ANTEPARTUM HEMORRAGE

Bleeding into genital tract after 24 weeks of gestation and prior to birth.
Leading cause of perinatal and maternal mortality worldwide.
APH complicates 3–5% of pregnancies.
Failure to identify cause of APH is possible. It is termed Unexplained APH
Bleeding amount of APH is often underestimated, thus assessing sign of shock,presence of fetal compromise/ demise as indicator of volume depletion

Causes:
Obstetric

- Placenta; Placental abruption, Placenta previa. Maternal Bloody show .
- Fetal blood; Vasa previa .
- Uterine rupture.

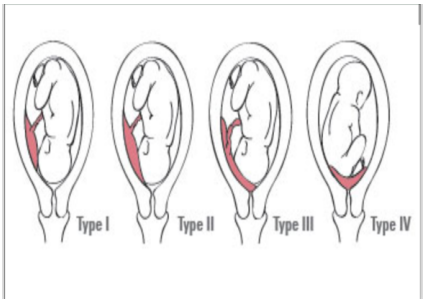
Non obstetric
Cervical bleeding; cervicitis, neoplasm, polyp
Vagina bleeding :trauma, neoplasm
Gi bleeding; IBS, hemorrhoids
Urinary tract bleeding; stone, cystitis

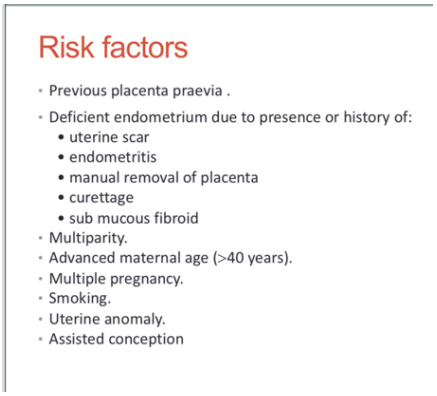
Classification of APH:

1- Spotting : staining, streaking or blood spotting noted on underwear or sanitary protection.
2- Minor hemorrhage : blood loss <50ml
3- Major hemorrhage : blood loss 50-1000 ml
4- Massive hemorrhage; blood loss >1000ml or sign of shock

We will discuss placental causes of APH;

1- placenta praevia:
    a. Insertion of the placenta, partially or fully, in the lower segment of the uterus.
    b. 1 : 200-300 incidence
    c. Graded based on location in relation to internal os
        i. Grade 1: placenta in lower segment not reaching os
        ii. Grade 2: placenta reaches os but not covering it
        iii. Grade 3: partially covering os
        iv. Grade 4: complete coverage of os
    d. Risk factors;
    e. Clincial presentation;
        i. painless bleeding in 70% of ptn around 30 weeks
        ii. Soft uterus
        iii. Normal fetal heart unless severe bleeding
        iv. Fetal malpresenetation
    f. Diagnostics;
        i. U/S; transabdominal 95% accurate, transvaginal 100%
        ii. Examination in the **theatre** if no U/S is present using something called (double set up)
        iii. Vaginal examination is contraindicated





g. Maternal/ fetal complication due to Placenta previa

- ***i.*** Preterm delivery
- ***ii.*** Preterm PROM
- ***iii.*** IUGR (if repeated bleeding)
- ***iv.*** Malpresentation; breech
- ***v.*** Fetal abnormalities
- ***vi.*** Maternal death due to uncontrollable hemorrhage
- ***vii.*** DIC
- ***viii.*** PPH; APH increases the risk for PPH

2- *Placental abruption*

a. separation of the placenta from its site of implantation before delivery of the fetus after 24 weeks gestation.

b. Incidence:1/100-120 deliveries.

c. Types: Total or partial, Concealed(On US may show hematoma bw placenta and uterine wall) or revealed

d. **Risk factors;**

e. Complications;

- ***i.*** Fetal;
  1. Fetal hypoxia
  2. Small for gestational age
  3. Fetal growth restriction.
  4. Prematurity (iatrogenic and spontaneous).
  5. Fetal death.
- ii. Maternal:
  1. Maternal shock
  2. Anemia
  3. Infection
  4. Renal tubular necrosis
  5. DIC
  6. PPH
  7. Sheehan syndrome.

f. Clinical presentation:

- i. Painful vaginal bleeding
- ii. Uterine tenderness
- iii. Fetal distress
- iv. High frequancy contraction
- v. Fetal demise
- vi. Hypertonic uterus

g. Diagnosis is clinical

- **i. U/S just used to confirm fetal viability, measure amniotic fluid and do doppler**
- **ii. Also U/S to exclude placenta praevia.**

h.

