Management of obstetric hemorrhage

APH & PPH

Hala Nsour
Hemorrhage is one of the most common cause of maternal death
APH

- **DIFINTION:**
  vaginal bleeding from second half of pregnancy (20 week) to delivery of the baby

- Critical for the well being of both mother and fetus

- Emergent
Causes

- **Common**
  - Placenta previa
  - Abruptio placentae
  - Bloody show

- **Uncommon**
  - Uterine rupture
  - Vasa praevia
  - Morbidly adherent placenta (MAP)
  - Marginal separation

- **Local**
  - Cervical, vaginal, or uterine pathology

- **Systemic cause**
If a patient is bleeding profusely, a team approach to the assessment and management should be instituted to maintain hemodynamic stability.

This team should include an obstetrician, an anesthesiologist, and nurses who are knowledgeable about the management of the critically ill patient.

two large bore intravenous line should be placed.
- Complete medical history ..... Past medical hx, known bleeding disorder or liver disease

- The vital signs and amount of bleeding should be checked immediately, as should the patient's mental status

- Physical examination
  Start with general look to pt (pale, anxious, jaundice)
  Then go to abdominal exam (SFH/Leoppold’s/tenderness)
  A pelvic examination should not be performed until placenta previa has been excluded by ultrasonography (so start with abdominal US)
Once placenta previa has been excluded, a sterile speculum examination can be safely done to rule out genital tears or lesions (e.g., cervical cancer) that may be responsible for the bleeding.

If none are identified, a digital examination or pelvic ultrasound may be performed to determine whether cervical dilatation is present.
- A **complete blood count** should be obtained and compared with previous evaluations to help assess the amount of blood loss.

- An assessment of the **patient's coagulation profile** should be done.

- The patient should be typed and **cross matched** for at least 6 units of blood (packed cells).
Indirect coombs test (ICT) and antibody titer should be done (if –ve mother blood group and +ve partner)

In case of –ve ICT and low AB titer ...... anti D should be order

Regular monitoring of fetus and mother by US and NST.
The most important and accurate method of determining the cause is **US**.

The ultrasonographic evaluation should include not only the **location** and **character** of the placenta but also an assessment of **gestational age**, an estimate of **fetal weight**, a determination of the **fetal presentation**, and a screening for **fetal anomalies**. Other than **liquor volume**.

Uterine activity and the fetal heart rate should be assessed with a monitored strip (**CTG**) to rule out labor and establish fetal well being.
Placenta previa

- is a condition where the placenta lies low in the uterus and **partially** or **completely** covers the cervix

- 20% of all cases of APH

- 70% painless vaginal bleeding in the third trimester mainly (more if anterior)

- Can be asymptomatic
Risk factors

- Multiparity
- Increase maternal age
- Smoking
- Malpresentation
- Multiple gestation
- Cesarean delivery
- Prior placenta previa
- Uterine abnormality
Classification

- According to the relationship and/or the distance between the lower placental edge and the internal os of the uterine cervix.

**Grading of placenta previa**

- **Grade 1. (lateral placenta):**
  - The placenta implanted in the lower uterine segment but *not reach* the internal os.

- **Grade 2. (marginal placenta):**
  - The edge of the placenta reaches the internal os but *not cover* it.

- **Grade 3. (partial placenta previa):**
  - The placenta *partially covering* the internal os.

- **Grade 4. (complete placenta previa):**
  - The placenta *completely cover* the internal os completely.
Diagnosis

- **US**: transabdominal US has an accuracy of 95%
  transvaginal US has an accuracy of 100%

**Note**: When P.P diagnosed in second trimester a repeat US is indicated at 30 to 32 wks for follow up evaluation.
Depend on GA and extent of bleeding

P.P antenatal care:

- **Hospitalization**
  Depend on distance between home and hospital, availability of transportation, previous bleeding episodes, hematology laboratory results, and acceptance of receiving donor blood or blood products.

- **corticosteroids**
  Consider it up to 34 week.

- **Excessive bleeding**: CS regardless of GA
- **Mild not repetitive**: expectant management in the hospital
- **After 36 weeks**: CS if fetal lungs are mature
- PV and intercourse are contraindicated
**Abruptio placenta**

- Refers to **partial or complete** placental detachment prior to delivery of the fetus.

