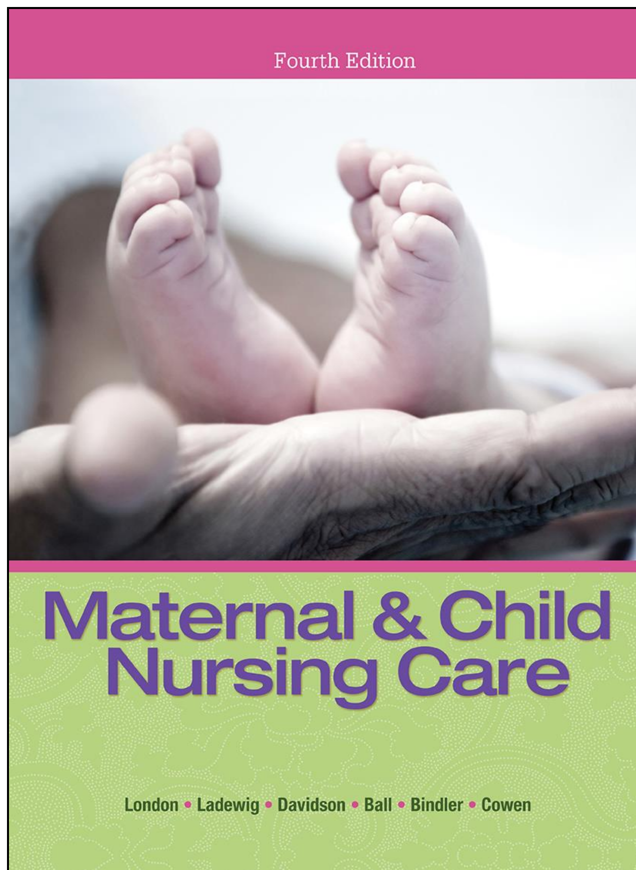
MATERNAL & CHILD NURSING CARE

FOURTH EDITION



CHAPTER 16

Pregnancy at Risk: Gestational Problems

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Learning Outcome 16-1

Contrast the etiology, medical therapy, and nursing interventions for the various bleeding problems associated with pregnancy.

Abortion

Abortion

- Major cause of bleeding in second and third trimester
- Pregnancy termination prior to 20 weeks' gestation or with a fetus weighing less than 500 g
  - Spontaneous
    - Occurring naturally

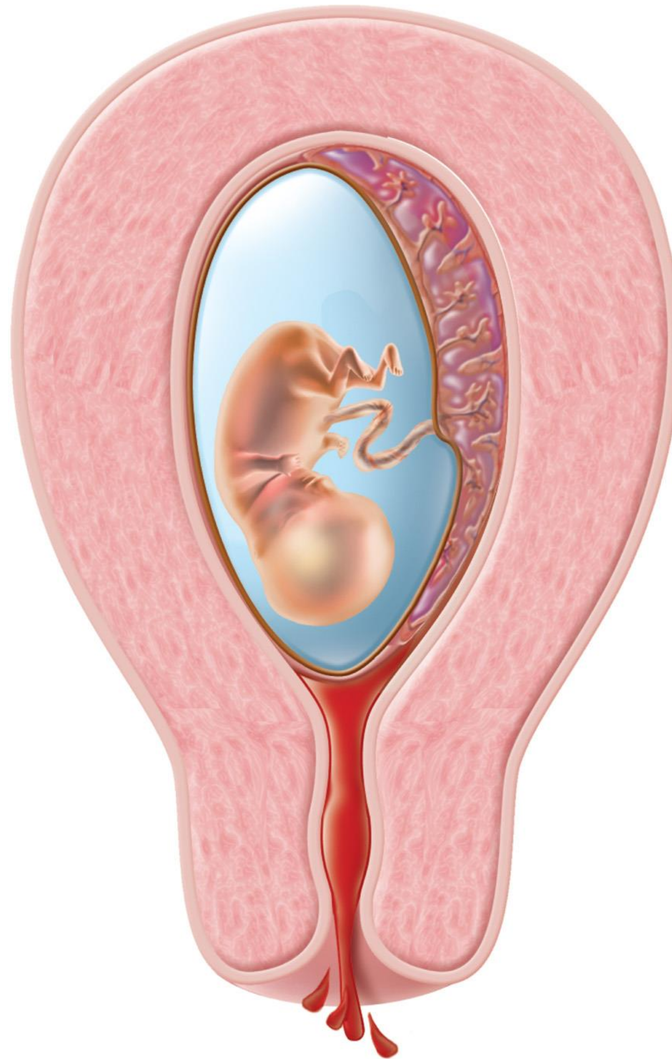
Abortion

- Pregnancy termination prior to 20 weeks' gestation or with a fetus weighing less than 500 g
  - Induced
    - Occurring as a result of artificial or mechanical interruption)
  - Miscarriage
    - Spontaneous abortion

