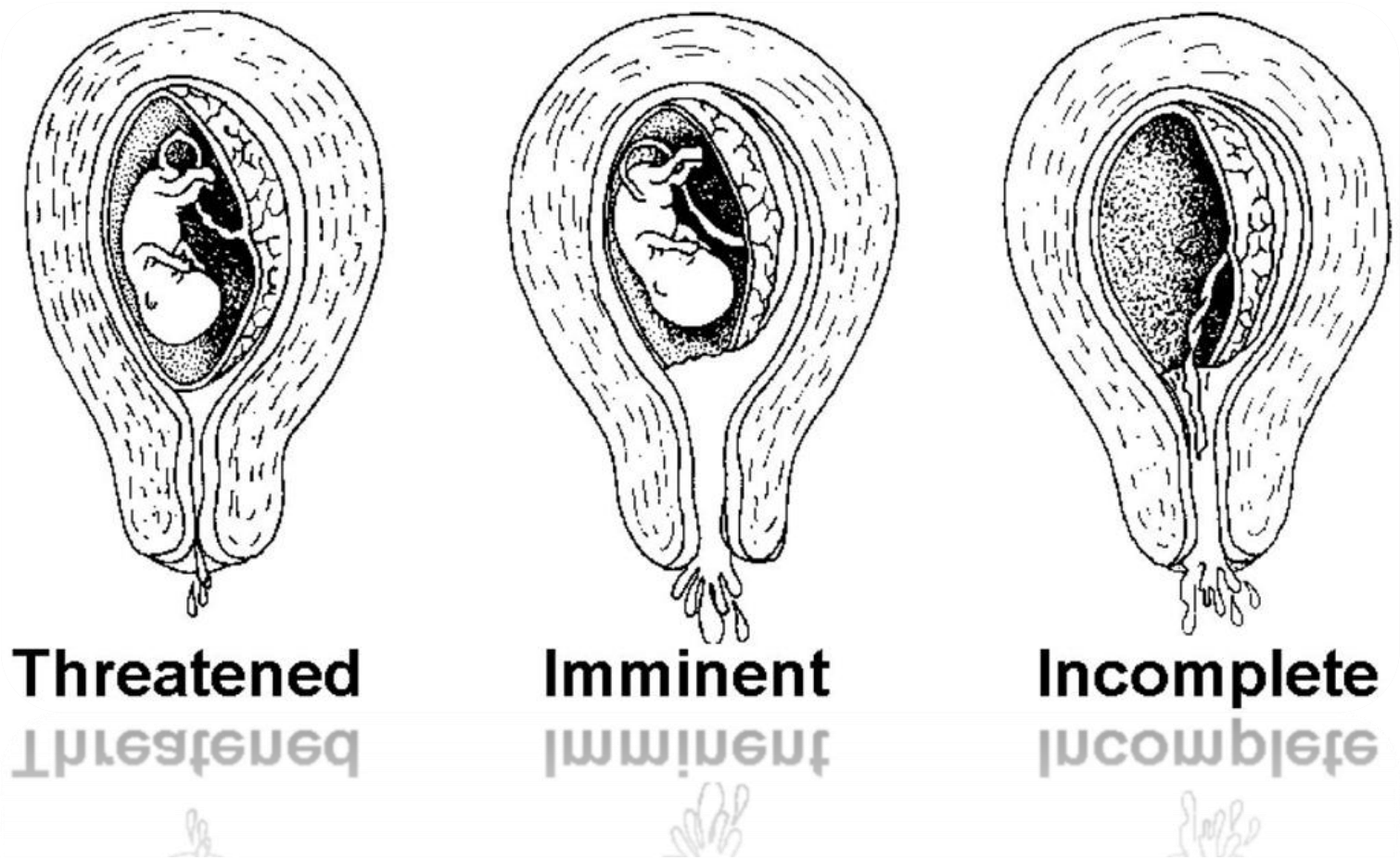

BLEEDING IN EARLY PREGNANCY/ABORTIONS

429 OB/GYN TEAM NOTES

RESOURCES:

- *Hacker and Moore's Essentials of Obstetrics and Gynecology International Edition*
- *OB/GYN team 428*
- *Dr. Johara Al-Mutawa's slides*

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ABORTION/MISCARRIAGE

DEFINITION:

- Any fetal loss from conception until the time of fetal viability at 24 weeks gestation.

