

1 Sonography of Multifetal Pregnancy

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2 Zygosity

- Two separate ova
 - Dizygotic twinning-fraternal twins
 - Much more common occurrence- 70%
- Single fertilized ova
 - Monozygotic twinning- identical twins
 - Occurs in approx. 1 per 250 live births

3 Triplets and Higher Order Pregnancies

- Combination of fertilized separate ova
- Division of fertilized ova

4 Perinatal Morbidity and Mortality in Twins

- ¹ • Mortality rate:
 - Multiples > Singletons
 - Prematurity
 - ✦ 36 Weeks Term
 - Growth Restriction
 - ✦ Birth Weight < 1500gms
 - Twins 8X
 - Triplets 33x
- Monochorionic Twins
 - Mortality rate 2/3x that of dichorionic twins

5 Embryology and Placentation

- Dizygotic twinning
 - Separate fertilized ova
 - Chorion frondosum and decidua basalis combine to form the placenta
 - ✦ Two placentas
- Monozygotic twinning
 - One ova fertilized – division of a single zygote
 - The chorionicity and amnionicity of monozygotic twins depends on the stage at which division occurs and is categorized


6 Monozygotic Twinning

- Division of a single zygote
- Chorionicity and amnionicity depends on the stage of division
- Categories:
 - Dichorionic/Diamniotic (DC/DA)
 - ✦ Within first three days post conception
 - Monochorionic/Diamniotic (MC/DA)
 - ✦ Between fourth and eighth day post conception
 - Monochorionic/Monoamniotic (MC/MA)
 - ✦ Divides after day 8 post conception
 - Conjoined Twins
 - ✦ Divides after day 13

✕ Incomplete division of embryonic disc

✕

7 **Sonographic Determination of Amnionicity and Chorionicity**

- 1  • Chorionicity predicts adverse outcomes
 - Placentas in the Monochorionic pregnancies always have vascular anastomoses
 - Fused placenta in DC/DA is not anastomosed

8 **After The First Trimester**

9 **Discordant Growth**

10 **Velamentous Insertion of the Umbilical Cord**

11 **Associated Complications**

12 **Twin Twin Transfusion Syndrome**

- <http://abcnews.go.com/Video/playerIndex?id=5475676>

13 **Twin Embolization Syndrome**

14 **Conjoined Twins**

15 **Congenital Anomalies in Twins**

16 **Twin Reversed Arterial Perfusion Sequence (TRAP)**

17 **Conclusion**

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