Abortion

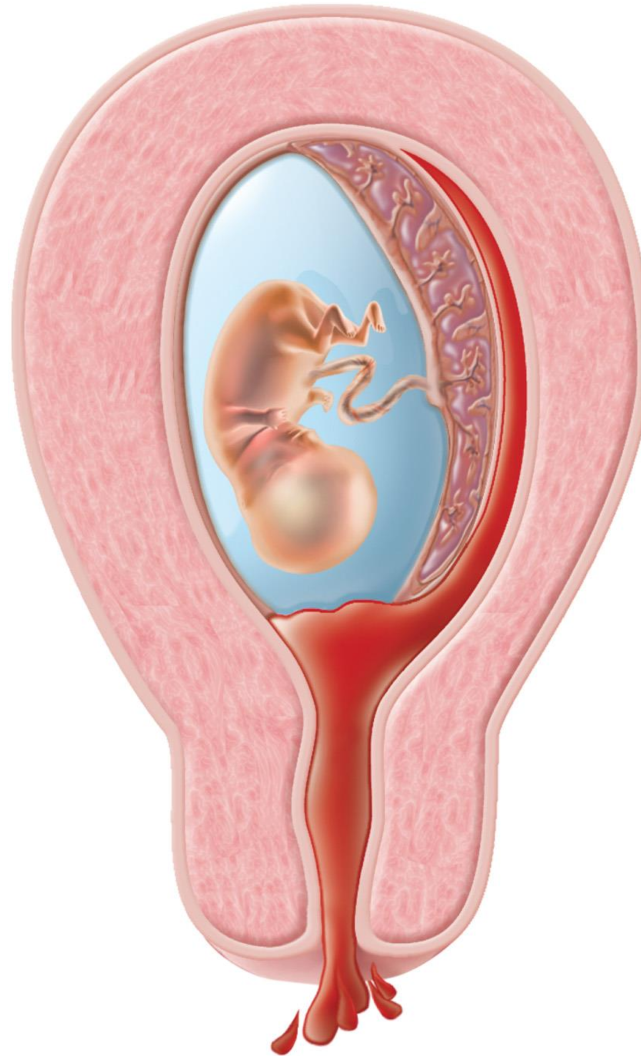
- 3 types of spontaneous abortion
  - ✓ Threatened
  - ✓ Imminent
  - ✓ Incomplete

Figure 16-1 Types of spontaneous abortion. *A*, Threatened. The cervix is not dilated, and the placenta is still attached to the uterine wall, but some bleeding occurs.



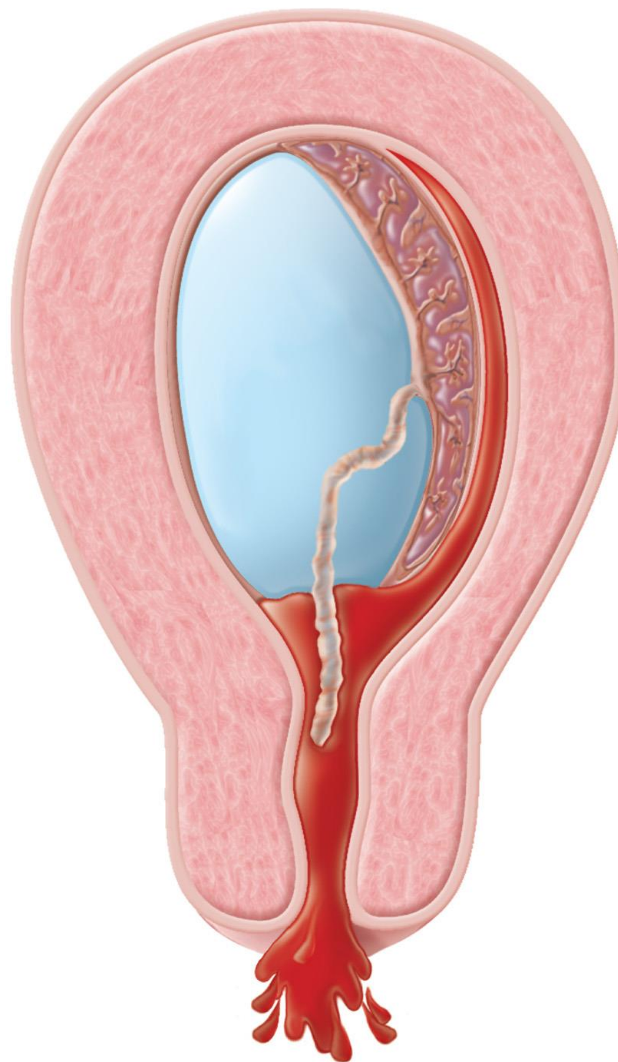
A

Figure 16-1 (continued) Types of spontaneous abortion. *B*, Imminent. The placenta has separated from the uterine wall, the cervix has dilated, and the amount of bleeding has increased.



B

Figure 16-1 (continued) Types of spontaneous abortion. *C*, Incomplete. The embryo or fetus has passed out of the uterus, but the placenta remains.



C

Categories of Spontaneous Abortion

- Threatened abortion
  - Embryo or fetus is jeopardized
  - May be followed by partial or complete expulsion of products of conception
- Imminent abortion
  - Increased bleeding and cramping
  - "inevitable abortion"
- Complete abortion
  - All products of conception expelled

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Categories of Spontaneous Abortion

- Incomplete abortion
  - Some products of conception are retained, most often the placenta
- Missed abortion
  - Fetus dies in utero but is not expelled
  - If fetus is retained beyond 6 weeks, disseminated intravascular coagulation (DIC) may develop

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Categories of Spontaneous Abortion

- Recurrent pregnancy loss
  - Formerly called habitual abortion
  - Abortion in three or more consecutive pregnancies

Categories of Spontaneous Abortion

- Septic abortion
  - Associated with prolonged, unrecognized rupture of membranes; pregnancy with intrauterine device (IUD) in utero; attempts by unqualified individuals to terminate pregnancy

Other Common Causes of Bleeding During Pregnancy

- Ectopic pregnancy
- Gestational trophoblastic disease
- Placenta previia
- Abruptio placentae

Pregnant Women with Bleeding Disorders – Nursing Interventions

- Monitor BP & pulse frequently
- Observe for signs & symptoms of shock
- Count & weigh pads to assess amount of bleeding
  - Save any tissue or clots expelled
- If pregnancy > 12 weeks' gestation assess fetal heart tones with Doppler

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Pregnant Women with Bleeding Disorders – Nursing Interventions

- Prepare for intravenous (IV) therapy
- Prepare equipment for examination
- Have oxygen available
- Collect & organize all data
  - Obtain order to type and crossmatch for blood if indicated

