Abortion

- The term abortion usually designates termination of gestation before the end of the 28th week of pregnancy. It implies the expulsion of all or any part of the placenta or membranes, with or without an identifiable fetus or with a live-born or stillborn infant weighing less than 1000 g. If abortion occurs before 12 weeks it is referred to as early abortion, and thereafter the term is late abortion.

Types of abortion

- Threatened abortion
- Inevitable abortion
- Incomplete Abortion
- Complete Abortion
- Missed Abortion
- Recurrent Abortion

Threatened abortion

- The term threatened abortion is used when a pregnancy is complicated by vaginal bleeding before the 20th week. Pain may not be a prominent feature of threatened abortion, although a lower abdominal dull ache sometimes accompanies the bleeding. Vaginal examination at this stage usually reveals a closed cervix. 25% to 50% of threatened abortion eventually result in loss of the pregnancy.

Inevitable abortion

- In case of inevitable abortion, a clinical pregnancy is complicated by both vaginal bleeding and cramp-like lower abdominal pain. The cervix is frequently partially dilated, attesting to the inevitability of the process.

Incomplete Abortion

- In addition to vaginal bleeding, cramp-like pain, and cervical dilatation, an incomplete abortion involves the passage of products of conception, often described by the women as looking like pieces of skin or liver.

Complete Abortion

- In complete abortion, after passage of all the products of conception, the uterine contractions and bleeding abate, the cervix closes, and the uterus is smaller than the period of amenorrhea would suggest. In addition, the symptoms of pregnancy are no longer present, and the pregnancy test becomes negative.

Missed Abortion

- The term missed abortion is used when the fetus has died but is retained in the uterus, usually for some weeks. After 16 weeks' gestation, dilatation and curettage may become a problem. Fibrinogen levels should be checked weekly until the fetus and placenta are expelled.

Recurrent Abortion

- Recurrent abortion refers to any case in which there have been three consecutive spontaneous abortions. Possible causes are known to be genetic error, anatomic abnormalities of the genital tract, hormonal abnormalities, infection, immunologic factors, or systemic disease.

The development of abortion is as follows:

Etiology

- Much confusion exists about the etiology of spontaneous abortion. Although many factors may result in the loss of a single pregnancy, relatively few factors are present in couples who abort recurrently. Cause-effect relationships in individual patients are frequently difficult to ascertain.

General Maternal Factors

- Infections
- Environmental Exposure
- Psychological Factors
- Systemic Disorders

Infections

- Despite the present recognition that microorganisms may cause spontaneous abortions, it is frequently difficult to identify unequivocally the infectious agent responsible for the loss of a specific pregnancy. Some microorganisms have a specific local effect on the conceptus, whereas infections with others may cause general systemic effects and a fever that result in abortion.

- Very few microorganisms have been implicated in recurrent abortions. Infection with Mycoplasma, Listeria, or Toxoplasma should be specifically sought in women with recurrent abortions, since despite being infrequently found, they are all treatable with modern antibiotics.

Environmental Exposure

- Epidemiologic evidence of a causal link between exposure to potentially mutagenic or teratogenic agents and subsequent abortion is sparse. Such exposures are likely to be uncommon and not an important cause of reproductive loss in the general population. Exceptions to this are maternal smoking and alcohol consumption, for which there is evidence of an increased incidence of chromosomally normal abortions.

- Women who smoke 20 cigarettes daily and consume more than seven standard alcoholic drinks per week have a fourfold increase in their risk of spontaneous abortion. It has also been reported that there is a doubling of the risk of spontaneous abortion with as little as two drinks a week.

Psychological Factors

Systemic Disorders

- The three general medical disorders commonly related to spontaneous abortion are diabetes mellitus, hypothyroidism, and systemic lupus erythematosus(SLE).

