ANTE PARTUM HAEMORRHAGE (APH)

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APH

" It is defined as bleeding from or into the genital tract after 28th week of pregnancy but before the birth of the baby".

The first and second stages of labour are included.

Incidence : 3 % in hospital deliveries

APH - CAUSES

- Placental bleeding (70%)
  - Placenta previa (35%)
  - Abruptio placenta (35%)
- Unexplained (25%) or indeterminate (excluding placental bleeding & local lesions)
- Extra placental causes (5%)
  - Cervical polyp
  - Carcinoma cervix
  - Varicose vein
  - Local trauma

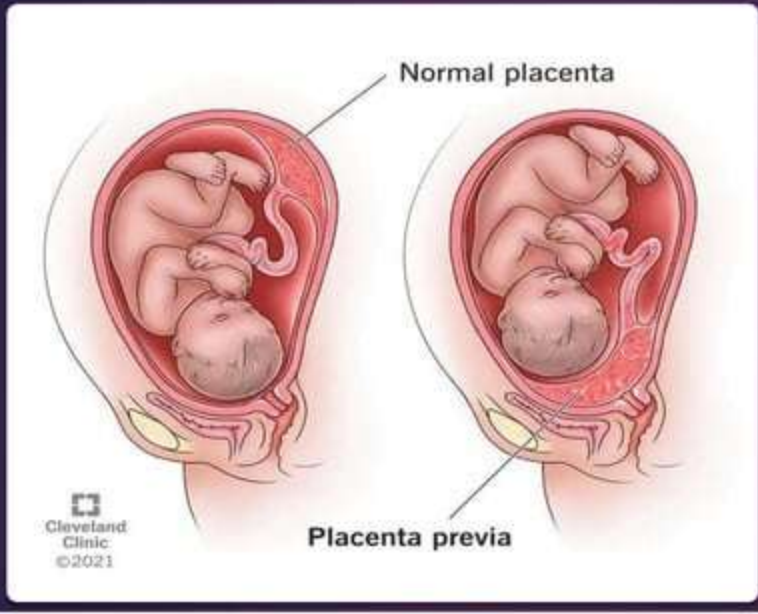
PLACENTA PREVIA

When placenta is implanted partially or completely over the lower uterine segment (over & adjacent to the internal os) is called placenta previa.

Incidence :

- About 1/3rd of APH
- 0.5 to 1 % amongst hospital deliveries
- 80% in multiparous women
- Increased incidence beyond 35 years of age

PLACENTA PREVIA



PLACENTA PREVIA - CAUSES

- **Exact cause is unknown**
- **Dropping down theory :** The fertilized ovum drops down and is implanted in the lower segment , may be because of poor decidual reaction in the upper uterine segment.
- **Persistence of chorionic activity in the decidua.**
- **Defective decidua**
- **Big surface area of the placenta**

HIGH RISK FACTORS

- Previous placenta previa
- **Previous cesarean delivery**
- Multiple gestation
- Multiparity
- **Advanced maternal age**
- **Infertility treatment**
- Previous abortion
- **Previous intrauterine surgical procedure**
- Maternal smoking
- Maternal cocaine use
- Male fetus
- Non-white race

TYPES or DEGREES

Type .I (Low Lying)

Major part of placenta is attached to the upper segment and only the lower margin encroaches onto the lower segment but not up to the os.

Type .II (Marginal)

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

Type .III (Incomplete or Partial Central)

The placenta covers the internal os partially. It will covers the internal os when closed but does not entirely do so when fully dilated.

Type .IV (Central or Complete)

The placenta completely covers the internal os even after it is fully dilated.

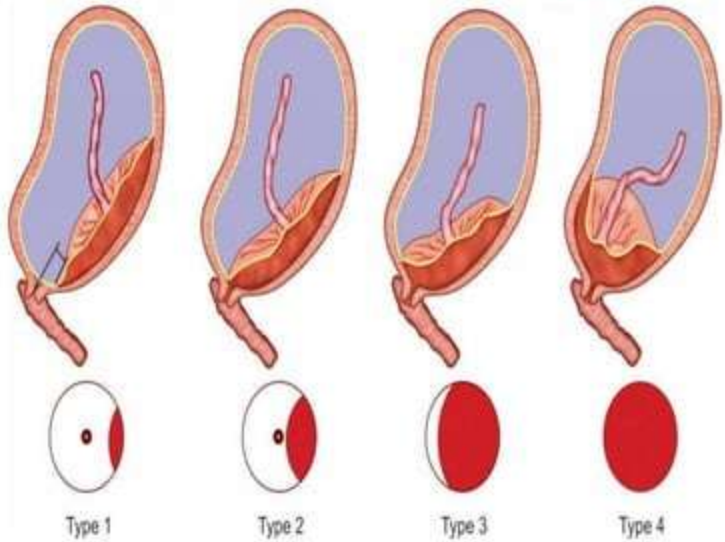
TYPES or DEGREES

Type .I (Low Lying)