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Pregnant Women with Bleeding Disorders – Nursing Interventions

- Assess woman's coping mechanisms
- Give emotional support
- Prepare the woman for possible fetal loss & assess her expressions of emotion
- Assess family's response

Spontaneous Abortion – Causative Factors

- Chromosomal abnormalities
- Teratogenic drugs
- Faulty implantation
- Weakened cervix
- Placental abnormalities
- Chronic maternal diseases

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Spontaneous Abortion – Causative Factors

- Endocrine imbalances
- Maternal infections
- Use of hot tub or jacuzzi may increase risk for miscarriage

Medical Assessment of Bleeding During Pregnancy

- Speculum examination
- Ultrasound scanning
- Laboratory diagnostics
  - Human chorionic gonadotropin (hCG)
    - Can confirm pregnancy, but cannot confirm live embryo/fetus
    - May require serial hCG levels to confirm diagnosis
- Hemoglobin & hematocrit

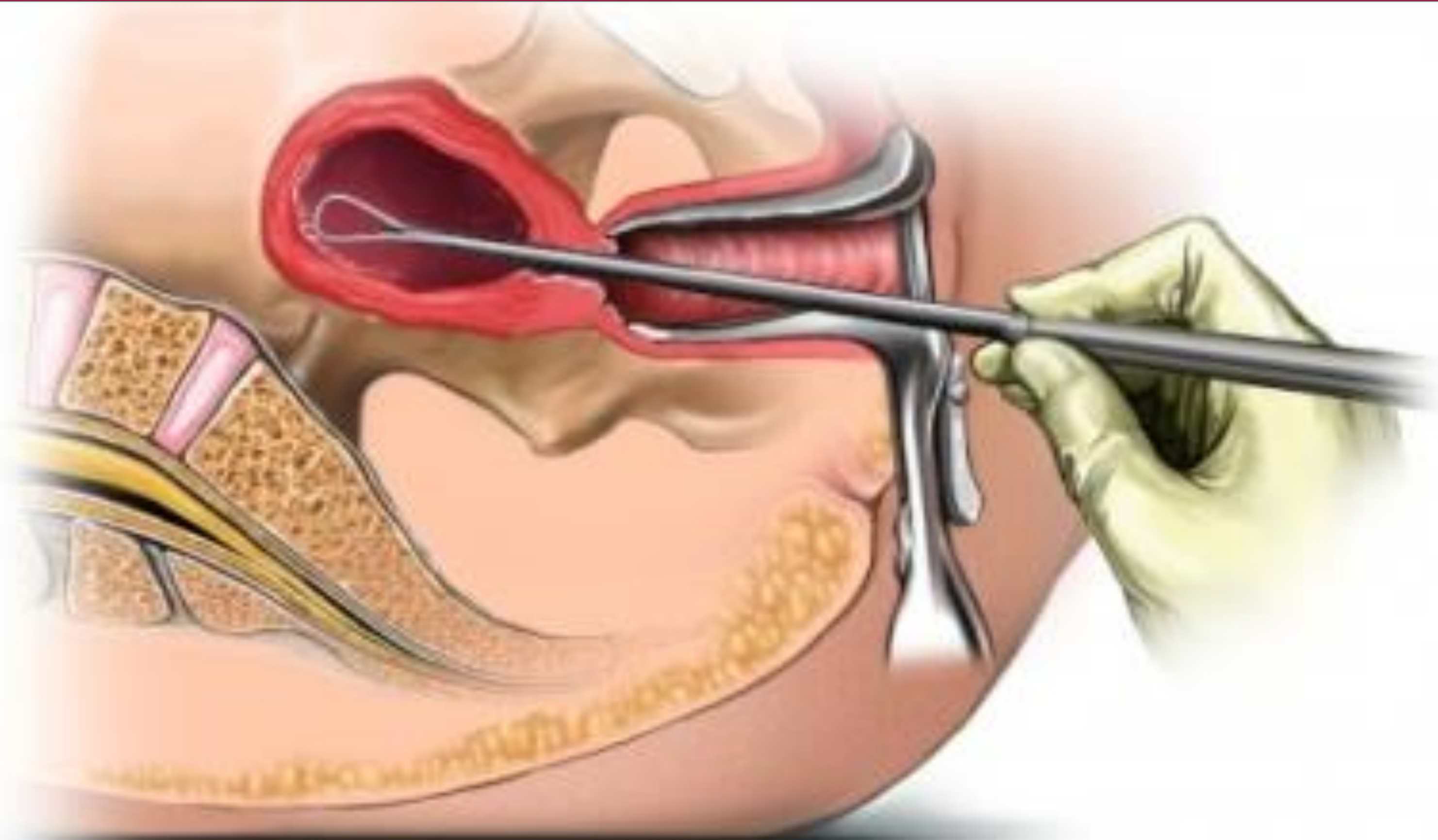
Treatment of Vaginal Bleeding During Pregnancy

- Bed rest, abstinence from coitus, & emotional support
- If bleeding persists & abortion is imminent or incomplete
  - Hospitalization with potential therapies
    - IV therapy or blood transfusions
    - Dilatation and curettage (D&C) or suction
    - Rh immune globulin (RhoGAM)

