Antepartum Haemorrhage (APH): Causes and Management

Antepartum haemorrhage (APH) is defined as vaginal bleeding occurring **after 20 weeks of gestation** and before delivery. It is a significant obstetric complication associated with increased **maternal and fetal morbidity and mortality**.

Epidemiology and Clinical Significance

APH complicates approximately 2-5% of pregnancies worldwide. The clinical outcome depends on the **volume of blood loss**, **duration**, and **underlying cause**. Prompt diagnosis and management are critical to reduce risks to both mother and fetus.

Causes of Antepartum Haemorrhage

1. Placental Causes (Most common)

- **Placental Abruption (Abruptio Placentae):**
  Premature separation of a normally implanted placenta from the uterine wall after 20 weeks gestation.

- *Presentation:* Sudden onset of **vaginal bleeding**, **abdominal/back pain**, and **uterine tenderness or rigidity**.
- Bleeding may be **concealed** (blood trapped behind the placenta) or **revealed** (external bleeding).
- Risk factors include **preeclampsia**, **hypertension**, **trauma**, **cocaine use**, and **smoking**.
- Severity ranges from mild to severe; bleeding volume does not always correlate with the extent of placental separation.

Placenta Praevia:

Placental implantation in the **lower uterine segment** partially or completely covering the internal cervical os.

- *Types:*
  - *Minor:* Placenta low-lying but not covering the os or partially covering it.
  - *Major:* Placenta completely covers the internal os.
- Presents with **painless, bright red vaginal bleeding** in the third trimester.
- Diagnosis confirmed by **transvaginal ultrasound** (safe and gold standard).

Vasa Praevia:

A rare condition where fetal blood vessels traverse the membranes over the cervical os (velamentous cord insertion), risking vessel rupture and fetal hemorrhage during membrane rupture.

2. Extraplacental Causes

Bleeding originates from sites other than the placenta:

- Cervical lesions (trauma, cervical polyps, cancer)
- Vaginal lacerations or infections
- Vulvar or perineal tears (rare)

Clinical Presentation

- Vaginal bleeding after 20 weeks, which may be bright red or dark.
- Associated symptoms: abdominal pain, uterine tenderness, fetal distress.
- Severity ranges from spotting to severe hemorrhage leading to hypovolemic shock.

Diagnosis and Investigations

- **History:** Amount, duration, character of bleeding; associated pain; trauma history; prior bleeding episodes.
- **Physical Exam:**
  - Vital signs monitoring (BP, HR, respiratory rate).
  - Abdominal exam: uterine tenderness, contractions, fundal height.
  - Fetal heart rate assessment (doppler or CTG).
  - Speculum exam to identify bleeding source and cervical status (avoid digital exam in suspected placenta praevia).
- **Laboratory Tests:**
  - CBC (hemoglobin/hematocrit, platelet count).
  - Coagulation profile (PT, aPTT, bleeding time).
  - Blood type and crossmatch.
  - Urinalysis (to exclude hematuria or infection).
- **Imaging:**
  - **Ultrasound** (transabdominal and transvaginal) is crucial for diagnosing placenta location and fetal well-being.

Management Principles

General Measures

- Admit all patients with APH for close monitoring, even if bleeding is minimal.
- Maintain maternal hemodynamic stability: secure airway, breathing, circulation (ABC).
- Establish IV access, begin fluid resuscitation (crystalloids), and prepare for blood transfusion if needed.
- Continuous maternal and fetal monitoring.
- Avoid digital vaginal examination if placenta praevia is suspected until placenta location is confirmed by ultrasound.

Specific Management Based on Cause and Gestational Age

Placental Abruption

- Stabilize maternal circulation (fluids, blood transfusion).
- Monitor fetal status closely; urgent delivery if fetal distress or maternal instability.
- Vaginal delivery preferred if safe and rapid; otherwise cesarean section.
- Correct coagulopathy (e.g., with fresh frozen plasma if DIC develops).

Placenta Praevia

- Hospitalize and monitor if bleeding is minimal.
- Strict pelvic rest and avoid vaginal exams.
- Administer corticosteroids if <37 weeks to promote fetal lung maturity.
- Cesarean delivery planned for major previa or active bleeding threatening maternal/fetal life.
- For minor previa with controlled bleeding and near term, vaginal delivery may be considered under strict supervision.

Vasa Praevia

- Requires immediate cesarean delivery upon diagnosis or onset of labor/bleeding to prevent fetal exsanguination.

Prevention and Prognosis

- Identification and management of risk factors (hypertension, trauma, substance use).
- Early prenatal ultrasound to detect abnormal placentation.
- Close antenatal follow-up to detect and manage APH complications early.

Key Clinical Pearls

- **Painless bright red bleeding in third trimester:** suspect placenta praevia.
- **Painful bleeding with uterine tenderness:** suspect placental abruption.
- Avoid digital vaginal exams before ultrasound rules out placenta praevia.
- Management decisions depend on maternal stability, fetal condition, gestational age, and bleeding severity.