OR:

- Expulsion of a fetus or an embryo weighing 500 gm or less.

INCIDENCE:

- 15 - 20% of pregnancies total reproductive losses are much higher if one considers losses that occur prior to clinical recognition.
- In other words, about 15% of *clinically recognized* pregnancies end in abortion.

- ✓ The commonest gynecological & obstetric disorder.
- ✓ The most common cause of 1st & 2nd trimester bleeding.
- ✓ Most abortions occur between 8 & 12 weeks (1st trimester) of pregnancy.

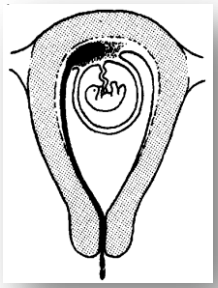
CLASSIFICATION:

1. Spontaneous: Occurs without medical or mechanical means.
2. Induced abortion.

PATHOLOGY:

Haemorrhage into the decidua basalis ➡ Necrotic changes in the tissue adjacent to the bleeding ➡ Detachment of the conceptus =

This will stimulate uterine contractions resulting in expulsion.



CAUSES:

1. Maternal factors.
    a. General.
    b. Local.
2. Fetal factors.

MATERNAL FACTORS

GENERAL

1. **<u>Immunological</u>:**
    a. Alloimmune response: Failure of a normal immune response in the mother to accept the fetus for a duration of a normal pregnancy.

    Up to 40% of clinical pregnancies are lost in women with SLE (Systemic Lupus Erythematosus).

    b. Autoimmune disease: Antiphospholipid antibodies especially lupus anticoagulant (LA) and anticardiolipin antibodies (ACL).
2. **<u>Endocrine</u>:**
    a. Poorly controlled diabetes (type 1/type 2).

    b. Hypothyroidism and hyperthyroidism.

    c. Luteal Phase Defect (LPD): A situation in which the endometrium is poorly or improperly hormonally prepared for implantation and is therefore inhospitable for implantation.
3. **<u>Infections (maternal/fetal)</u>:**

    a. TORCH infections.
    b. Ureaplasma urealyticum.
    c. Listeria.

TORCH infections: A medical acronym for a set of perinatal infections (i.e. infections that are passed from a pregnant woman to her fetus).

T – Toxoplasmosis / Toxoplasma gondii

O – Other infections (Coxsackievirus, Syphilis, Varicella-Zoster Virus, HIV, Parvovirus B19, and Hepatitis B)

R – Rubella

C – Cytomegalovirus

H – Herpes simplex virus-2

4. **<u>Environmental toxins</u>:**
    a. Alcohol.
    b. Smoking.
    c. Drug abuse.
    d. Ionizing radiation.

There is very little evidence that a sudden physical or emotional shock can cause pregnancy loss, but psychodynamic factors may contribute to recurrent abortions in a few cases.

LOCAL

Uterine abnormality:

1. Congenital: Septate uterus → recurrent abortion.
2. Fibroids (Submucus):
    a. Disruption of implantation and development of the fetal blood supply.
    b. Rapid growth and degeneration with release of cytokines.
    c. Occupation of space for the fetus to grow.

    - Also polyps > 2 cm diameter can cause abortion.

    Subserous fibroids do not appear to affect fecundity.
3. Cervical incompetence: Causes 2nd trimester abortions.

Cervical incompetence:

- ✓ Best diagnosed by Hx.
- ✓ Can occur in patient with history of cone biopsy.
- ✓ Typically causes painless abortions.
- ✓ May lead to premature rupture of the membrane.
- ✓ Treated by cervical cerclage, which is best performed early in the 2nd trimester.

