Antepartum Hemorrhage Placenta Praevia

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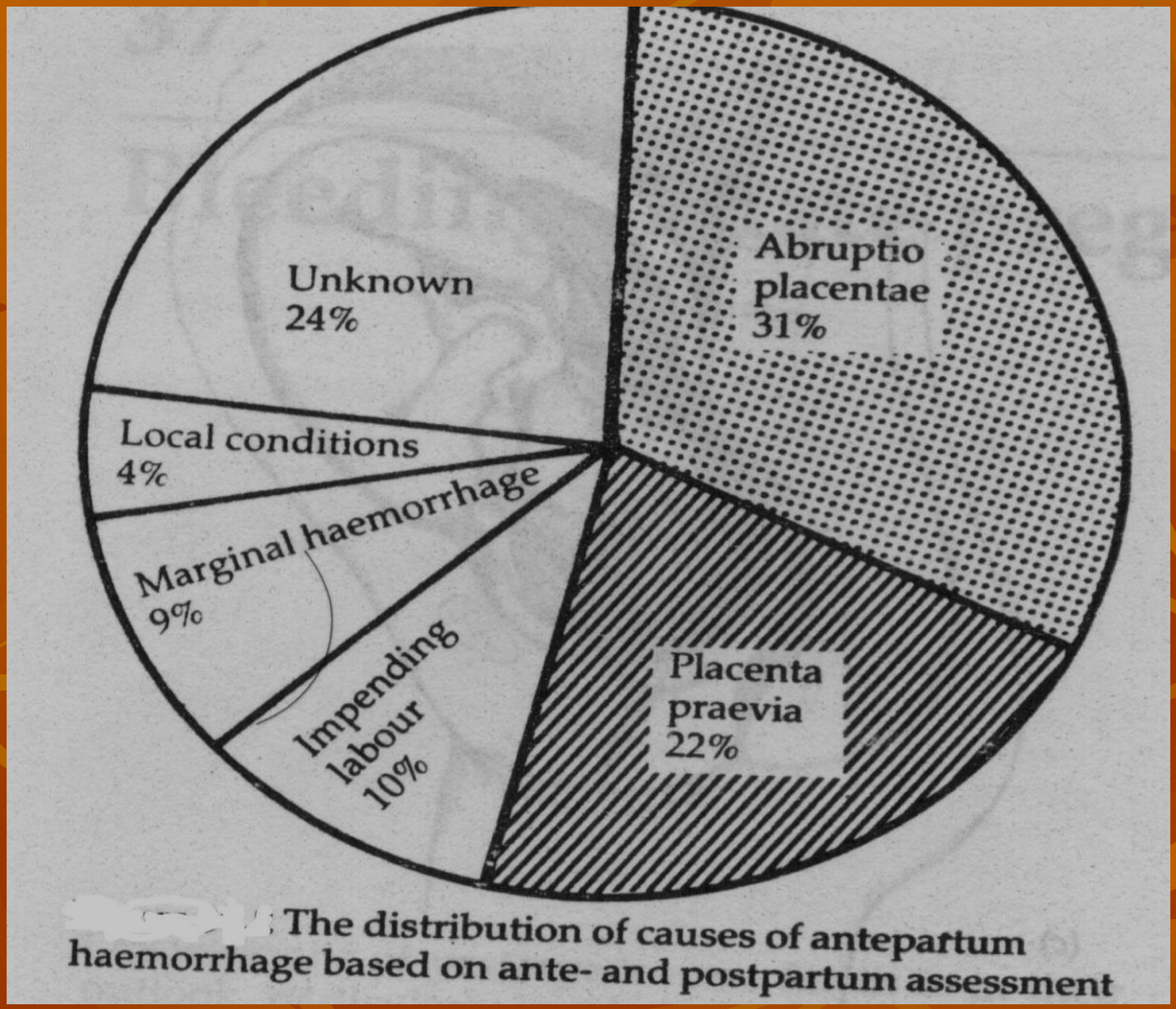
Definition

It is bleeding from the genital tract after the 28th week of pregnancy and before the end of the second stage of labor

Classification

- **(A) Placental site bleeding : (62%)**
- *Placenta praevia (22%) :* Bleeding from separation of a placenta wholly or partially implanted in the lower uterine segment.
- *Abruptio placentae (30%) :* Premature separation of a normally implanted placenta.
- *Marginal separation(10%)ý*: Bleeding from the edge of a normally implanted placenta.
- **(B) Non-placental site bleeding : (28%)**
- 1-Vasa praevia : Bleeding from ruptured foetal vessels.
- 2-Rupture uterus. 3-Bloody show.(labour)
- 4-Cervical ectopy , polyp or cancer.
- 5- Vaginal varicosity.



