

(EP05.3 I). Ultrasound imaging of the fetal pancreas: from womb to screen

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Objectives:

To emphasize the importance of visualizing the pancreas during routine anomaly scans. This also aims to familiarize clinicians with the techniques to enhance visualization of pancreas and lesion identification, thereby facilitating informed prenatal counselling and optimized neonatal care.

Methods:

It was a retrospective study over three years involving 4,200 patients out of which 5 cases (0.1%) were detected with pancreatic lesions between 24 and 31 weeks of gestation. On ultrasound, the normal foetal pancreas appeared as a “hockey shaped” homogeneous, slightly echogenic structure in the upper abdomen seen just inferior to the plane of AC. Anterior landmarks included stomach, umbilical vein and gallbladder. Posterior landmarks included left kidney and adrenal gland, aorta, and spine and laterally the spleen.

Results:

Case 1 and 2 had simple pancreatic cysts (Fig. 1) seen at 24–25 weeks of gestation which was monitored during the antenatal period and demonstrated complete resolution postnatally. Case 3 presented at 31 weeks with polyhydramnios, macroglossia, nephromegaly and pancreatomegaly and postnatal genetic evaluation revealed Beckwith-Wiedemann syndrome (Fig. 2). Case 4 presented at 26 weeks with sonographic features of duodenal atresia and was subsequently diagnosed postnatally at surgery with annular pancreas (Fig. 3). Case 5 had left atrial isomerism with underdeveloped body and tail of the pancreas (Fig. 4).

Conclusions:

Prenatal ultrasound is a key tool for visualizing the fetal pancreas and identifying structural abnormalities. Evaluation of the fetal pancreas may also offer useful insights in pregnancies affected by gestational diabetes mellitus (GDM) and fetal growth restriction (FGR), aiding clinical assessment and management.

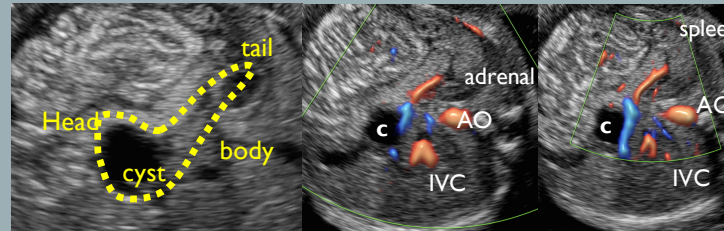


Fig1. Cystic lesion (C) head of pancreas on greyscale (a) and power doppler (b, c).



Fig 2. showing Macroglossia (a, b) nephromegaly (c) and pancreatomegaly (arrow)

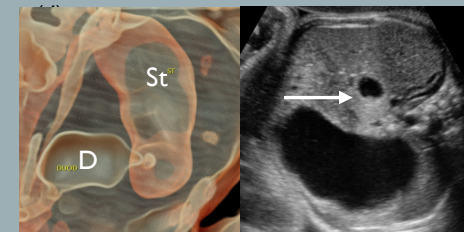


Fig 3. Annular Pancreas showing overdystended stomach and duodenum (a) Echogenic band (arrow) around duodenum (b)

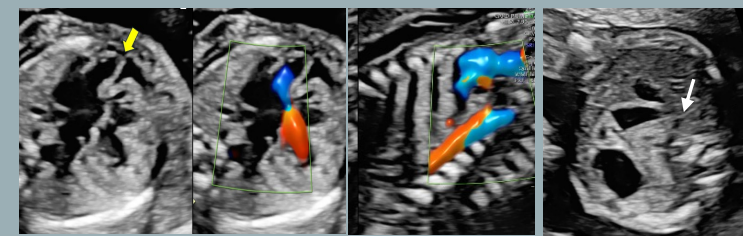


Fig 4. Cardiomegaly with AVSD and interruption of IVC (a, b) Missing distal body & tail (arrow) on axial section of abdomen (c).