

ULTRASOUND LECTURE SERIES

Fetal Abdomen

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Objectives

After completing this presentation, students will be able to:

- Define normal anatomy of the fetal abdomen.
- Recognize and diagnose selected anomalies particular to the fetal abdomen and ventral wall.
- Recognize systemic disease findings within the fetal abdomen.

Topics

1. Normal anatomy
 - Liver
 - Stomach
 - Bowel
 - Gallbladder
 - Umbilical/portal veins
2. Common sonographic abnormalities of the abdomen
 - Omphalocele
 - Gastroschisis
 - Small or absent stomach
 - Duodenal atresia
 - Ascites
3. Bowel echogenicity
 - Significance
 - Counseling
 - Evaluation

Review Questions

1. If a “double bubble” is seen during routine ultrasound screening, the fetus is at increased risk of having Down syndrome. Ultrasound findings in a fetus with a double bubble include:
 - A. Small stomach, hypertrophied pylorus, dilated proximal duodenum, dilated distal duodenum, and polyhydramnios.
 - B. Dilated stomach, normal pylorus, dilated proximal duodenum, and polyhydramnios.
 - C. Normal stomach, normal pylorus, dilated proximal duodenum, dilated pancreatic bile duct, and oligohydramnios.
 - D. Dilated esophageal pouch, dilated stomach, normal-appearing duodenum, and polyhydramnios.

2. The ductus venosus can be best described as:
 - A. A fetal shunt that directs blood from the inferior vena cava (IVC) into the umbilical arteries.
 - B. A fetal shunt that directs blood from the umbilical vein into the aorta.
 - C. A fetal shunt that directs blood from the umbilical vein into the right atrium via the IVC.
 - D. A fetal shunt that directs blood from the aorta into the umbilical arteries.
 - E. A fetal shunt that directs blood from the pulmonary artery into the aorta.
3. All of the findings below are characteristic of omphalocele except:
 - A. Midline defect in the ventral abdominal wall.
 - B. Aneuploidy risk is not increased.
 - C. Abdominal wall defect covered by a membrane consisting of peritoneum and amnion.
 - D. Majority of fetuses are affected with additional ultrasound findings.
4. All of the findings below are characteristic of gastroschisis except:
 - A. Elevated maternal serum a-fetoprotein.
 - B. Freely floating intestinal loops.
 - C. Normal umbilical cord insertion.
 - D. Fetal abdominal circumference will be larger than expected.
5. Echogenic bowel is diagnosed when the echogenicity of the intestine reaches that of surrounding bone. All of the following are causes of echogenic bowel except:
 - A. Chromosomal abnormalities.
 - B. Viral infections.
 - C. Pregnancy-related bleeding.
 - D. Cystic fibrosis.
 - E. Poorly controlled maternal diabetes.