The distribution of causes of antepartum haemorrhage based on ante- and postpartum assessment

PLACENTA PRAEVIA

- **Definition**
- The placenta is partialy or totally attached to the lower uterine segment.
- **Incidence:**
- 1/200 pregnancies . It is more common in multiparas and in twin pregnancy due to the large size of the placenta.
- **Etiology** Not well known but may be due to:
- -Low implantation of the blastocyst.
- -Development of the chorionic villi in the decidua capsularis leading to attachment to the lower uterine segment.
- -Large placenta as in twin pregnancy.

Degrees (types)

- *(1)First degree (Type I = P.P. lateralis = low-lying placenta)*

The lower edge of the placenta reaches the lower uterine segment but not the internal os.

- *(2)Second degree (Type II= P.P. marginalis)*

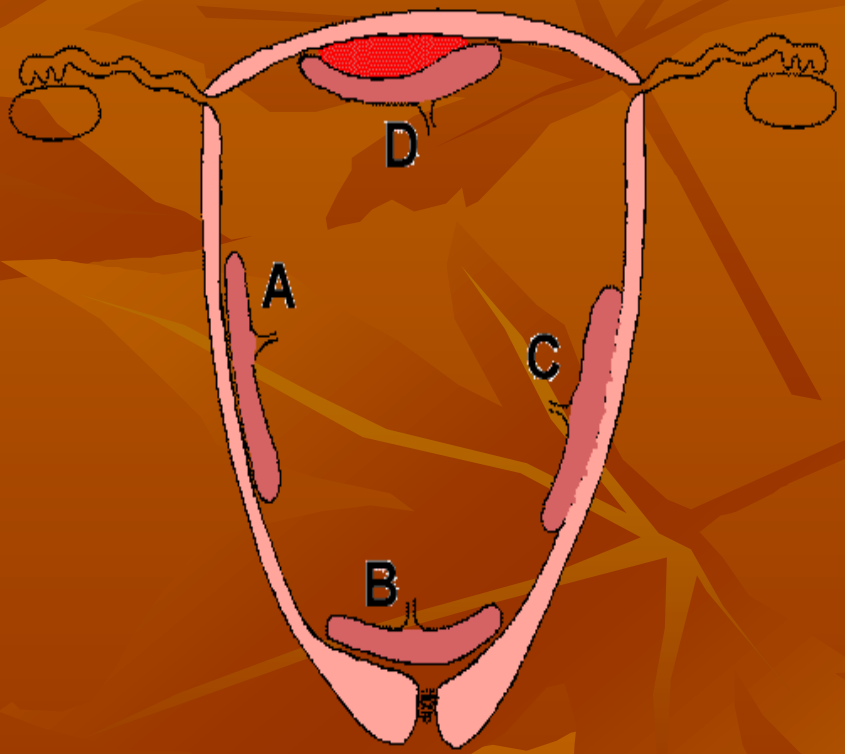
The lower edge of the placenta reaches the margin of the internal os but does not cover it.

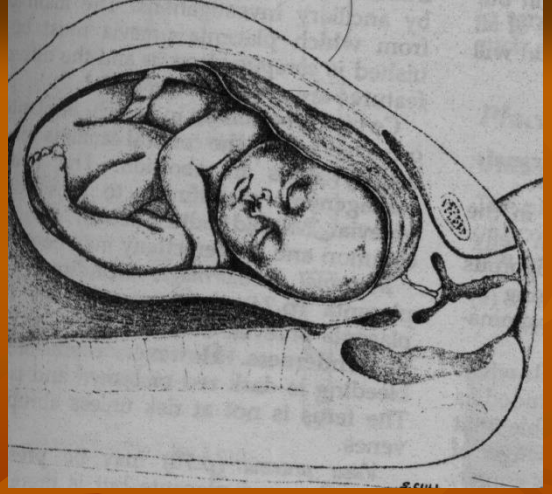
- *(3)Third - degree (Type III= P.P. incomplete centralis)*

