs, but rather appeared encapsulated with a hyperechogenic formation. The anal sphincter could be visualized and there was no “double bubble”-sign. Fetal MRI confirmed the abnormalities described in the ultrasound. We suspected meconium peritonitis due to intestinal obstruction.

Genetic testing confirmed fetal trisomy 21. The patient decided to continue the pregnancy. Three weeks later, the large fluid collection was no longer visible. Instead, there was a hyperechogenic non-perfused formation of about 3.5 cm. It appeared to be in the colon transversum, without any evidence of dilatation of the involved intestinal segment.

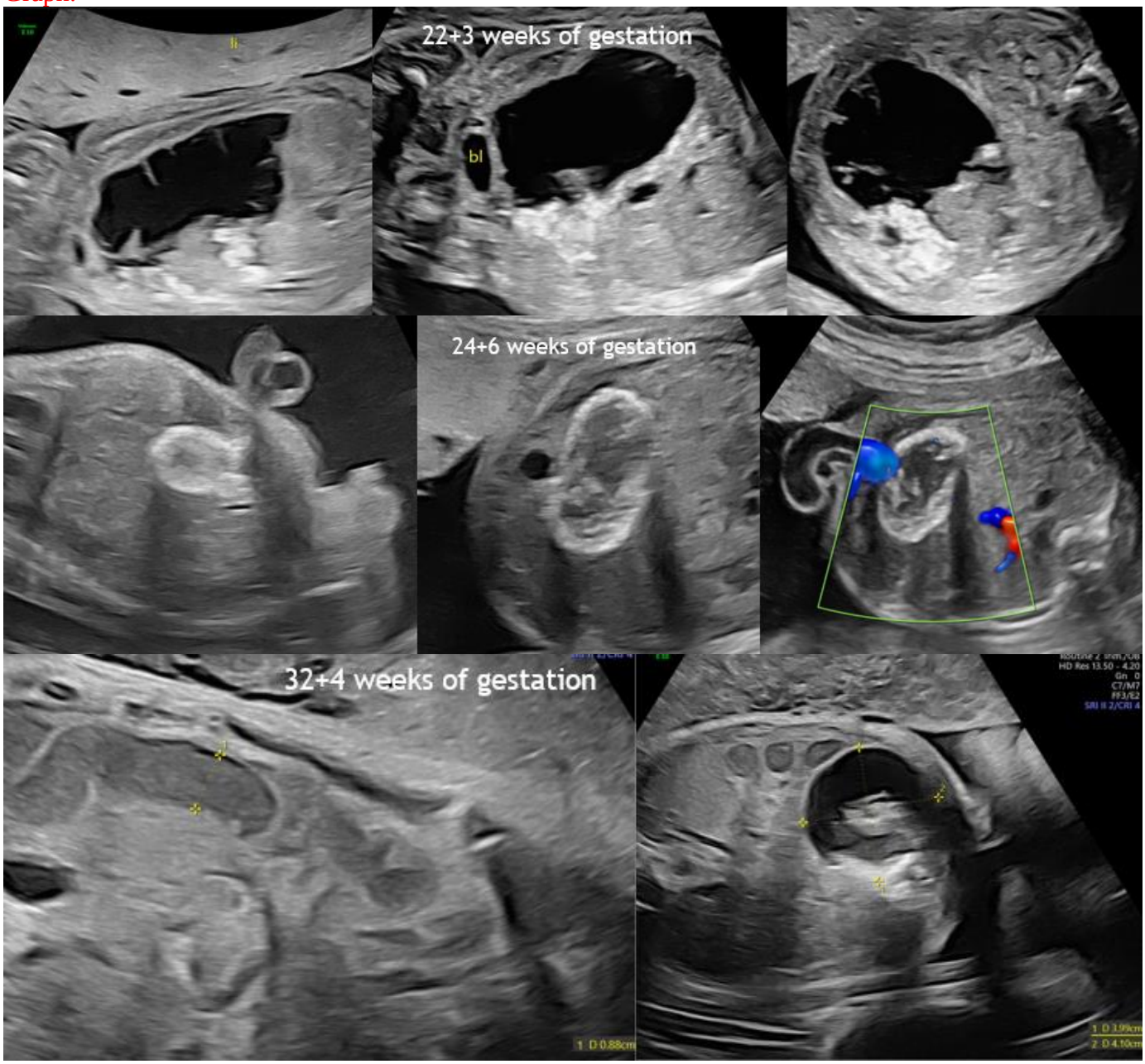
At 36+6 weeks of gestation caesarean section was performed due to pathologic CTG following premature rupture of the membranes. In the first postnatal days, there was an increase in the inflammatory parameters and further examinations (abdominal radiograph and US) confirmed the prenatal suspected diagnosis of intestinal obstruction.

At surgery, the abdominal organs appeared surrounded by a pseudomembranous structure. The intestine was convoluted with some calcifications. After the adhesions were released, a perforated appendix was shown. In addition, the testicles were pulled up in this conglomerate tumor. The appendix was removed and the remaining adhesions were removed as far as possible. The testicles needed to be detached in a second operation. The further postoperative course was without complications.

Abstract conclusion

Fetal appendiceal perforation is extremely rare. Preoperative diagnosis is particularly difficult to achieve. Unusual and abnormal gastrointestinal findings during the examination, such as "atypical ascites" or meconium peritonitis, may serve as clues to rare findings and be given greater attention. Neonates with these findings, may require earlier surgery with the need for careful intraoperative exploration.

Graph:



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