FETAL CAUSES

Chromosome abnormality:

- Most common etiology of 1st trimester abortion.
- 50% of spontaneous losses are associated with fetal chromosome abnormalities.
    a. Autosomal trisomy (nondisjunction/balanced translocation):
        - It is the single largest category of abnormality and recurrence.

    b. Monosomy (45, X; Turner Syndrome):
        - Occurs in 7% of spontaneous abortions.
        - It is caused by loss of the paternal sex chromosome.

    c. Triploids:
        - Found in 8 to 9% of spontaneous abortions.
        - It is the consequence of either dispermy or failure of extrusion of the second polar body.

TYPES OF ABORTIONS

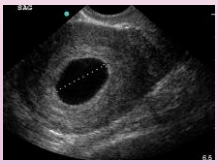
	Threatened Abortion	**Inevitable Abortion**	**Incomplete Abortion**	**Complete Abortion**	**Missed Abortion**	**Septic Abortion**
Definition	The term *threatened abortion* is used when pregnancy is complicated by vaginal bleeding before the 20th week.		Partial expulsion of products.	Expulsion of all products of conception.	The term *missed abortion* is used when the fetus has died but is retained in the uterus, usually for more than 6 weeks.	Any type of abortion, which is complicated by infection.
Clinical Finding	Hx: 1- Short period of amenorrhea. 2- **Mild** vaginal bleeding (Spotting). 3- **Mild** abdominal pain. Ex: 1- The cervix is **closed**. 2- The uterus is usually correct size for date (Corresponding to the duration).	Hx: 1- Short period of amenorrhea. 2- **Heavy** bleeding accompanied with clots (may lead to shock). 3- **Severe** cramp-like lower abdominal pain. 4- With **NO** passage of products of conception. Ex: The cervix is **opened**.	Hx: 1- Bleeding and colicky pain continue. 2- **With** passage of products of conception. Ex: 1- The cervix is **opened**. 2- Retained products may be felt through it.	Hx: Cessation of heavy vaginal bleeding and lower abdominal pain. Ex: 1- The cervix **closes** gradually. 2- The uterus is smaller than the period of amenorrhea would suggest.	Hx: 1- Gradual disappearance of pregnancy symptoms & signs. 2- Brownish vaginal discharge. 3- Milk secretion. **<u>Complications</u>** 1-Infection (Septic abortion). 2-DIC.	Hx: 1- **Severe** vaginal bleeding. 2- **With** passage of products of conception. 3- Pelvic infection: Pyrexia, tachycardia, lower abdominal pain, pelvic tenderness, general malaise, purulent vaginal discharge.
Pregnancy Test	(hCG): +ve.	(hCG): +ve.			-ve but it may be +ve for 3-4 weeks after the death of the fetus.	

U/S	Which is essential for the diagnosis. Showed the presence of fetal heart activity (viable intra uterine fetus).	Non-viable fetus and blood inside the uterus.	Retained products of conception.	Transvaginal: Showed empty uterine cavity.	Absent fetal heart pulsations.	
Manage-ment	1- Repeated U/S. 2- Bed rest. 3- Reassurance if fetal heart activity is present (> 90% of cases will be progressed satisfactorily). 4- Non-sensitized rhesus-negative women should receive anti-D immunoglobulin if threatened miscarriage occurs after at least 12 weeks of pregnancy.	1- CBC, blood grouping, blood cross match. 2- Resuscitation large IV line, fluids & blood transfusion. 3- Ergometrine + Sentocinon (Oxytocin infusion). 4- Evacuation & curettage. 5- Post-abortion management (discussed later).	Same as inevitable abortion.	1- Ruling out ectopic pregnancy via transvaginal sonography & ensuring no trophoblastic remain by serial β-hCG titers. 2- Cautious observation. 3- If there is RPOC, evacuation & curettage is needed. 4- Post-abortion management.	1- CBC, blood grouping, blood cross match. 2- Coagulation profile: to exclude DIC. 3- Wait 4 weeks for spontaneous expulsion. 4- Surgical evacuation; by D&C, if spontaneous expulsion does not occur after 4 weeks. 5- Manage according to size of uterus: - Uterus <**12 weeks**: Dilatation & evacuation. - Uterus >**12 weeks**: Cytotic drugs. 6- Post-abortion management.	1- CBC, blood grouping, blood cross match. 2- Cervical swabs (not vaginal) for culture and antibiotic sensitivity. 3- Coagulation profile, serum electrolytes & blood culture if pyrexia > 38.5. 4- Antibiotics: Metronidazole. 5- Surgical evacuation: Usually 12 hours after antibiotic therapy. 6- Post-abortion management.

