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FETAL ABDOMINAL CYST: CHALLENGES IN PRENATAL DIAGNOSIS

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BACKGROUND

Fetal abdominal cysts are typically detected during the second trimester morphology ultrasound or incidentally in the third trimester. The incidence is approximately 1 in 1000 pregnancies and has increased with widespread use of ultrasound [1]. They may represent a benign condition or pathology requiring surgical intervention. It is difficult to reach a definitive diagnosis in fetal life, however proximity to anatomical landmarks guides assessment. The most common origins of a fetal abdominal cyst are the urinary tract and gastrointestinal tract; other aetiologies include cysts from the ovary, liver and mesentery. Rarely, cysts may arise from the adrenals, spleen, urachus and biliary tree.

CASE

A 28-year-old primigravida was referred following morphology ultrasound at 19 weeks, which demonstrated a fetal abdominal cyst.

Tertiary morphology ultrasound confirmed a cyst in the right upper quadrant of the fetal abdomen. The cyst was anechoic, round, thin-walled, avascular, measured 16mm x 16mm the axial plane and was not in close proximity to the gallbladder.

The cyst remained stable in pregnancy and the woman went on to have an uncomplicated vaginal birth at term of a well baby weighing 3490g.

Differential diagnoses included a hepatic cyst, choledochal cyst and duplication of the gallbladder. Abdominal ultrasound of the newborn confirmed the diagnosis of a congenital hepatic cyst with a normal biliary tree and gallbladder.

ULTRASOUND FINDINGS

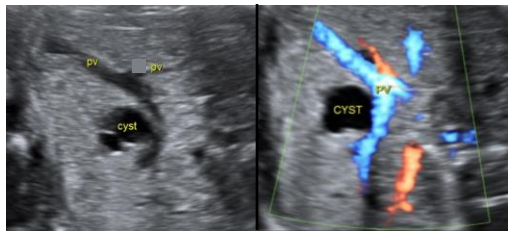

Figure 1 Axial abdomen (B mode and colour doppler) demonstrating cyst near portal vein

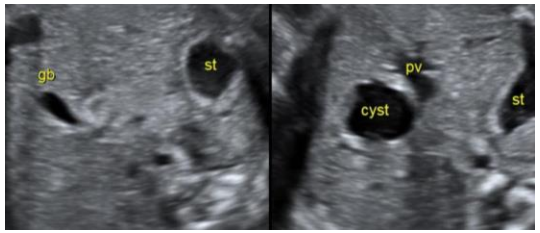

Figure 2 Axial abdomen demonstrating the cyst and gallbladder
Abbreviations **pv** portal vein **st** stomach **gb** gallbladder

DISCUSSION

Cysts arising from within the fetal abdomen present a diagnostic dilemma and may represent numerous structural pathologies. Evaluation of the cyst by ultrasound includes assessment of the size, shape, structure (simple or complex), cyst wall characteristics, vascularity and relative location to anatomical structures [2].

Careful ultrasound assessment guides prediction of the natural history and the likelihood of postnatal surgical intervention. Detection of an abdominal cyst in the fetus should prompt investigation of causes and associated conditions including chromosomal abnormalities and perinatal infections [3].

The role of a multidisciplinary team and engagement with paediatric surgical teams is associated with earlier postnatal support and intervention, which may improve long term outcomes [4, 5].

Congenital hepatic cysts are an uncommon antenatal finding on ultrasound. They are typically small and spontaneously resolve in pregnancy. Surgical management of the neonate is based on symptomatology rather than size or location [6].

CONCLUSION

This case illustrates the approach to evaluation and management of a fetal abdominal cyst.

Congenital hepatic cysts are an uncommon antenatal finding, and postnatal imaging is crucial to confirm the diagnosis.

Management is guided by symptomatology in the neonate and requires a period of ultrasound surveillance after birth.

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