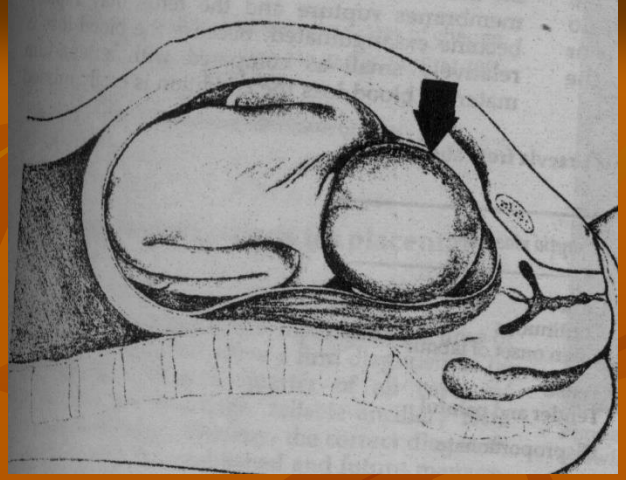
The placenta covers the internal os when it is closed

- *(4)Fourth - degree (Type IV = P.P. complete centralis)*

The placenta covers the interanl os completely whether the cervix is partially or fully dilated.







- Anterior placenta praevia, head could be difficult to palpate due to presence of placenta
- Posterior placenta compressed between fetal head and scrum

Mechanism of bleeding

Progressive stretching of the lower uterine segment normally occurs during the 3rd trimester and labor, but the inelastic placenta cannot stretch with it.

This leads to inevitable separation of a part of the placenta with unavoidable bleeding. The closer to term, the greater is the amount of bleeding.

Diagnosis

- **Symptoms:**

Causeless, painless and recurrent bright-red vaginal bleeding;

-It is causeless, but may follow sexual intercourse or vaginal examination.

-It is painless, but may be associated with labour pains .

-It is recurrent, but may occur once in slight placenta praevia lateralis.

-Fortunately, the first attack usually not severe.

Signs

- ***General examination:***

The general condition of the patient depends upon the amount of blood loss. Shock develops if there is acute severe blood loss and anaemia develops if there is recurrent slight blood loss.

- ***Abdominal examination:***

-The uterus is corresponding to the period of amenorrhoea, relaxed and not tender.

-The fetal parts and heart sound (FHS) can be easily detected.

-Malpresentations, particularly transverse and oblique lie and breech presentation are more common as well as non-engagement of the head. This is because the lower uterine segment is occupied by the placenta.

- ***Vaginal examination***

Speculum examination to exclude local lesions is only permissible when placenta praevia has been excluded by ultrasound .

P/V is indicated only if active treatment is initiated. This may provoke a severe attack of bleeding so it should be done with the following precautions:

*In the operating room,

*under general anaesthesia,

*cross- matched blood is in hand

,*operating theatre is ready for immediate caesarean section.

- If the index finger is introduced gently through the dilated cervix, the placenta can be felt as a tough fibrous mass. (this is usually in areas where no facility for ultrasound present)

Differential diagnosis

- Other causes of antepartum haemorrhage.
- Abruptio placenta
- Vasa praevia
- Local causes

Investigations

- *(1)Ultrasound :*
- It is the most simple, precise and safe method for placental localization. A partially full bladder is necessary to identify the lower edge of the placenta. If it is less than 3 cm from the margin of the internal os , it is diagnosed as placenta praevia.
- The posterior placenta praevia is difficult to be identified due to shadowing from the presenting part of the fetus. This can be overcome by head-down tilt of the patient or displacing, the presenting part manually. If difficulty still present, the distance between the presenting part and the promontory of the sacrum is measured. If this exceeds 1.5 cm it means that placenta lies in between.
- NB

In mid - pregnancy the placenta reaches the internal os in up to 20% of pregnancies. With increasing gestational age and the formation of the lower uterine segment, a gap develops between the placental edge and the internal os " *placental migration* ." So it is recommended to repeat scan when placenta praevia is diagnosed in mid - pregnancy.

