ANTEPARTUM HEMORRHAGE

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Definition

- Bleeding from the genital tract in pregnancy between 20 to 24 week’s gestation and the onset of labour.
- It affects 4% of all pregnancies.
- It is associated with increased risks of fetal and maternal morbidity and mortality.
Causes

Placental:
- Abruptio placenta.
- Placenta previa.

Non-placental:
- Vasa previa.
- Bloody show.
- Trauma.
- Uterine rupture.
- Cervicitis.
- Carcinoma.
- Idiopathic.
ABRUPTIO PLACENTA
Introduction

- **Definition:**
  It is the separation of the placenta from its site of implantation before delivery of the fetus.

- **Incidence:**
  1 in 200 deliveries.
Risk Factors

- Increased age & parity.
- Hypertensive disorders.
- Preterm ruptured membranes.
- Multiple gestation.
- Polyhydramnios.
- Smoking.
- Cocaine use.
- Prior abruption.
- Uterine fibroid.
- Trauma.
Types

- Total or partial.
- Concealed 25-30%  
  Revealed 65-80%

![Diagram of placental abruption](image)
Presentation

- Vaginal bleeding.
- Uterine tenderness or back pain.
- Fetal distress.
- High frequency contractions.
- Uterine hyper tonus.
- IUFD.
Classification

- Grade 0. Asymptomatic, small retroplacental clot after delivery
- Grade 1. *External vaginal bleeding
  *Uterine tetany and tenderness may be present
  *No signs of maternal shock
  *No evidence of fetal distress
Classification

- **Grade 2.** *External vaginal bleeding may or may not be present*
  *Uterine tender and tentany.*
  *No signs of maternal shock*
  *Signs of fetal distress present*

- **Grade 3.** *External bleeding may or may not be present*
  *Marked uterine tetany*
  *Maternal shock*
  *Fetal death or distress*
  *Coagulopathy in 30% of the cases*
Placental Abruption
Differential Diagnosis

- Revealed: may present like placenta previa or local causes
- Concealed:
  * Intraperitoneal hemorrhage
  * Ruptured uterus
  * Abdominal pregnancy
  * Acute polyhydramnious
  * Degenerated fibroid or complicated ovarian cyst
  * Volvolus & Peritonitis
Placental Abruption

- **Shock**
- **Consumptive Coagulopathy**
- **Renal Failure**
- **Fetal Death**
Diagnosis of Placenta Abruption

- The diagnosis is clinical.
- **U/S**: is to
  - Confirm fetal viability, assess fetal growth & normality, measure liquor, do umbilical artery Doppler velocities.
  - Exclude placenta praevia.
U|S for Abruptio placenta
Management of Placenta Abruption

- **Principle of management:**
  1. Early delivery (50% of abruption present in labour).
  2. Adequate blood transfusion.
  3. Adequate analgesia.
  4. Detailed maternal and fetal monitoring.
- Coagulation profile (30% develop DIC).
- C/S: distressed baby, severe bleeding, alive baby & not in advanced labour. Perinatal mortality rate is 15-20%.
- Vaginal delivery: very low gestation, dead baby, cervix is fully dilated (Ventouse delivery).
- Conservative: small abruption, well mother and fetus, if the gestational age < 34, give steroids.
Management of Placenta Abruption

- Conservative: Time taken to achieve delivery depends on:
  - rate of the bleeding.
  - The rate of change in the clotting studies.
  - The clinical condition of the mother and fetus.
  - CTG: twice/day.
  - Serial U/S and umbilical artery Doppler waveform.
  - No conservative after 38 week’s gestation.
- Anti-D if the mother is rhesus positive.
- Anticipate PPH.
- In cases of previous CS, discuss hysterectomy.
Complications

- **Maternal:**
  1. Hypovolemia.
  2. DIC.
  3. Renal failure.
  4. Death.
  5. Uterine rupture

- **Fetal:**
  1. Hypoxia.
  2. IUGR.
  3. IUFD.
  4. Anemia
PLACENTA PREVIA
Introduction

- **Definition:**
  The presence of placental tissue overlying or proximate to the internal cervical os after viability.

- **Incidence:**
  Complicates approximately 1 in 300 pregnancies.
Predisposing factors

- Multiparty
- Increased maternal age
- Previous placenta previa, recurrence rate 4-8%
- Multiple gestation
- Previous cesarean section
- Uterine anomalies
- Maternal smoking
Placenta praevia

**Grades:**
- **Grade 1:** the placental edge is in the lower uterine segment but does not reach the internal os (low implantation).
- **Grade 2:** the placental edge reaches the internal os but does not cover it.
- **Grade 3:** the placenta covers the internal os when it is close and is asymmetrically situated (partial).
- **Grade 4:** the placenta covers the internal os and is centrally situated (complete)
- **Grade 2:** the placenta could be situated anteriorly or posteriorly.
Figure 33–2. Normal placenta.

Figure 33–3. Low implantation.

Figure 33–4. Partial placenta previa.