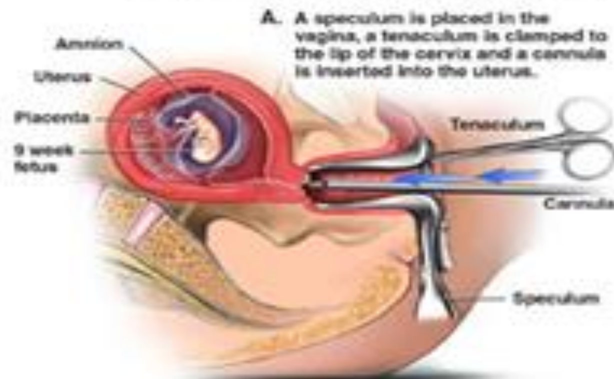
Treatment for Missed Abortion

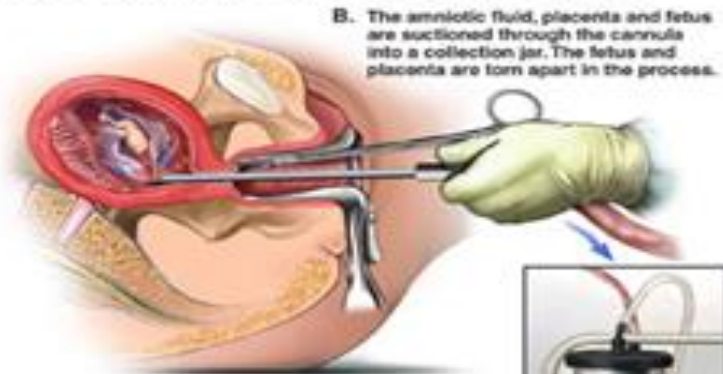
- Products of conception eventually expelled spontaneously
- If not expelled within 4 to 6 weeks after embryo or fetal death
  - Hospitalization
  - Dilatation & curettage or suction evacuation if first trimester
  - Induction of labor or dilatation and evacuation (D&E) if second trimester

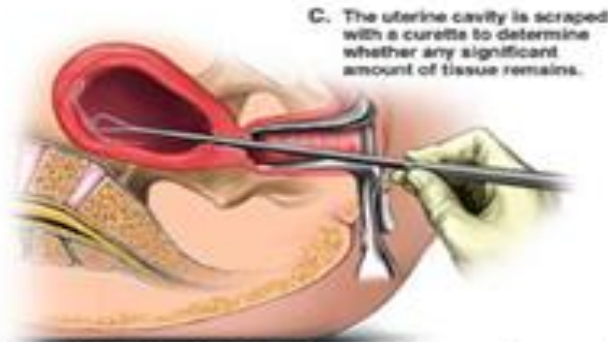
Dilation and curettage

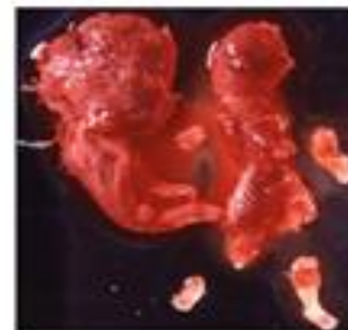


Suction and Curettage Abortion of a 9 Week Old Fetus









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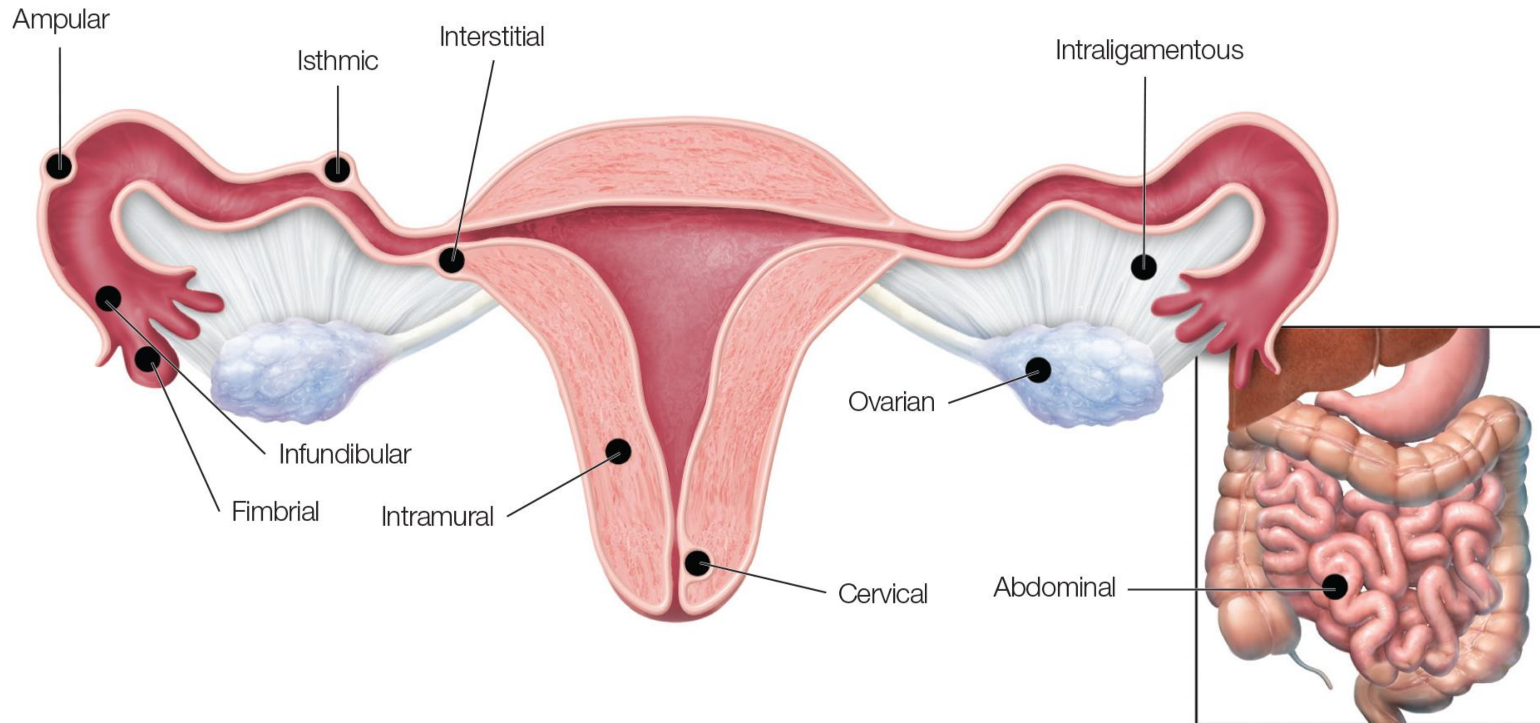
Ectopic Pregnancy (EP)