- *(2)Soft tissue placentography, isotopes and thermography :*
- are old methods for placental localization that are obsolete nowadays.

Treatment

- **At home:**
- Arrange for immediate transfer to the hospital.
- No vaginal examination and no vaginal pack, only a sterile vulval pad is applied.
- No oral intake as anaesthesia may be required.
- Antishock measures as pethidine IM, fluids and blood transfusion may be given in the way to the hospital if bleeding is severe.

Treatment

- **At Hospital:**
- Assessment of the patient's condition, general and abdominal examination and resuscitation if needed.
- At least 2 unites of cross matched blood should be available.
- Ultrasonography for:
- differentiation between abruptio placenta (retroplacental hematoma in a normally implanted placenta), marginal bleeding (separation of the margin of a normally implanted placenta) and placenta praevia (in the lower uterine segment)
- assessment of fetal viability, age, position and presentation.

- ***(I) If the patient is not in labor:***
- Look to the amount of bleeding ;
- If the bleeding is severe, continue antishock measures and do immediate caesarean section.
- If the bleeding is slight , look to the gestational age;
- If completed 37 weeks (36 weeks by some authors) or more, pregnancy is terminated by induction of labor or caesarean section (see later). At this time, the fetus is mature and the mother will be in a risk of severe hemorrhage as term approaches.
- If less than 37 weeks (36 weeks by others), conservative treatment is indicated till the end of 37 (or 36) weeks but not more.

- ***Conservative treatment:***

- The patient is kept hospitalized with bed rest and observation till delivery.

- Anaemia should be corrected if present.

- Observation of fetal wellbeing.

- Anti-D immunoglobulin is given for the Rh-negative mother.

- ***(II) If the patient is in labor:***
- Vaginal examination is done under the previously mentioned precautions or ultrasound location of placenta. According to the findings, the patient will be delivered either vaginally by amniotomy + oxytocin or by caesarean section.
- Vaginal delivery is allowed if the following findings are fulfilled:
- *Placenta praevia is lateralis or marginalis anterior,
- *bleeding is slight
- *vertex presentation,
- *adequate pelvis with no soft tissue obstruction
- *partially dilated cervix to allow amniotomy .
- Amniotomy has 2 benefits:
- -Allows descent of head so it compresses the placental site preventing further bleeding.
- -It abolishes the shearing movement of the placenta during uterine contractions. As the bulging of fore bag of water during contractions with intact membranes will drag the edge of the placenta evoking more bleeding.

Indication of Caeserean Section

- *Placenta praevia centralis whether complete or incomplete even if the fetus is dead.
- *Placenta praevia marginalis posterior.
- *Severe bleeding* .Malpresentation
- *Other obstetric indications as contracted pelvis, cord prolapse and elderly primigravida* .Vasa praevia.
- **N.B .**Although upper segment C.S. is sometimes advocated to be away from the placenta, lower segment C.S. is preferable because:
- 1-It allows better control of bleeding from the placental site
- 2.-It leaves a stronger scar that can withstand subsequent vaginal delivery.
- 3-If placenta praevia was anteriorly implanted it is gently displaced laterally to reach the fetal head otherwise cut through it (not preferred)

Complications of Placenta Praevia

- **(A) Maternal :**
- Maternal mortality rate is 0.2%.
- *(I) During pregnancy:*
- (1)Abortion. (2) Preterm labor. (3)Antepartum hemorrhage
- .(4) Malpresentation and non-engagement.
- *(II) During labor*
- (1)Premature rupture of membranes.
- (2) Cord prolapse
- (3)Uterin inertia.
- (4)Obstructed labor.
- (5) Postpartum hemorrhage.
- (6) Retained placenta.
- (7)Placenta accreta due to deficient decidual reaction in the lower segment allows deep penetration of chorionic villi. This may necessitate hysterectomy .
- (8)Lacerations of lower uterine segment due to increased vascularity and friability.
- (9) Air embolism due to low placental site.

- **(B) Fetal:**
- Fetal mortality rate is 20.%
- (1)Prematurity.
- (2)Asphyxia.
- (3)Malformations (2%)