Figure 33–5. Complete placenta previa.
Placenta praevia

Clinical presentation

• Bleeding: usually mild but it could be severe; recurrent, painless.
• Soft uterus.
• Normal fetal heart rate (unless there is severe bleeding or associated abruption).
• High presenting part.
• Fetal malpresentation (breech/transverse/oblique).
  ✷ Vaginal examination is contraindicated.
Placenta praevia

**Diagnosis:**

- **Clinical presentation.**
- **U/S:** Transvaginal is better than transabdominal; the woman does not need full bladder and can determine the placental edge in posterior PP.
  - 5% of low lying placenta can be diagnosed at 16-18 weeks but only 0.5% have PP at delivery.
  - In the second trimester, if the placenta covers the internal os with an overlap > 2.5 cm and the placental edge is thick; placenta praevia will persist.
- **MRI:** expensive.
- **Examination in the theatre:** if no facilities or in doubt.
Complications of Placenta praevia

- Preterm delivery.
- Preterm premature rupture of membranes.
- IUGR (repeated bleeding).
- Malpresentation; breech, oblique, transverse.
- Fetal abnormalities (double in PP).
- ↑ number of C/S.
- Morbid placenta: placenta acreta(80%), increta and percreta.
- Postpartum haemorrhage: lower segment not contract and retract.
Placenta Previa Management

- Admit to hospital
- NO VAGINAL EXAMINATION
- IV access
- Placental localization
Placenta Previa Management

Severe bleeding → Resuscitate → Caesarean section

Moderate bleeding → Gestation

Mild bleeding → Gestation

Gestation:
- <34/52:
  - Resuscitate Steroids
  - Unstable
- >34/52:
  - Stable
  - Conservative care

Conservative care:
- <36/52:
  - Stable
- >36/52:
  - Stable
Placenta Previa Management

• **Vaginal delivery:** placenta 4.5 cm from the internal os, low head, no bleeding. Consider examination in theatre if in doubt.

• **C/S (of choice):** grade 4, 3, placenta within 2 cm of the internal os, high head, bleeding, presence of the added factors.
Outcome

The maternal and perinatal mortality rates in pregnancies complicated by placenta previa have been reduced over the past few decades because of:

- The introduction of conservative obstetrical management.
- The liberal use of cesarean rather than vaginal delivery.
- Improved neonatal care.
VASA PREVIA
Introduction

- Vasa previa refers to vessels that traverse the membranes in the lower uterine segment in advance of the fetal head.

- Rupture of these vessels can occur with or without rupture of the membranes and result in fetal exsanguination.

- The incidence is 1 in 2000 – 3000 deliveries.
Vasa Previa
Associated Conditions

- Low-lying placenta.
- Bilobed placenta.
- Multi-lobed placenta.
- Succenturiate-lobed placenta.
- Multiple pregnancies.
- Pregnancies resulting from IVF.
Diagnosis

- The diagnosis of vasa previa is considered if vaginal bleeding occurs upon rupture of the membranes.
- Concomitant fetal heart rate abnormalities.
- Ideally, vasa previa is diagnosed antenatally by US with color flow Doppler.
Antenatal Management

- Consider hospitalization in the third trimester to provide proximity to facilities for emergency cesarean delivery.
- Fetal surveillance to detect compression of vessels.
- Antenatal corticosteroids to promote lung maturity.
- Elective cesarean delivery at 35 to 36 weeks of gestation.
Antepartum Management

- Immediate C/S.

- Avoid amniotomy as the risk of fetal mortality is 60-70% with rupture of the membranes.
UTERINE RUPTURE
Uterine Rupture

- Reported in 0.03-0.08% of all delivering women, but 0.3-1.7% among women with a history of a uterine scar (from a C/S for example).

- 13% of all uterine ruptures occur outside the hospital.

- The most common maternal morbidity is hemorrhage.

- Fetal morbidity is more common with extrusion.
Uterine Rupture

- Classic presentation includes vaginal bleeding, pain, cessation of contractions, absence/deterioration of fetal heart rate, loss of station of the fetal head from the birth canal, easily palpable fetal parts, and profound maternal tachycardia and hypotension.

- Patients with a prior uterine scar should be advised to come to the hospital for evaluation of new onset contractions, abdominal pain, or vaginal bleeding.
Risk Factors

- The most common risk factor is a previous uterine incision.
- The rate is higher with classical & T-shape uterine incision in comparison to low vertical & transverse incisions.
- The rate increases with the number of previous uterine incisions.
Risk Factors

- High parity.
- Labor complications:
  1. CPD.
  2. Abnormal presentation.
  3. Unusual fetal enlargement (hydrocephalus).
- Trauma.
- Delivery complications:
  1. Difficult forceps.
  2. Breech extraction.
  3. Internal podalic version.
Presentation

- Sudden severe fetal heart decelerations.
- Abdominal pain & PV bleeding (<10%).
- Diaphragmatic irritation.
- Loss of fetal station.
- Cessation of uterine contractions.
Prognosis

- Fetal death 50-75%.
- Maternal mortality is high if not diagnosed & managed promptly.
- Maternal morbidity: hemorrhage & infection.
Management

- Stabilization of maternal hemodynamics.

- Prompt C/S with either repair of the uterine defect or hysterectomy.

- Antibiotics.
THANK YOU