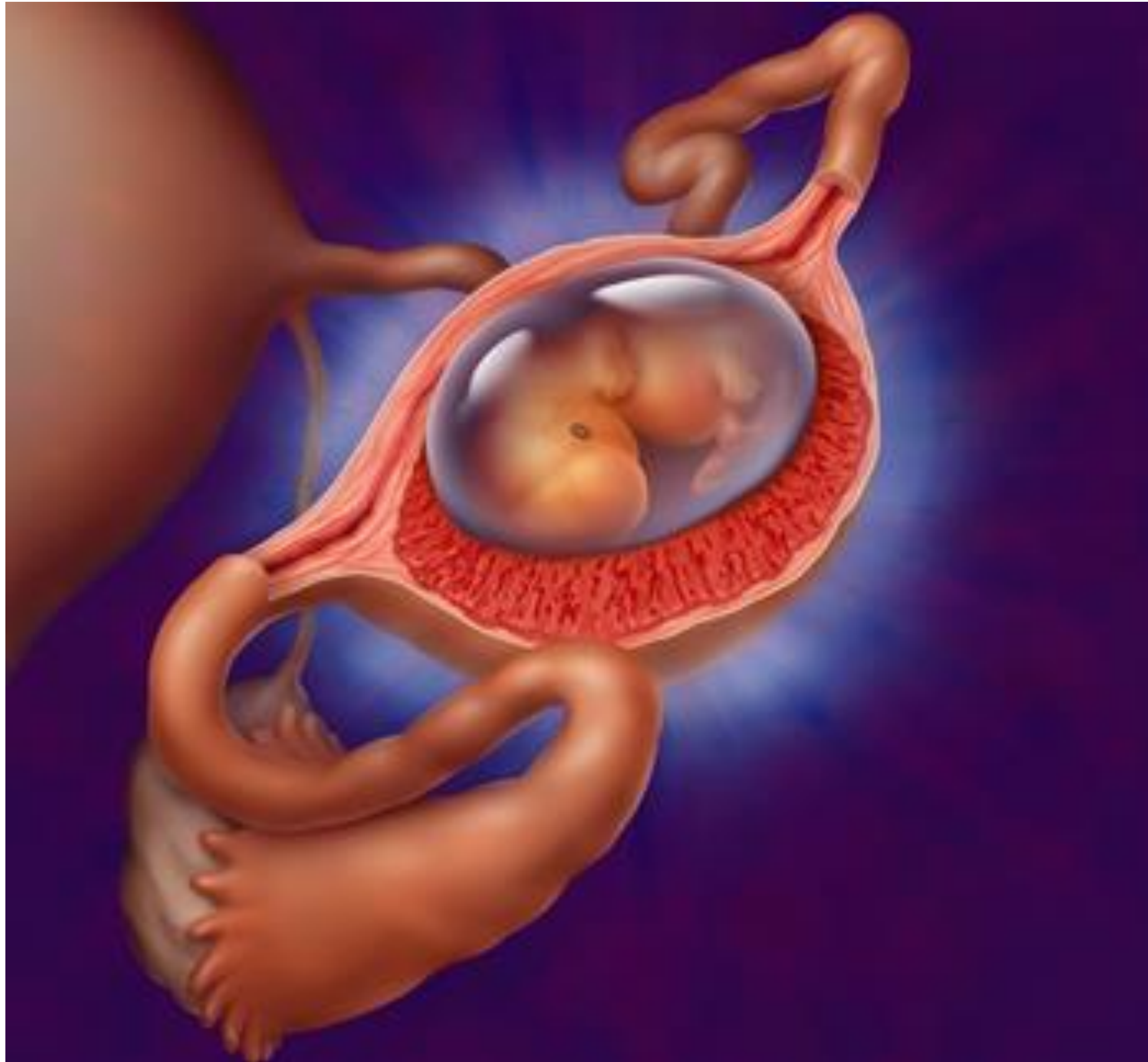
Ectopic Pregnancy (EP)

- Implantation of fertilized ovum in a site other than uterine endometrial lining
- Ampulla of fallopian tube is most common site of implantation
- Accounts for 6% of all maternal deaths in the United States

Pathophysiology Illustrated — Ectopic Pregnancy



Various implantation sites in ectopic pregnancy. The most common site is within the fallopian tube, hence the name "tubal pregnancy."