Risk factors

- The most predictive factor is abruption in a previous pregnancy. (it recurs in 4.4% in second pregnancy and 19–25%).
- Pre-eclampsia.
- Polyhydramnios
- advanced maternal age.
- Multiparity
- Low body mass index (BMI).
- Fetal growth restriction.
- Non-vertex presentations.

Risk factors

- Drug misuse (cocaine and amphetamines)
- smoking.
- Intrauterine infection
- Pregnancy following assisted reproductive techniques.
- Premature rupture of membranes.
- Abdominal trauma (both accidental and resulting from domestic violence).
- first trimester bleeding and especially if scan showed a hematoma.
- Maternal thrombophilia.
- Folate deficiency.

3- Vasa pervia

a. Condition in which the fetal vessels are located in the membranes near the internal os of the cervix, putting them at risk of injury if the membranes rupture
b. Rupture of vessels can happen with or without membrane rupture
c. Incidence: 1;3000-5000
d. Diagnosed by apt test
e. Difficult to diagnose and ideally diagnosed antenatal by US and doppler
f. Antenatal management:
    i. Hospitalization in 3rd trimester
    ii. Fetal surveillance to detect compression of vessels.
    iii. Antenatal corticosteroids to promote lung maturity.
    iv. Elective cesarean at 35-36 weeks
g. Associated conditions:
    - Low-lying placenta.
    - Bi lobed placenta.
    - Multi-lobed placenta.
    - Succenturiate-lobed placenta.
    - Multiple pregnancies.
    - Pregnancies resulting from IVF

Clinical assessment for APH in general;

- The aim is to establish whether urgent intervention is required
- The mother is the priority before fetus
- Maternal examination & investigation;
- Fetal investigation; US to assess fetal heart, CTG
- Management;
    - Women with spotting, no ongoing bleeding, placenta praevia excluded ; can go home
    - On going bleeding, APH heavier than spotting; admission at least until bleeding stop
    - Antenatal corticosteroids for women at high preterm risk bw 24 week to 34+6 weeks.
    - Tocolysis should not be used to delay delivery in major APH, unstable ptn, fetal compromise.
    - Benefit from use of a tocolytic in ; very preterm ptn, ptn needing to be transferred to hospital with NICU, completion of a full course of corticosteroids.
    - tocolytic therapy is contraindicated in placental abruption and is 'relatively contraindicated' in 'mild haemorrhage' due to placenta praevia.
    - Follow up is important
    - **Vaginal delivery is contraindicated in placeta previa**
    - Women with APH and associated maternal and/or fetal compromise are required to be delivered immediately.
    - APH, no ongoing bleeding, no fetal/maternal problems, <37 weeks: there is no evidence to support elective premature delivery of the fetus.
    - APH,>37 weeks, ongoing bleeding ; induction of labour to achieve vaginal delivery is advised.
    - PPH should be anticipated

- ergometrine-oxytocin to manage APH, in absence of hypertension.
- Anti-D Ig should be given to all non-sensitized RhD-negative women after any presentation with APH. If recurrent vaginal bleeding consider giving anti D at minimum 6 weeks interval.

UTERINE RUPTURE ①

- It is complete separation of uterine musculature through all of its layers with all or part of the fetus being out side the uterine cavity.
- Reported in 0.07-0.08% of all delivering women, but 0.3-1.7% among women with a history of a uterine scar (from a C/S for example).
- It can be spontaneous or traumatic or due to previous uterine scar
- It can occurs during pregnancy, during first stage or second stage of labor.

Risk factors ②

- 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, and repeated CS) .
- High parity.
- Labor complications:
  1. CPD.
  2. Abnormal presentation.
  3. Unusual fetal enlargement (hydrocephalus).

- Trauma.
- Delivery complications: ③
  1. Difficult forceps.
  2. Breech extraction.
  3. Internal podalic version.

Clinical presentation ④

- Sudden onset of acute sever abdominal pain with some vaginal bleeding.
- Absence/ deterioration of fetal heart rate.
- Loss of station of the fetal head from the birth canal.
- Cessation of contractions.
- Easily palpable fetal parts.
- Profound maternal tachycardia and hypotension.

Prognosis ⑤

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

Management ⑥

- Stabilization of maternal hemodynamics.
- Prompt C/S with either repair of the uterine defect or hysterectomy(mainly).
- Antibiotics.

(إن الله يحب إذا عمل أحدكم عملًا أن يتقنه)

Mohammad alhorani

تحيه للأشاوس ,,,