

ULTRASOUND LECTURE SERIES

Ultrasound in Twins

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Objectives

At the conclusion of this presentation, students will be able to:

- Review trends in twin gestations in the US.
- Determine chorionicity in twins.
- Review monochorionic twin-specific anomalies:
 - Twin to twin transfusion syndrome.
- Discuss prematurity and Down syndrome screening in twins.

Topics

1. Types of twinning/sonographic appearance
 - Frequency
 - Significance
 - Dichorionic-diamniotic
 - Monochorionic-diamniotic
 - Monoamniotic
2. First-trimester and second determination of chorionicity
 - “Twin peak” sign
 - Membrane thickness
 - Type/number of placentas
 - Gender
3. Normal growth in twins
 - Growth discordancyComplications in twins
 - Twin to twin transfusion syndrome
 - Demise of single twin
 - Conjoined twins
 - Acardia
 - Monoamniotic twin/cord entanglement
4. Images and brief discussion of higher-order twins

Review Questions

1. The incidence of dizygotic twins in the US is:
 - A. 50%.
 - B. 60%.
 - C. 70%.
 - D. 80%.
 - E. 85%.
2. First- and second-trimester determination of chorionicity relies on:
 - A. “Twin peak” sign.
 - B. Membrane thickness.
 - C. Type/number of placentas.
 - D. Gender.
 - E. All of the above.
3. The Quintero staging of twin to twin transfusion syndrome uses all of the features below except:
 - A. The demise of one twin.
 - B. Growth discordancy.
 - C. Doppler interrogation of the umbilical and middle cerebral arteries.
 - D. Polyhydramnios/oligohydramnios.
 - E. Absence of the fetal bladder.
4. When comparing monochorionic to dichorionic twins, monochorionic twins have all of the following except:
 - A. A higher loss rate in both first and second trimester.
 - B. Laser of placental vessels.
 - C. Fewer infants with cerebral palsy.
 - D. To be followed by ultrasound every 7–14 days from weeks 16 to 26.
 - E. 80%–90% of vessels with arterial to arterial, arterial to venous, and venous to venous anastomoses.
5. Select the correct statement about acardiac, or TRAP sequence, twins:
 - A. Dichorionic-diamniotic placentation.
 - B. Difficult to identify features at fetal poles.
 - C. Grows in proportion to cotwin.
 - D. Treated with amnioreduction.