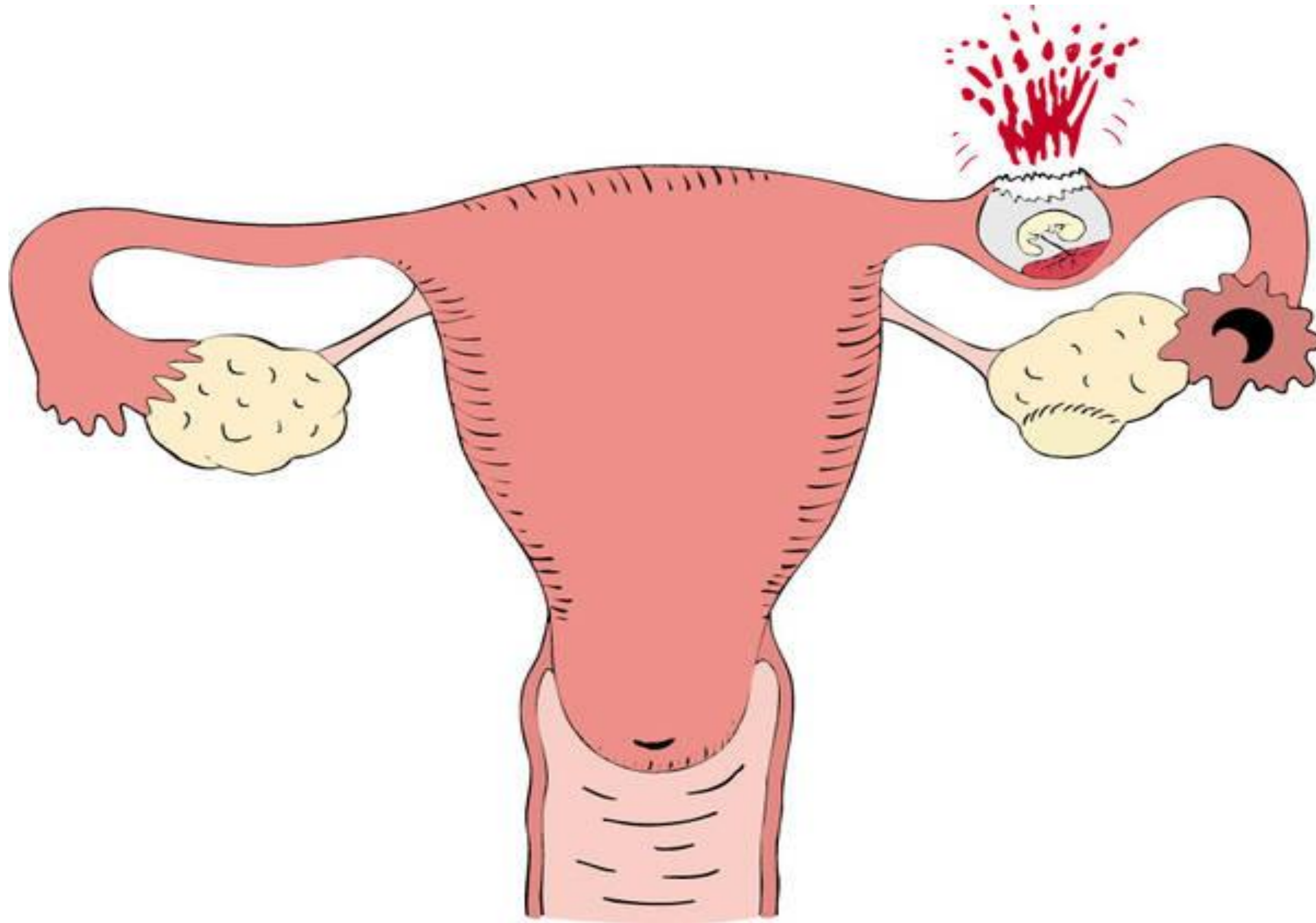
Pathophysiology of Ectopic Pregnancy

- Normal symptoms of pregnancy may initially be present
- Abnormal progression of pregnancy
  - Embryo outgrows area of implantation
  - Tube ruptures
  - Bleeding into abdominal cavity causes irritation of peritoneum

Ectopic Pregnancy – Signs and Symptoms

- Sharp, one-sided pain
- Syncope
- Referred right shoulder pain
- Lower abdominal pain
  - Adnexal tenderness
  - Abdominal rigidity & tenderness
- Decreased hemoglobin & hematocrit
- Increased leukocytes

Ectopic Pregnancy – Signs and Symptoms



Assessment and Diagnosis of Ectopic Pregnancy

- Menstrual history
- Pelvic exam
- Transvaginal ultrasound
  - Initial test of choice to detect intrauterine pregnancy or adnexal mass
- Serial hCG measurements
- Laparoscopic intervention may be necessary

Ectopic Pregnancy – Treatment

- Medical
  - Methotrexate (antimetabolites): prevents cell replication
- Surgical
  - Laparoscopic linear salpingostomy (opening fallopian tubes)
  - Laparoscopic salpingectomy
- With both medical & surgical therapies, Rh immune globulin is administered to Rh negative nonsensitized women

Gestational Trophoblastic Disease (GTD)

Gestational Trophoblastic Disease (GTD)

- Pathologic proliferation of trophoblastic cells
- Risk factors largely unknown
- Types of GTD
  - Hydatidiform mole
  - Invasive mole (chorioadenoma destruens)
  - Choriocarcinoma