- Clinically diagnosed
Risk factors:

- Maternal hypertension
- Placental abruption in a prior pregnancy
- Pregnancy after IVF
- Trauma
- Polyhydramnios with rapid decompression
- Premature rupture of the membrane
- Short umbilical cord
- Folate deficiency
- Substance abuse (cocaine, amphetamines, tobacco)
Types

Blood downward toward the cervix

Blood dissects upward toward the fundus
Presentation

- Vaginal bleeding  80%
- Abdominal pain and uterine tenderness  66%, and/or back pain (Back pain is prominent when the placenta is on the posterior wall of the uterus)
- Fetal distress  60%
- Uterine hyperactivity and increase uterine tone  34%
- Fetal death  15%

Note: The amount of vaginal bleeding correlates poorly with the degree of placental separation and does not serve as a useful marker of impending fetal or maternal risk.
Complications

- **DIC**: the most common cause of DIC in pregnant women
- Hypovolemic **shock** and **acute renal failure** as a result of massive bleeding
- Sheehan syndrome
Focus management

- Intensive **monitoring** for both mother and fetus
- **2 large IV** line and **blood** prepair
- The use of tocolytics or uterine relaxants is not advisable
- Uterine tone must be maintained to control bleeding after delivery
- If > 36 week deliver, <36 expectant if mild
Uterine rupture

- is spontaneous tearing of the uterus that may result in the fetus being expelled into the peritoneal cavity.
- rare.
- It can occur during late pregnancy or active labor.
Risk factor

- Prior uterine scar (40% of cases), high vertical (classic) scar
- Obstructed labor in multiparous pt
- Induction of labor using prostaglandins
- Obesity
Sign and symptoms

- sudden onset fetal heart rate (FHR) abnormalities
- vaginal bleeding
- sudden onset intense constant abdominal pain
- cessation of uterine contractions
- recession of the presenting part
- maternal hypotension and tachycardia.
Total abdominal **hysterectomy** is the treatment of choice, although **debridement** of rupture site and **primary closure** maybe consider in women of low parity who desire more children.

**Repair vs hysterectomy:**

- pt plans for future pregnancy
- extent of damage
- hemodynamic stability
- surgeon’s skills
Morbidly adherent placenta (MAP)

- Abnormal attachment of the placenta through the uterine myometrium

- **Risk factor**:  
  - hx of uterine surgery  
  - prior cs delivery (abnormal implantation)
Morbidly adherent placenta

- 75%: accretas
- 18%: incretas
- 7%: percretas.
Vasa praevia

- occurs when the fetal vessels run through the free placental membranes. Unprotected by placental tissue
Pervaginal examination
during early labour detecting the **pulsating fetal vessels** inside the internal os, or
by the presence of **dark-red vaginal bleeding** and **acute fetal compromise** after
spontaneous or artificial rupture of the placental membranes.

**Apt test**
If fetus blood the fluid of color will remain red (not denatured by KOH)

A combination of both **transabdominal** and **transvaginal** colour Doppler imaging (CDI)
ultrasonography provides the best diagnostic accuracy for vasa praevia.
emergency caesarean delivery and neonatal resuscitation, including the use of blood transfusion if required, are essential in the management of ruptured vasa praevia diagnosed during labor

Because of the speed at which fetal exsanguination can occur and the high perinatal mortality rate associated with ruptured vasa praevia, delivery should not be delayed while trying to confirm the diagnosis, particularly if there is evidence that fetal wellbeing is compromised.

In the presence of confirmed vasa praevia in the third trimester, elective caesarean section should ideally be carried out prior to the onset of labour.

A decision for prophylactic hospitalisation from 30–32 weeks of gestation in women with confirmed vasa praevia should be individualised and based on a combination of factors, including multiple pregnancy, antenatal bleeding and threatened premature labour.
In cases of vasa praevia that develop premature rupture of membranes and/or labour at viable gestational ages, a caesarean section should be performed without delay.

To avoid unnecessary anxiety, admissions, prematurity and caesarean section, it is essential to confirm persistence of vasa praevia by ultrasound in the third trimester.
Thank you