Type .II (Marginal)

Type .III (Incomplete or Partial Central)

Type .IV (Central or Complete)



CLINICAL FEATURES - SYMPTOMS

VAGINAL BLEEDING

- Sudden onset
- Painless
- Apparently causeless
- Recurrent
- Bleeding usually occurs at night and awakening the patient in a pool a blood and majority occurs before 38 weeks.

CLINICAL FEATURES - SIGNS

1. Anemia (proportionate to the visible blood loss)
2. Tachycardia & Hypotension (proportionate to the visible blood loss)
3. The size of uterus is as that of usual period of gestation, and it is relaxed, soft and elastic without any localized tenderness.
4. Increase incidence of malpresentation and multiple pregnancy.
5. Head is not fixed and usually floating and cannot be pushed down into the pelvis.
6. Fetal heart sound is usually present.

CONFORMATION OF DIAGNOSIS

painless & recurrent vaginal bleeding in the second half of pregnancy

- **BRIGHT RED OR DARK COLORED BLOOD IS SEEN ON VULVAL INSPECTION.**
- **VAGINAL EXAMINATION IS AVOIDED (outside the OT).**
- **PLACENTOGRAPHY**
  - TAS & TVS
  - TPS
  - COLOR DOPPLER
  - MRI

Placenta previa

- COMPLICATIONS

Maternal	Fetal
Antepartum hemorrhage	Fetal growth retardation
Early rupture of membrane	Low birth weight
Cord prolapse	Asphyxia
Intrapartum and postpartum haemorrhage	Birth injuries
Retained placenta	Intrauterine death
Sepsis	Congenital malformation
Embolism	
Subinvolution	

Management
Prevention

- Regular antenatal care
- Antenatal diagnosis
- Significance of warning haemorrhage
- Colour flow doppler USG
- MRI

Management
At Home

- Patient is immediately put to bed
- Assess the blood loss
  1. Inspection of the clothing soaked with blood
  2. To note the pulse ,BP & degree of anaemia
- Quick but gentle abdominal examination
- Vaginal examination must not done
- Arrangement should made to shift to hospital.
- All cases of APH , if even the bleeding is slight , should be admitted.

Management
TREATMENT ON ADMISSION

IMMEDIATE ATTENTION

- Asses the amount of blood loss
- Blood sample for Hb , grouping & cross matching
- A large bore iv cannula is sited and an infusion of normal saline is started
- Gentle abdominal inspection
- Inspection of the vulva
- Sonographic examination

Management
FORMULATION OF THE LINE OF TREATMENT

I. Expectant management (McAfee & Johnson – 1945)

Aim : to continue pregnancy for fetal maturity without compromising the maternal health

Vital prerequisites :

- Availability blood transfusion whenever required
- Facilities for caesarean section (throughout 24 hours)

Selection of cases :

- Mother is in good health status
- Hb ≥10 g % and haematocrit >30 %
- Duration of pregnancy is less than 37 weeks
- Active vaginal bleeding is absent
- Fetal well being is assured (CTG & USG)

Management
FORMULATION OF THE LINE OF TREATMENT

Conduct of Expectant Management:

1. Bedrest with bathroom & toilet privileges
2. Investigations - Hb , blood grouping & urine for protein
3. Periodic inspection of vulval pads
4. Fetal surveillance with USG interval of 2-3 weeks
5. Supplementary haematinics
6. A gentle speculum (Cusco's) examination if patient is allowed out of the bed
7. Use of tocolytics (magnesium sulphate) & Use of cervical cerclage
8. Rh immunoglobulin should be given (Rh negative women)

Termination of Expectant Management:

Carried up to 37 weeks of pregnancy , by this time the baby become sufficiently mature.

Management
FORMULATION OF THE LINE OF TREATMENT

II. Active or definite management (Delivery)

Indiactions :

1. Bleeding occurs at or after 37 weeks of pregnancy
2. Patient is in labour
3. Patient is in exsanguinated state on admission.
4. Continuing bleeding
5. Absence of FHS or movement

Caesarean Delivery : Done for all women with sonographic evidence of placenta previa where placental edge is within 2 cm from the internal os.

Vaginal Delivery : **is considered where the** placental edge is clearly 2 – 3 away cm from the internal os (Based on sonography).

