

Fetal Ovarian torsion: a case report

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Abstract

A 32 year old woman was referred to our tertiary obstetrics hospital from rural Australia following an incidental finding of fetal pelvic mass on routine imaging in the third trimester. A repeat ultrasound was performed by a specialist obstetrics sonographer. An avascular, cystic mass was identified in the female fetal pelvis with otherwise normal fetal anatomy. A diagnosis of fetal ovarian torsion was made, with a plan for timed local delivery, early paediatric surgical review and ultrasound postpartum to guide further management.

Introduction

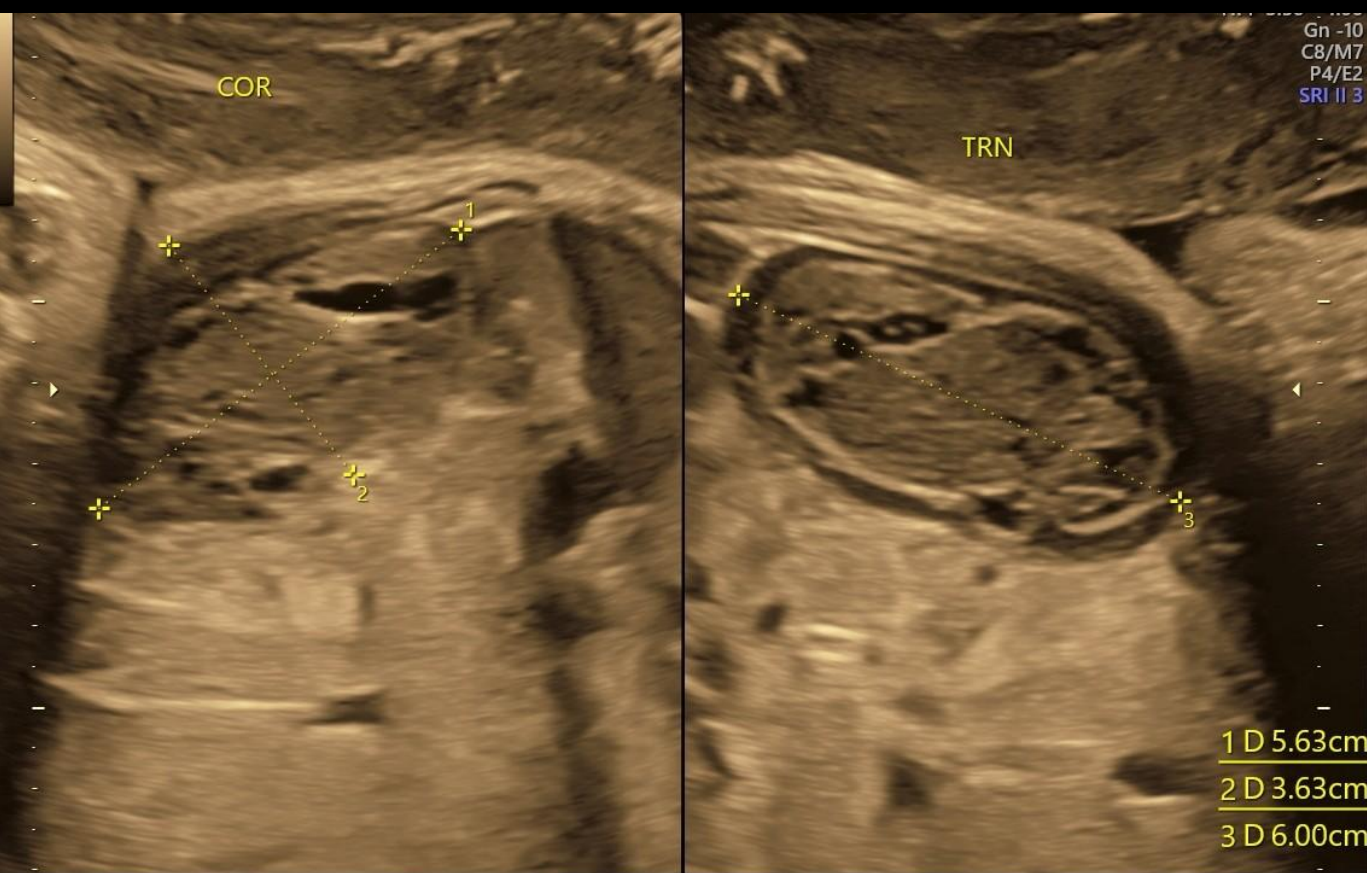
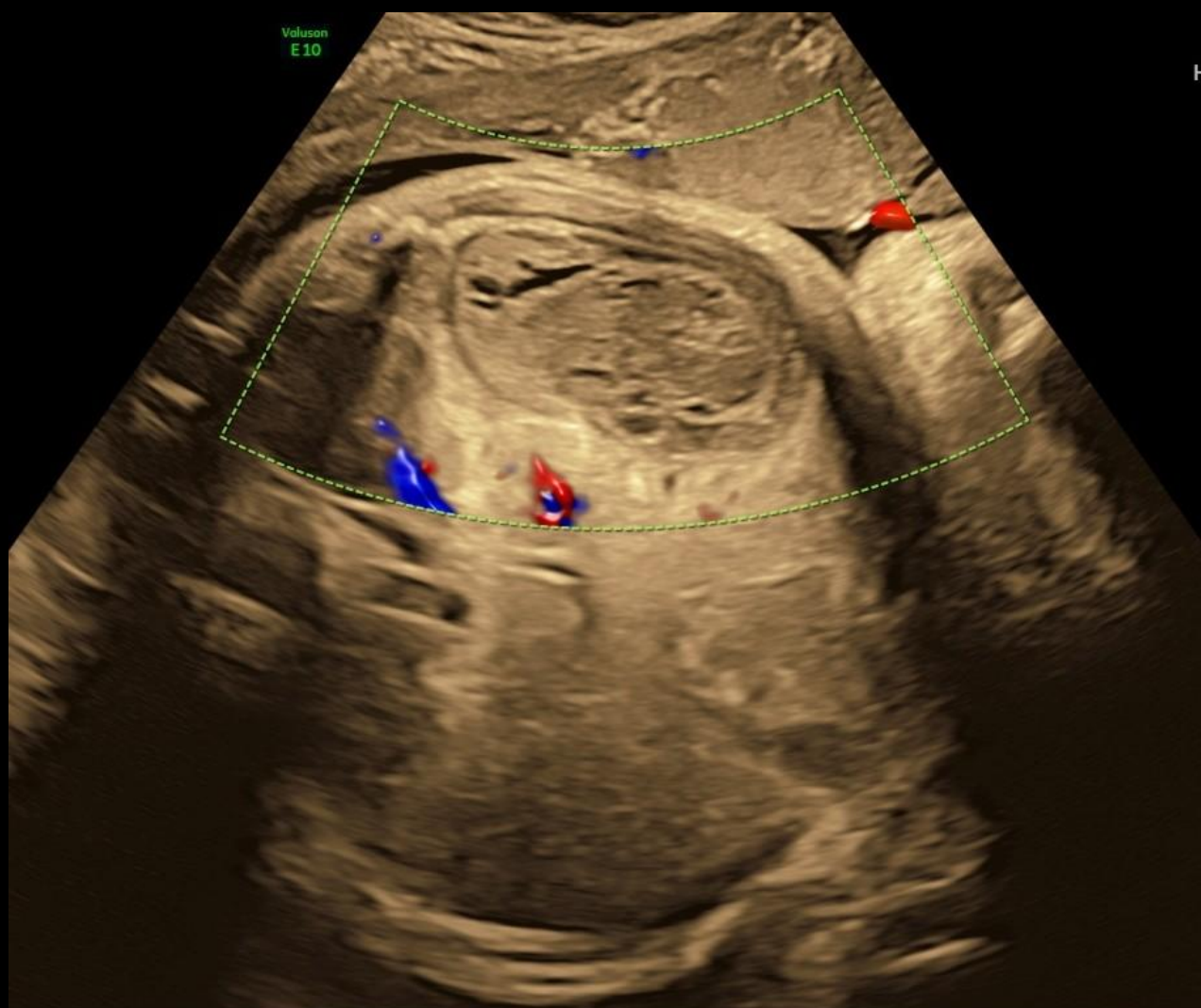
Fetal abdominal and pelvic masses are common with an incidence of 1:1000, with differentials including ovarian cysts (in female fetuses), hepatic, splenic, renal or choledochal cysts (1). Fetal ovarian cysts have an incidence of between 1:2500 and 1:2600 with rates of spontaneous ovarian torsion in fetal ovarian cysts over 40mm reported to be between 25% and 75% without management (2, 3). Despite fetal pelvic masses being common, there is a lack of guidance on best management for fetal ovarian cysts and fetal ovarian torsion.

