ABORTION

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Definition

- Termination of pregnancy before the fetus is viable that is before 28 weeks
- WHO defines abortion as pregnancy termination before 20 weeks gestation or fetus born weighing less than 500gm

Incidence

- Approximately 15% of clinically evident pregnancies abort
- 60 % of chemically evident pregnancies abort
- 80% of spontaneous abortions occur prior to 12 weeks

Aetiology

- Approximately 50% of spontaneous abortion occurring in 1st trimester is due to abnormal karyotype

Aetiology

1. Fetal factors

Aneuploid abortion

- 95% of chromosomal abnormalities are due to maternal gametogenesis errors a
- 5% due to paternal errors
- 75% of aneuploid abortions occurred before 8 weeks

Fetal factors

- Autosomal trisomy – most frequently identified chromosomal anomaly with 1st trimester miscarriages
- Monosomy X
- Triploidy , tetraploidy
- Chromosomal structural abnormalities

Euploid abortion

- Chromosomally normal fetuses tend to abort later in gestation than those with aneuploidy
- Euploid abortions peaked at 13 weeks
- Incidence of euploid abortions increase dramatically after maternal age exceeds 35 years

Maternal factors

(a) Maternal infections

- Any infection with hyperpyrexia
- Treponema pallidum, HSV, CMV, Toxoplasma, streptococcus

(b)Maternal systemic diseases

i. Insulin dependent diabetes

ii. Thyroid abnormalities – hyperthyroidism
hypothyroidism

iii. Cardiovascular disease

iv. Renal disease

v. SLE

Maternal factors

(c) Uterine causes

i. Congenital abnormalities of uterus

unicornuate, bicornuate, septate uterus, DES related abnormality

ii. Submucous or intramural myoma

iii. Asherman's syndrome

iv. Cervical incompetence – congenital

acquired

(d)Immunological→ APLA and thrombophilias

Maternal factors

4. Toxic factors

   Radiation,

   antineoplastic drugs,

   anaesthetic gases, alcohol, nicotine

5. Trauma

Pathology

- In spontaneous abortions haemorrhage into decidua basalis occurs.
- Necrosis and inflammation appear in the area of implantation.
- Pregnancy becomes partially or entirely detached
- Uterine contractions and dilatation of cervix result in expulsion of most or all products of conception

Signs and symptoms

1. Pain due to uterine contractions
2. Haemorrhage due to separation of pregnancy
3. Dilatation of cervix due to uterine contractions
4. Expulsion of part or entire products of conception

Differential diagnosis

1. Functional menstrual disturbance
2. Ectopic gestation
3. Implantation bleeding
4. Cervical polyps

Types of Abortions

1. Threatened abortion
2. Inevitable abortion
3. Incomplete abortion
4. Complete abortion
5. Missed abortion
6. Septic abortion

Threatened abortion

Symptoms :

- Period of amenorrhoea followed by slight abdominal pain and slight vaginal bleeding
- General condition stable

Pelvic examination :

- softened cervix , os closed
- size of uterus corresponding to period of amenorrhoea

USG

Inevitable abortion

- Pregnancy is separated from uterine wall and is bound to be expelled
- Symptoms :

  pain and bleeding more severe
- Pelvic examination :

  cervix – os open, may feel the products through os

  size of uterus corresponding to period of gestation

Incomplete abortion

- Products of conception partially expelled
- Symptoms :

  period of amenorrhoea followed by pain abdomen, bleeding p/v,

  and history of passing products
- Pelvic examination:

  os open or may be closed

  Size of uterus less than period of gestation

Complete abortion

- When the entire products of conception has been expelled
- Symptoms:

  Period of amenorrhoea followed by bleeding p/v,

  pain abdomen, history of passing products.

  Once the products has been expelled, bleeding comes down

Missed abortion

- Embryo or fetus dies inside uterus, but is not expelled
- Symptoms:

  There may or may not be vaginal bleeding
- May present with brownish discharge p/v

Missed abortion

- If missed abortion occurs early in pregnancy, the whole of the uterine contents are changed into a dark red or brownish shaggy mass known as carneous mole
- If it occurs late in pregnancy, it becomes a shrivelled sac containing a macerated fetus depending on the duration of fetal death

Missed abortion

- Pelvic examination:

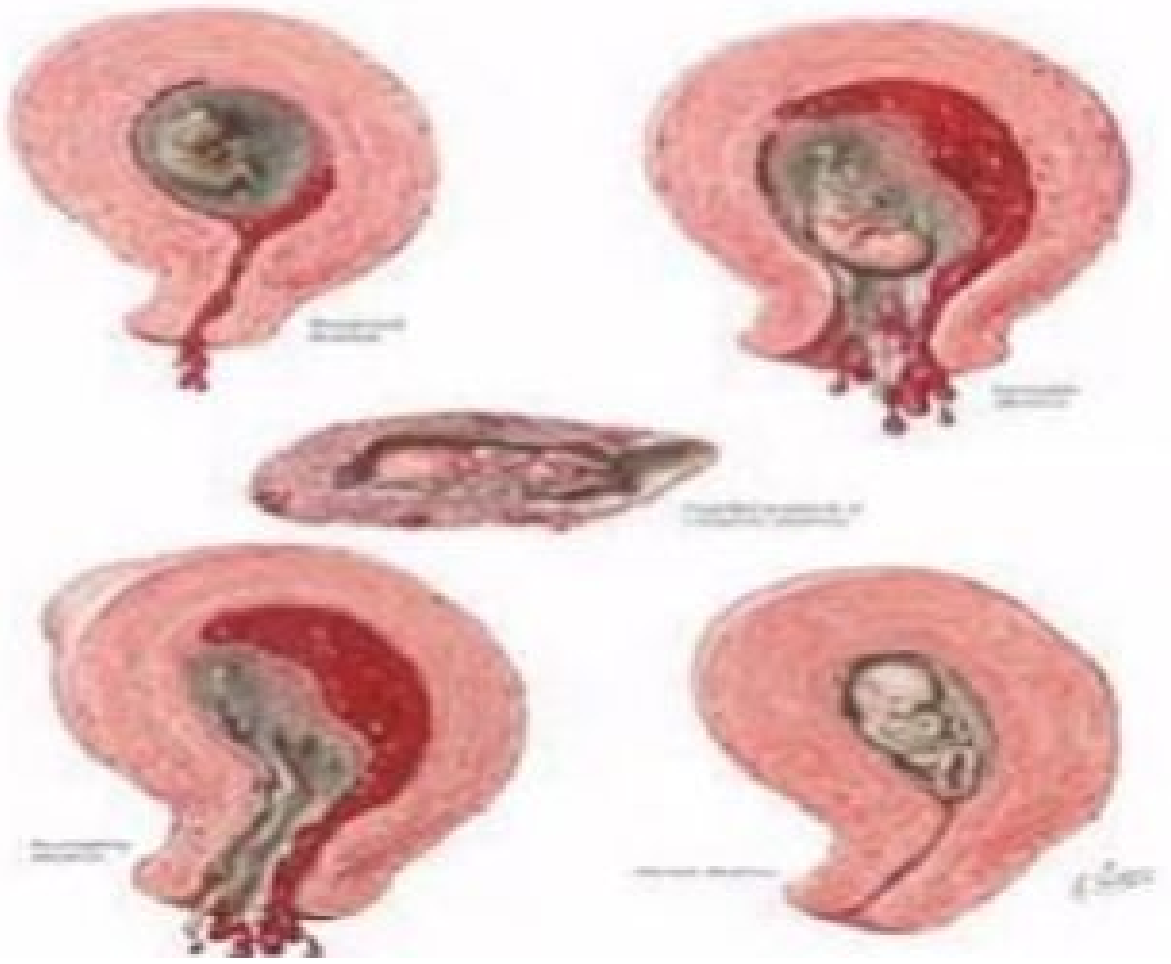
  Cervix- os closed

  Size of uterus less than period of gestation

- Diagnosis:

  USG showing absent cardiac activity

- If a dead fetus is retained in uterus for more than 5-6 weeks, there is risk of developing coagulation disorders



Septic abortion

- Any abortion associated with clinical evidence of infection of uterus and its contents

- Usually associated with incomplete abortion
- Majority with illegally induced abortion due to improper aseptic precautions, incomplete evacuation, injury to genital tract and adjacent structures like gut

Septic abortion

Organisms

1. Anaerobic- Bacteroides group, anaerobic streptococci, Clostridium welchii, Clostridium tetani
2. Aerobic- E. Coli, Klebsiella, staphylococcus, pseudomonas, hemolytic streptococci

Septic abortion

Clinical features

1. Pyrexia associated with chills and rigor

   If subnormal temperature, endotoxic shock

2. Pain abdomen

3. Tachycardia

4. Purulent vaginal discharge, tender uterus

Recurrent abortion

Definition

- 3 or more consecutive spontaneous clinically detectable pregnancy losses prior to 20 weeks gestation

  primary - no prior live birth

  secondary – following one prior live birth

- Incidence – 1%