ABRUPTIO PLACENTA

It is one form of Ante partum haemorrhage where the bleeding occurs due to premature separation of normally situated placenta.

Incidence :

- 0.5 to 1.3 % amongst hospital deliveries
- Severe abruption 1 in 100 deliveries

Risk factors

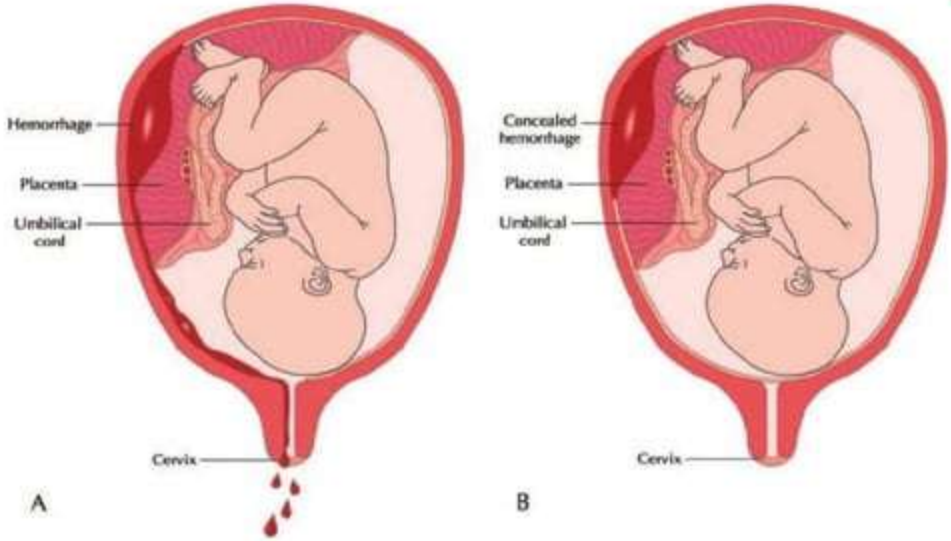
- General factors
  - High birth order pregnancies with gravid（≥ 5）
  - Advancing age of mother
  - Poor socioeconomic condition
  - Low nutritional state
  - Smoking
- Hypertension in pregnancy
- Traumatic separation of placenta
- Sudden uterine decompression
  - Following delivery of the first baby of the twins
  - Sudden escape of liquor amni in polyhydramnios
  - PROM

Risk factors

- Short cord
- Supine hypotension syndrome(Postural hypotension) (Inferior Vena Cava Compression Syndrome)
  - It is caused when the gravid uterus compresses the inferior vena cava when a pregnant woman is in a supine position, leading to decreased venous return centrally.
  - The normal BP is quickly restored by turning the patient to lateral position.
- Placental anomaly
- Folic acid deficiency
- Cocaine abuse
- Torsion of the uterus
  - It is defined as rotation more than 45 degrees around the long axis of the uterus.
  - Uterine torsion is observed in all age groups of the reproductive period, in all parity groups, and at all stages of pregnancy.

Varieties of Abruptio Placenta

1. Revealed
   - Following separation of the placenta , the blood insinuates downwards between the membranes and the decidua.
   - Ultimately , the blood comes out of the cervical canal to be visible externally.
   - Most common type
2. Concealed
   - The blood collects behind the separated placenta or collects in between the membranes and decidua.
   - Rare 20-30 %
3. Mixed
   - Some part of blood collects inside and a part is expelled out.
   - Quite common


Hemorrhage
Placenta
Umbilical cord
Cervix
A
Concealed hemorrhage
Placenta
Umbilical cord
Cervix
B

Classification of placental abruption

- Clinical classification is as follows:
- Class 0 - Asymptomatic
- Class 1 - Mild (represents approximately 48% of all cases)
- Class 2 - Moderate (represents approximately 27% of all cases)
- Class 3 - Severe (represents approximately 24% of all cases)

Classification of Placental Abruption

- **A diagnosis of class 0 : is made retrospectively by finding an organized blood clot or a depressed area on a delivered placenta.**
- **Class 1 characteristics include the following:**
  - **No vaginal bleeding to mild vaginal bleeding**
  - **Slightly tender uterus**
  - **Normal maternal BP and heart rate**
  - **No coagulopathy**
  - **No fetal distress**

Classification of Placental Abruption

- **Class 2 characteristics include the following:**
  - No vaginal bleeding to moderate vaginal bleeding
  - Moderate to severe uterine tenderness with possible tetanic contractions
  - Maternal tachycardia with orthostatic changes in BP and heart rate
  - Fetal distress
  - Hypofibrinogenemia (i.e., 50-250 mg/dL)