RPOC: Retained Products of Conception.

Blighted Ovum:

- ✓ *It is due to an early death and resorption of the embryo with the persistence of the placental tissue.*
- ✓ *Diagnosed by U/S that shows empty gestational sac.*



- ✓ *Managed as missed abortion.*

Septic Abortion:

- Bacteriology: The commonest organisms are

1. *Gram -ve: E.coli, streptococcus & staphylococcus.*
2. *Anaerobics: Bacteroids and rarely Cl. tetani, which is potentially lethal if not treated adequately.*

- Types:

1. *Mild: the infection is confined to the decidua (80%).*
2. *Moderate: the infection is extended to the myometrium (15%).*
3. *Severe: the infection is extended to the pelvis + Endotoxic shock + DIC (5%).*

RECURRENT ABORTION

DEFINITION

- ≥ 3 consecutive spontaneous abortions before 24 weeks' gestation.

TYPES

1. Primary: All pregnancies have ended in loss.

2. Secondary: One pregnancy or more has proceeded to viability (>24 weeks gestation) with all others ending in loss.

INCIDENCE

- Occurs in about 1% of women of reproductive age.
- Idiopathic recurrent abortion, in about 50%, in which no cause can be found.

CAUSES

First trimester: • **Fetal**	Chromosomal & structural abnormalities.
• **Medical disorders**	○ Diabetes. ○ Thyroid disorders. ○ PCOS (More common in women with recurrent abortion than the general population). ○ SLE. ○ Antiphosphlipid syndrome (an autoimmune, hypercoagulable state caused by antibodies against cell-membrane phospholipids that provokes thrombosis as well as recurrent miscarriage). ○ Thrombophilia (Deficiencies of antithrombin III & Factor XII). ○ Rh-isoimmunization.
Second trimester: • **Anatomical disorders**	○ Cervical incompetence. ○ Submucosal fibroids. ○ Uterine anomalies (Bi/Unicornuate uteri). ○ Asherman's syndrome.
• **Infections**	○ CMV. ○ Bacterial vaginosis.

MANAGEMENT

- Idiopathic recurrent abortion:
    1. Support: From husband, family and obstetric staff.
    2. Advice: Stop smoking & alcohol intake and decrease physical activity.
    3. Drug therapy:
- *Progesterone & hCG*: Start from the luteal phase and up to 12 weeks.
- *Low dose aspirin*: Start from the diagnosis of pregnancy and up to 37 weeks.
- *Low-molecular-weight heparin (LMWH)*: Start from the diagnosis of fetal heart activity and up to 37 weeks.
- In the presence of a cause: Treatment is directed to control the cause.

Hysterosalpingogram is the most useful investigation in patients with three consecutive spontaneous abortions in the second trimester.

COMPLICATIONS OF ABORTION

a. Hemorrhage.
b. Complications related to surgical evacuation: E&C and D&C.
    i. Uterine perforation: may lead to ruptured uterus in the subsequent pregnancy.
    ii. Cervical tear & excessive cervical dilatation: may lead to cervical incompetence.
    iii. Infection: may lead to infertility.
    iv. Excessive curettage: may lead to Asherman's syndrome.
c. Rh- isoimmunization: If the anti-D is not given or if the dose is inadequate.
d. Maternal depression after fetal lost.

POST-ABORTION MANAGEMENT

- In cases of incomplete, inevitable, complete, missed and septic abortions.
    1. Support: From the husband, family and obstetric staff.
    2. Anti-D: to all Rh –ve, non-immunized patients, whose husbands are Rh +ve.
    3. Counseling and explanation:
- *Contraception*: Should start immediately after abortion if the patient choose to wait, because ovulation can occur 14 days after abortion, and so pregnancy can occur before the expected next period.
- Best to wait 3 months before trying again. This allows more time to regulate cycles, to know the LMP and to give folic acid.