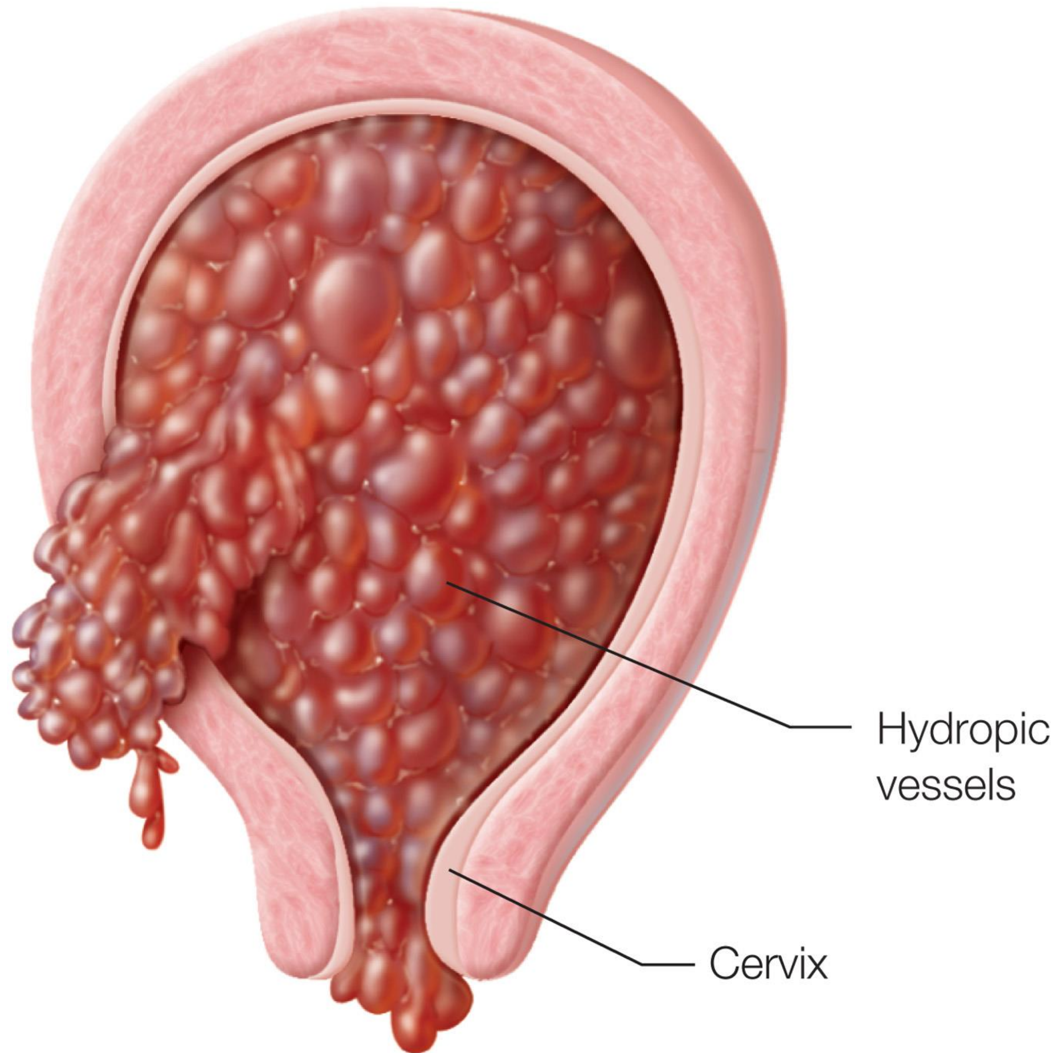
Hydatidiform Mole (molar pregnancy)

- Proliferation of placental trophoblastic cells in which chorionic villi develop into edematous, cystic, a vascular transparent vesicles characterized by hydropic (fluidfilled) grapelike clusters
- Consequences
  - Loss of pregnancy
  - Remote possibility of developing choriocarcinoma

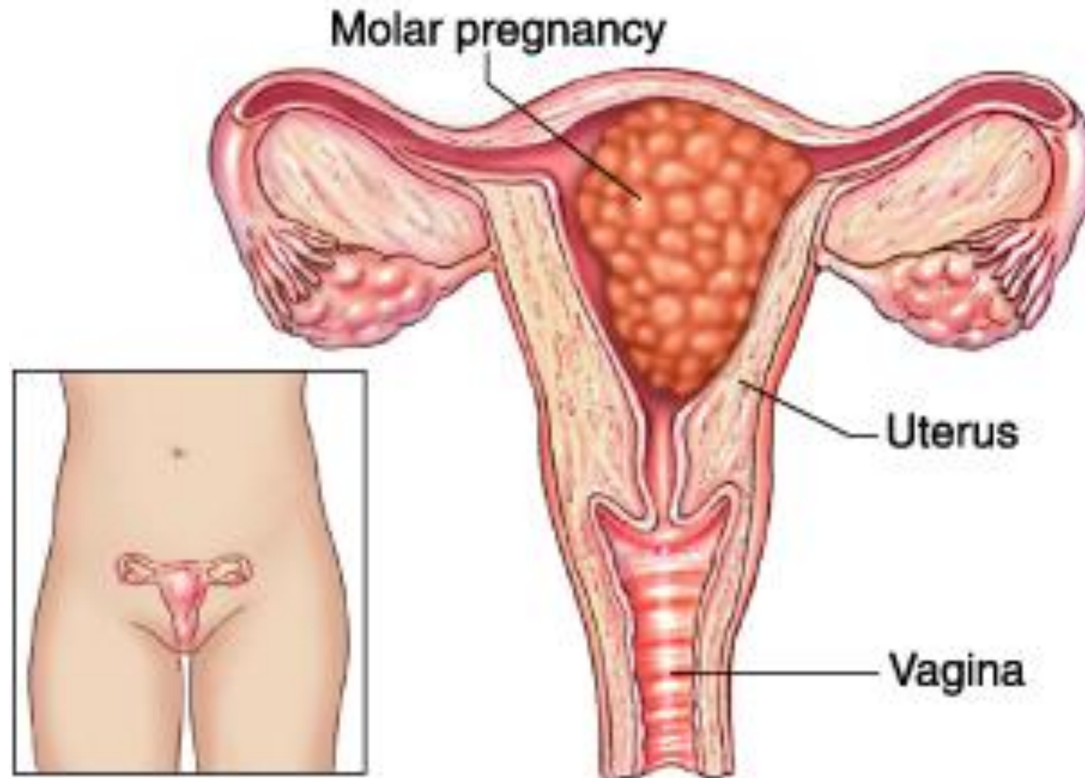
Development of GTD

- Complete mole
  - Ovum containing no maternal genetic material ("empty egg")
  - Fertilized by a normal sperm
  - Choriocarcinoma believed to be associated exclusively with complete mole