Classification of Placental Abruption

- **Class 3 characteristics include the following:**
  - No vaginal bleeding to heavy vaginal bleeding
  - Very painful tetanic uterus
  - Maternal shock
  - Hypofibrinogenemia (i.e., < 150 mg/dL)
  - Coagulopathy
  - Fetal death

Clinical Features

- The most common symptom is vaginal bleeding with cramping during the third trimester of pregnancy.
- Symptoms or signs can also include:
  - Uterine contractions that are longer and more intense than average labor contractions.
  - Backache or back pain.
  - Decreased fetal movement
  - Vaginal bleeding (not visible in concealed).
  - Abdominal pain or back pain (begin suddenly).
  - Uterine tenderness or rigidity.
  - Pallor (due to blood loss).
- Pain can range from mild cramping to strong contractions and often begins suddenly.
- These symptoms can resemble other pregnancy conditions.

Diagnosis of abruptio placenta

- **USG**
- **Clinical features**
- **MRI**
- **Laboratory test**
  - **Hb**
  - **Coagulation profile**
  - **Urine for protein**

Complications of Placental Abruption

- Placental abruption is a life-threatening condition for mother and baby.
- **In mother, abruption can cause**
  - Shock due to bleeding.
  - Blood clotting problems.
  - Multi-organ failure because of excessive blood loss example kidney failure liver failure.
  - Need hysterectomy if bleeding is not controlled.
- **In babies, abruption can cause**
  - Premature birth.
  - Low birth weight.
  - Lack of oxygen and nutrition.
  - Stillbirth.

MANAGEMENT

PREVENTION

- Early detection and effective therapy of hypertensive disorders
- Needle puncture during amniocentesis should be under USG guidance.
- Avoidance of trauma
- Avoid sudden decompression of the uterus
- Avoid supine hypotension
- Routine administration of folic acid
- Correction of anemia during antenatal period
- Prompt detection & institution of the therapy to minimize the grave complications namely shock , blood coagulation disorders and renal failure.

MANAGEMENT

- **TREATMENT AT THE HOSPITAL :**

Shift the patient to an equipped maternity unit as early as possible

ASSESSMENT

- Amount of blood loss
- Maturity of the fetus
- Whether patient is in labor or not
- Presence of any complications
- Type & grade of placental abruption

MANAGEMENT

EMERGENCY MEASURES

- Blood test (Hb , hematocrit , coagulation profile ,ABO ,RH)
- Urine test (protein)
- Ringer's solution drip is started with a wide bore cannula
- Arrangement for blood transfusion
- Resuscitation arrangement
- Monitor fetal and maternal condition
- Urine output

MANAGEMENT

Management options

1. Immediate delivery
2. Management of complications
3. Expectant management I(rare)

MANAGEMENT

Definitive Treatment (Immediate Delivery)

Patient is in labor

- Labor is accelerated by low rupture of membrane
- Oxytocin drip may be started to accelerate when needed

Patient is not in labor

- Induction of labor by LRM
- Oxytocin along with blood transfusion

  or

- Cesarean section

MANAGEMENT

Management of complications

- Hemorrhagic shock
- Renal failure
- Uterine atony
- PPH
- Hypovolemia
- Feto-maternal hemorrhage (Rh Incompatibility)
- Disseminated intravascular coagulation (DIC)

Table 19.1: Distinguishing Features of Placenta Previa and Abruptio Placentae

Parameters	Placenta Previa	Abruptio Placentae
▪ **Clinical features:**		
• **Nature of bleeding**	(a) Painless, apparently causeless and recurrent (b) Bleeding is always revealed	(a) Painful, often attributed to pre-eclampsia or trauma and continuous (b) Revealed, concealed or usually mixed
• **Character of blood**	Bright red	Dark colored
• **General condition and anemia**	Proportionate to visible blood loss	Out of proportion to the visible blood loss in concealed or mixed variety
• **Features of pre-eclampsia**	Not relevant	Present in one-third cases
▪ **Abdominal examination:**		
• **Height of uterus**	Proportionate height to gestational age	May be disproportionately enlarged in concealed type
• **Feel of uterus**	Soft and relaxed	May be tense, tender and rigid
• **Malpresentation**	Malpresentation is common. The head is high floating	Unrelated, the head may be engaged
• **FHS**	Usually present	Usually absent especially in concealed type
▪ **Placentography (USG, MRI)**	Placenta in lower segment	Placenta in upper segment
▪ **Vaginal examination**	Placenta is felt on the lower segment (not to be done in a suspected case)	Placenta is not felt on lower segment. Blood clots should not be confused with placenta

Thank you