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Isolated fetal ascites detected at 36 weeks gestation

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Objective

This is a case report of isolated fetal ascites detected at 36 weeks of gestation, resulting from either transudation from a fetal ovarian cyst or from cyst rupture. We discuss the management and implications of isolated fetal ascites and those of fetal ovarian cysts.

Methods

A 32 year old primigravida presented at 36+2/40 with spontaneous rupture of membranes and in early labour. Incidental finding of significant fetal ascites was noted on ultrasound scan which was performed to check fetal presentation. There was no hydrops, pleural or pericardial effusion. There was no evidence of fetal arrhythmia. Amniotic fluid index and umbilical artery dopplers were normal. First trimester risk for aneuploidies by the combined test was low. Normal fetal anatomy was noted at 20 weeks gestation. She had a spontaneous vaginal delivery a few hours later. A girl baby, weighing 2898 grams was born in good condition and with good Apgars. Distended abdomen for baby was noted at birth. An ultrasound scan confirmed abdominal ascites. A complex lesion measuring 3. 5 x 1. 4 x 3. 1 cm was seen in the left iliac fossa, which was part-cystic and part-solid in nature. This was thought to be of ovarian origin. Differential diagnosis of teratoma/ haemorrhage within an ovarian cyst or ovarian torsion were considered. An MRI scan performed on day 4 showed almost complete resolution of the previously noted ascitic fluid, with only tiny volumes seen outlining the liver and within the left paracolic gutter. No abnormal soft tissue mass was seen in the abdomen or pelvis.

Results

With an incidence of 1/2600 pregnancies, fetal ovarian cysts are the most common abdominal anomaly identified in female fetuses. They are likely related to stimulation of fetal ovaries by pregnancy hormones such as maternal oestrogen, placental hCG or fetal pituitary gonadotropins. They are usually identified in the second trimester of pregnancy. The earliest case was described at 19 weeks' gestation. They have a broad differential diagnosis which includes significant structural abnormalities such as renal cyst, hydronephrosis, ureterocoele, urachal cyst, hydrocolpos, persistence of urogenital sinus or cloaca. Some studies have reported that as many as 15% of complex urogenital abnormalities were misdiagnosed as ovarian cysts. As the exposure to hormones stops after birth, most cysts regress spontaneously. Bagolan et al. (2002) reported a spontaneous resolution of cysts <5cm in 69% of cases, with the remaining 31% requiring oophorectomy. However, only 15% of cysts >5cm resolved spontaneously and 85% required oophorectomy.

Conclusion

Fetal ascites can occur in isolation or accompany other fetal abnormalities. It is a finding that should always be investigated further, given its significant association with fetal or infant death. Isolated fetal ascites is rare. Relevant investigations include detailed ultrasound assessment, karyotyping, infection screen, maternal blood group and antibody screen. Fetal ovarian cysts can be associated with fetal ascites. If small in size, they regress spontaneously in the majority of cases.