Case

A 32 year old, G4P3 was referred to our maternal fetal medicine department at 36 weeks gestation, following an incidental finding of dilated fetal bowel loop on routine imaging in the third trimester. She had previously had 3 normal vaginal deliveries at term, with two of these pregnancies complicated by gestational diabetes. She had nil other significant medical history and no known personal or family history of congenital anomalies.

First trimester screening was low risk for aneuploidy, with both BHcG and PAPP-A being within normal limits (0.85 and 1.22MoM respectively). Nuchal thickness was also within normal limits at 13+2 weeks gestation (2.2mm). Routine morphology ultrasound had demonstrated no abnormality in mid trimester. The patient was diagnosed with gestational diabetes based on a 2hr 75g oral glucose tolerance test. A third trimester growth ultrasound was arranged due to her history of gestational diabetes.

A repeat ultrasound was performed by a specialist obstetrics sonographer in our maternal fetal medicine unit at 37+3 weeks gestation. A 46x46x36mm echogenic, avascular, multicystic mass was identified in the female fetal pelvis with otherwise normal female fetal anatomy. The mass was separate from fetal bowel, kidney and renal collecting systems. The fetus was noted to be large for gestational age with an abdominal circumference on the 96th centile and estimated fetal weight on the 87th centile (Hadlock). Images were reviewed by a maternal fetal medicine consultant and paediatric surgeon, and a diagnosis of fetal ovarian torsion was made. Due to the echogenicity and appearance of the lesion, the impression was that ovarian torsion had occurred earlier in pregnancy, therefore expediting delivery was unlikely to improve outcome. A multidisciplinary discussion was held, and the plan for timed, local delivery at 39 weeks, with monitoring for feeding and bowel opening, early paediatric surgical review and ultrasound postpartum to guide further management.



Discussion:

Whilst fetal abdominal and pelvic masses are common (1:1000), data and guidelines on the management of fetal ovarian torsion is limited. As can be seen from this case, the diagnosis of fetal ovarian torsion remains challenging, due to the number of possible differentials, particularly in patients that have not had fetal pelvic masses identified previously in pregnancy. Fetal ovarian cysts are most likely to be identified from late in the 2nd trimester and the majority spontaneously resolve. Current antenatal management consists of additional monitoring of fetal growth and wellbeing, due to the potential risk of bowel obstruction, fetal ovarian torsion or polyhydramnios. Most suspected fetal ovarian torsions are surgically treated postnatally after multidisciplinary consultation between maternal fetal medicine, paediatric surgeons and our patients.

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2. Cass D. Fetal abdominal tumors and cysts. Translational paediatrics. 2021;10(5).
3. Bucuri C, Miha D, Malutan A, Oprea V, Berceanu C, Nati I, et al. Fetal Ovarian Cyst—A Scoping Review of the Data from the Last 10 Years. Medicina. 2023;59(186).