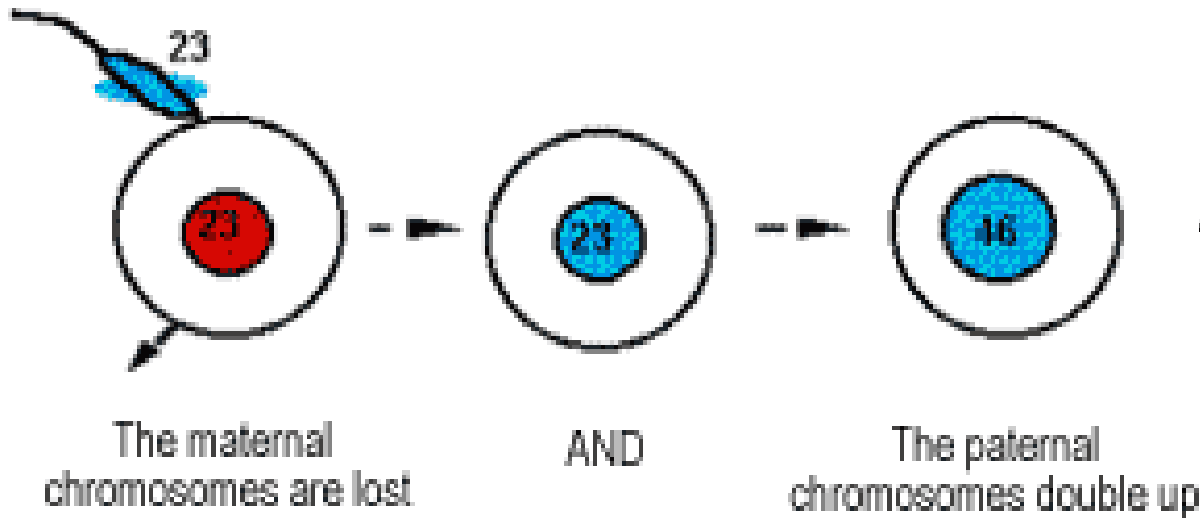
Figure 16-2 Hydatidiform mole. A common sign is vaginal bleeding, often brownish (the characteristic "prune juice" appearance) but sometimes bright red. In this figure, some of the hydropic vessels are being passed. This occurrence is diagnostic for hydatidiform mole.



Development of GTD



Complete mole



This results in a conceptus with 46 chromosomes but all of them are derived from the father

Development of GTD

- Partial mole
  - Usually has triploid karyotype (69 chromosomes)
  - Normal ovum with 23 chromosomes fertilized by two sperm or by a sperm that has failed to undergo the first meiotic division and contains 46 chromosomes

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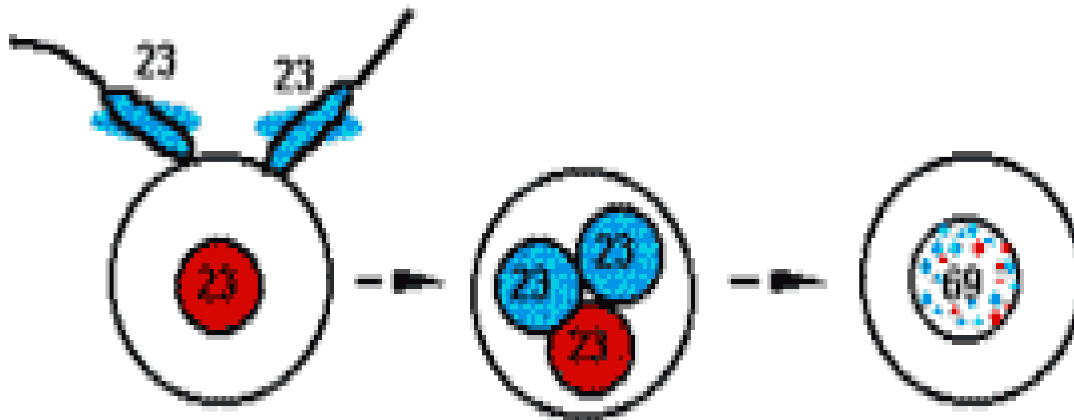
Partial mole



Two sperm fertalise an egg.
This results in a triploid
conceptus with 69 chromosomes

Development of GTD

- Invasive mole (chorioadenoma destruens)
  - Similar to complete mole but involves uterine myometrium
  - Same treatment as for complete mole

Hydatidiform Mole – Possible Signs and Symptoms

- Vaginal bleeding
  - Often brownish but it may be bright red
- Uterine enlargement greater than expected for gestational age
- Passage of hydropic vesicles (grapelike clusters)

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Hydatidiform Mole – Possible Signs and Symptoms

- Hyperemesis gravidarum
- Anemia due to blood loss
- Symptoms of preeclampsia before 24 weeks' gestation
- Absent fetal heart tones

Hydatidiform Mole – Diagnosis and Initial Treatment

- Ultrasound
  - Primary diagnostic tool
- Therapy
  - Suction evacuation of the mole
  - Uterine curettage
  - Rh immune globulin administered to Rh-negative women
  - Hysterectomy may be treatment of choice to reduce risk of choriocarcinoma

Development of Malignant GTD

- Develops following evacuation of a mole in about 20% of women
- Early detection requires extensive follow-up therapy
  - Baseline chest X-ray
  - Physical exam including pelvic exam
  - Serial hCG measurements

Hydatidiform Mole – Antepartum Nursing Implications

- Be aware of symptoms
- Observe for symptoms at each antepartum visit
- If molar pregnancy is diagnosed, assess the woman's (or the couple's) understanding of the condition and its implications

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Hydatidiform Mole – Antepartum Nursing Implications

- If molar evacuation requires hospitalization
  - Monitor vital signs and vaginal bleeding for evidence of hemorrhage
  - Assess for abdominal pain
  - Evaluate emotional state and coping ability

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Hydatidiform Mole – Antepartum Nursing Implications

- If molar evacuation requires hospitalization
  - Ensure typed and crossmatched blood available for surgery
  - Oxytocin administration
  - Rh immune globulin if indicated