- The risk of abortion increases with maternal age, and studies linked to prenatal diagnostic procedures have revealed that if a live fetus is demonstrated by ultrasonography at 8 weeks gestational age, fewer than 2% will abort spontaneously if the mother is younger than 30 years. If, however, she is older than 40 years, the risk exceeds 10%, and it may be as high as 50% at age 45 years. The probable explanation is the increased incidence of chromosomally abnormal conceptuses in older women.

Local Maternal Factors

- Endocrine Factors
- Uterine Abnormalities
- Trauma

Endocrine Factors

- It has been claimed that insufficient production of progesterone by the corpus luteum before the placenta is fully formed will lead to inadequate development of the decidua and abortion.

Uterine Abnormalities

- The incidence of abortion is increased if the uterus is double or septate.

- Retroversion of the uterus is not a cause of miscarriage.
- A fibromyoma of the uterus which is closely related to the uterine cavity may cause abortion, but other fibromyoma will not do so.

- Lacerations of the cervix which extend as far as internal os may result in abortion in the middle trimester or in premature labor. Very rarely the cervical weakness is congenital, but it is usually the result of obstetric damage or of injurious surgical dilatation of the cervix.

Trauma

- Abortion may follow surgical operations, for example myomectomy, or removal of an ovary containing the corpus luteum of pregnancy or appendectomy.

Fetal Factors

- The most common cause of spontaneous abortion is a significant genetic abnormality of the conceptus. In spontaneous first-trimester abortion, approximately two thirds of aborted fetuses have significant chromosomal anomalies.

Pathology

- In spontaneous abortion, usually the embryo or fetus is compromised first and this is followed by hemorrhage into the decidua basalis. Necrosis and inflammation appear in the region of implantation. The detached conceptus is, in effect, a foreign body in the uterus which causes strong uterine contractions. Uterine contractions and dilatation of the cervix result in expulsion of partial or all the products of conception.

- An abortion is a miniature labour, the rhythmical uterine contractions cause the cervix to dilate and embryo or fetus to be expelled with or without its accompanying membranes. If all the products of conception are expelled, the contractions cease and the bleeding stops. In some cases of incomplete abortion a piece of placental tissue may remain in the uterus because it is fixed at its base. Bacterial invasion of the retained products may occur.

Management

Threatened Abortion

- The patient is kept at rest in bed until 2 days after blood loss has ceased. Intercourse is forbidden. As soon as the initial bleeding has stopped an ultrasound scan is performed. This will reveal whether or not the pregnancy is intact. The prognosis is good when all abnormal signs and symptoms disappear and when the resumption of the progress of pregnancy is apparent.

Inevitable Abortion

- The uterus usually expels its contents unaided, and examination must be made with strict aseptic technique. If the abortion is not quickly completed, or if hemorrhage becomes severe, the contents of the uterus are removed with a suction curettege.

Incomplete Abortion

- Patients require admission to the hospital. Treatment is aimed at preventing infection, controlling bleeding and obtaining an empty and involuting uterus. The chief risks associated with retained products are hemorrhage and sepsis.

Missed Abortion

- Once the diagnosis has been made the uterus should be emptied. Early in gestation evacuation of the uterus is usually accomplished by suction curettage. The prognosis for the mother is good. Serious complications are uncommon.

Recurrent abortion

- Paternal and maternal chromosomes shoud be evaluated.
- The mother should be ruled out the presence of systemic disorders such as DM,SLE, and thyroid disease.
- It should rule out the presence of Mycoplasma, Listeria, Toxoplasma etc. infectious disease.
- Pelvic examination

1 All of the following may be the cause of recurrent abortion except:

A cervical incompetence
B infection
C chromosome aberrantions
D retroversion of the uterus

2 A patient of 8th week pregnancy, presents with vaginal bleeding, low abdominal pain, vaginal examination revealing partially dilatated cervix, without expelling any tissue, she should be diagnosed as :

A threatened abortion

B inevitable abortion

C complete abortion

D incomplete abortion