



- **What are the causes of bleeding in early pregnancy (before 12 weeks of gestation)?**

• **Abortion:**

- ✓ **Definition:** loss of the fetus before 20 weeks of gestation. If abortion occurs spontaneously, this will be known as “miscarriage”.
- ✓ **Causes:** there are many causes of abortion, the most important being genetic abnormalities (such as triploidy, tetraploidy or monosomy-X). Other causes include maternal anatomical defects, maternal systemic diseases (such as SLE and antiphospholipid syndrome) and infections (TORCH).
- ✓ **Types of abortion:**

Type	Description
Threatened	<ul style="list-style-type: none"> • Characteristics: minimal vaginal bleeding (due to implantation of the embryo in the uterine wall), no cervical dilation and fetal heart sound is present. • Management: rest and observation.
Inevitable	<ul style="list-style-type: none"> • Characteristics: vaginal bleeding with uterine cramping, there is cervical dilation and fetal heart sound will start decelerating or might not be present. • Management: suction dilation and curettage.
Missed	<ul style="list-style-type: none"> • Characteristics: no vaginal bleeding, no uterine cramping, no cervical dilation but pregnancy is nonviable (the fetus is dead!). • Management: scheduled suction dilation and curettage.
Incomplete	<ul style="list-style-type: none"> • Characteristics: vaginal bleeding with uterine cramping, there is cervical dilation but only parts of the fetus will be passed. • Management: Emergency suction dilation and curettage (to prevent further blood loss).
Complete	<ul style="list-style-type: none"> • Characteristics: vaginal bleeding with uterine cramping, there is cervical dilation and the whole fetus will be passed (this must be confirmed with ultrasound to make sure there are no remaining parts in the uterus). • Management: Conservative.

• **Blighted ovum (anembryonic pregnancy):**



- ✓ **Definition:** implantation of a fertilized egg in the uterus without developing into an embryo. This causes one out of two miscarriages in the first trimester of pregnancy.
- ✓ **Causes:** genetic abnormalities caused by a poor quality sperm/egg or abnormal cell division.
- ✓ **Signs and symptoms:** a female might experience signs of pregnancy (missing her period or having a positive pregnancy test). Then, she might have signs of miscarriage such as vaginal bleeding and uterine cramps.
- ✓ **Diagnosis:** ultrasound is usually needed to confirm that pregnancy sac is empty.
- ✓ **Management:** suction dilation and curettage or misoprostol (which might take several days to expel the tissues) or to wait until the body expels the tissues by itself (spontaneously).



- **Molar pregnancy (hydatidiform mole):**

- ✓ Definition: cystic swelling of chorionic villi and proliferation of chorionic epithelium (only trophoblasts).

- ✓ Types:

	Complete mole	Partial mole
Karyotype	46 (XX) or 46 (XY)	69 (XXX) or 69 (XXY) or 69 (XYY)
hCG	↑↑↑	↑
Uterine size	↑	-
Convert to choriocarcinoma	2%	Rare
Fetal parts	No	Yes
Components	Enucleated egg + single sperm	2 sperms + 1 egg
Risk of malignancy	15-20%	< 5%
Symptoms	Vaginal bleeding, enlarged uterus, hyperemesis, pre-eclampsia and hyperthyroidism	Vaginal bleeding and abdominal pain
Imaging (using ultrasound)	Clusters of grapes 	Fetal parts 

- ✓ Treatment:

- ❖ Suction dilation and curettage.
- ❖ Methotrexate.

Notice that you must monitor β -hCG with your treatment.

- **Ectopic pregnancy:**

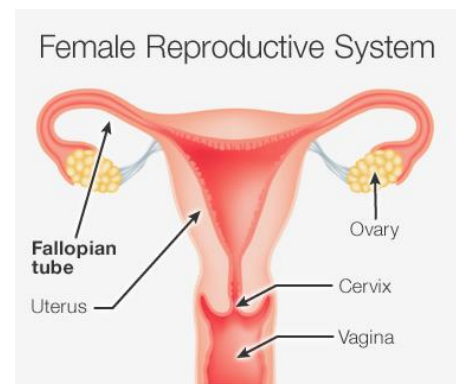
- ✓ Definition: Implantation of the fertilized egg outside the uterus. This might be in fallopian tube (tubal pregnancy), another organ in the abdomen, horn of the uterus or even in the cervix.

- ✓ Causes of ectopic pregnancy:

- ❖ Damaged fallopian tubes (cilia are not working and cannot guide the fertilized egg into the uterine cavity) or congenital abnormality of fallopian tubes.
- ❖ Current use of an intrauterine device (a form of birth control).
- ❖ History of Pelvic Inflammatory Disease (PID).
- ❖ Sexually Transmitted Diseases (STDs) such as Chlamydia or gonorrhoea
- ❖ Previous history of ectopic pregnancy.
- ❖ Infertility treatments such as In Vitro Fertilization (IVF).

- ✓ Symptoms of ectopic pregnancy:

- ❖ Minimal vaginal bleeding.
- ❖ Nausea and vomiting with lower abdominal pain.
- ❖ Sharp abdominal cramps.
- ❖ Pain on one side of the body.
- ❖ Dizziness and weakness.





✓ Diagnosis: pregnancy test, pelvic exam and ultrasound.

✓ Treatment:

❖ If fallopian tube has ruptured, emergency surgery is necessary to stop the bleeding.

❖ If fallopian tube has not ruptured, laparoscopic surgery may be all that is needed to remove the embryo and repair the damage.

Notice that most doctors suggest to wait 3-6 months before conceiving again after having an ectopic pregnancy.

- **Local causes**: such as cervical cancer or ulcers.
- **Medical causes**: such as the use of heparin or warfarin.