Chapter 3
Congenital Anomalies of the Female Genital System

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Objectives

• Discuss the normal and abnormal paramesonephric (Müllerian) and mesonephric (wolffian) duct development
• Identify differentiation criteria to differentiate a bicornuate from a septated uterus
• Compare different uterine fusion anomalies on sonographic, radiographic, and magnetic resonance imaging (MRI) studies
• Explain treatment options for uterine anomalies

Objectives - continued

• Relate uterine anomalies to possible renal positional and structural changes
• Recognize the characteristic uterine appearance of a patient exposed to Diethylstilbestrol (DES)
• Summarize fertility and pregnancy outcomes for the patient with congenital anomalies of the uterus

Embryology

• Five weeks
  - Undifferentiated gonadal develop from yolk sac
  - Germ cells
    • Genital ridges
    • Sex cords
  - Migration failure
    • Ovarian development does not occur

Embryology

• Six weeks
  - Paired ducts
    • Paramesonephric (müllerian)
    • Mesonephric (wolffian) ducts
  - Undifferentiated genital system
  - Abnormal development results in urogenital malformations
**Embryology**

**Uterus Unicornis**
- Complete failure of one müllerian duct elongation
- Contralateral rudimentary horn
- Associated with renal anomalies
  - Ipsilateral
    - Renal agenesis
    - Pelvic kidney
  - Horseshoe kidney

**Bicornuate Uterus**
- Complete duplication of uterus
- Does not involve cervix and vagina
- Fundal cleft deeper than one centimeter
Septated Uterus

- Due to reabsorption failure of the müllerian ducts
- Most common anomaly
- Increased rate of
  - Spontaneous abortion
  - Prematurity
  - Fetal mortality
- Treatment
  - Hysteroscopic septum resection

Diethylstilbestrol (DES) Exposed Uterus

- Helped increase favorable outcomes for an at risk pregnancy
- Daughters showed increased
  - Vaginal cancer
  - Breast cancer
- T-shaped uterus
Diethylstilbesterol (DES) Exposed Uterus

Diethylstilbesterol (DES) Exposed Uterus

Ovaries

- Develop from different tissues
- Malposition common with uterine malformations