Chapter 8

ABRUPTION

Some degree of abruption of the placenta occurs in about 1-2% of all pregnancies. It is precipitated by a haemorrhage into the decidua, which separates part of the placenta from the uterine wall. The blood escapes between the membranes and uterine wall, often appearing externally. Occasionally, the blood is contained behind the placenta and the woman experiences uterine tenderness without obvious vaginal bleeding (concealed abruption).

Predisposing Factors

- Abruption in previous pregnancy
- Hypertensive disorders
- Sudden decompression of the uterus
  - Rupture of the membranes with polyhydramnios
  - After birth of the first twin
- Trauma
  - Motor vehicle accident
  - Abuse
- Lifestyle
  - Smoking
  - Cocaine use

Maternal Risks

- Disseminated Intravascular Coagulation (DIC)
- Postpartum haemorrhage (PPH)
- Rhesus sensitization
- Profound maternal blood loss leading to, shock, renal failure, and Sheehan's Syndrome (necrosis of the anterior lobe of the pituitary).

Fetal Risks

- Perinatal mortality
  - The outlook for the fetus is influenced by the extent of placental separation
  - Intrauterine fetal death results if placental separation is greater than 50%
- Perinatal morbidity based on hypoxia or prematurity

Symptoms

- Vaginal bleeding (may be slight or profuse)
- Abdominal pain, backache, uterine tenderness (painless haemorrhage may occur)
- Uterine irritability to frank tumultuous labour
- Shock and anemia out of proportion to obvious blood loss
- Non-reassuring fetal heart rate, or loss of fetal heart

Diagnosis

- Clinical
- Ultrasound
- No digital, vaginal, or rectal examinations until placenta previa is ruled out. Encourage documentation of placental location on the Ontario Antenatal Record.

Clinical Features of Abruptio Placenta & Placenta Previa

ABRUPTIO PLACENTA	PLACENTA PREVIA
May be associated with hypertensive disorders, uterine overdistention, abdominal trauma	No apparent cause
Abdominal pain and/or backache (often unremitting)	Painless (unless in labour)
Uterine tenderness	Uterus not tender
Increased uterine tone	Uterus soft
Uterine irritability	No uterine irritability
Usually normal presentation	Malpresentation and/or high presenting part
Fetal heart may be absent or non-reassuring	Fetal heart usually normal with initial bleed
Shock and anemia out of proportion to apparent blood loss	Shock and anemia correspond to apparent blood loss
May have coagulopathy	Coagulopathy very uncommon initially

Management

* There are 2 immediate objectives if bleeding is severe and the patient remains unstable: volume (crystalloid, blood/blood products) replacement and delivery. It may be necessary to deliver and call for the neonatal transport team.

ABOVE ALL, STABILIZE AND RESUSCITATE THE MOTHER

Stabilization and transfer will be necessary for Level I units or centres with inadequate surgical and blood bank back-up.

- Communicate with receiving hospital
- NPO
    - Start intravenous infusion of Saline or Ringers Lactate using a large bore needle
    - A second intravenous line may be necessary for blood replacement

- Monitor intake and output
    - If the bleeding is severe, a Foley catheter with urometer is indicated for accurate urine output assessment

- Monitor maternal vital signs every 15 minutes while actively bleeding and hourly once stable, and not in labour. Administer O^2 to the hypotensive patient.

- Continuous fetal heart rate monitoring should be done on initial presentation and until the bleeding has stopped

- Assess uterine tone, uterine irritability, uterine contractions and resting tone every 15 minutes while actively bleeding and hourly once stable

- Assess colour and amount of blood loss
    - Pad count
    - Presence of blood clots

- Strict bed rest in lateral position

- 1:1 nursing care with nurse accompaniment during transport. Physician accompaniment if severe abruption and tumultuous labour

- Lab assessment
    - CBC, Hgb, HCT

  - Coagulogram (platelet count, fibrinogen, PT, PTT)
  - Electrolytes, urea, creatinine
  - Group and cross match 2 units whole blood (take along during transfer)
  - Kleihauer - Betke test for assessment of fetal/maternal hemorrhage

- Rh immune globulin should be given to all non-sensitized Rh negative women with any bleeding, or suspected concealed abruption. The dose may be adjusted by the Kleihauer-Betke results (300 Fg. of Rh immune globulin should be given for every 30 cc of fetal blood detected in maternal circulation.)

- Tocolytics contraindicated

If the woman is retained in a Level II centre, the following is recommended when the abruption is small.

EXPECTANT MANAGEMENT

- Bed rest until active bleeding is stopped followed by gradual ambulation
- Assess and treat anemia
- A careful speculum examination is performed to observe for local lesions after placenta previa is excluded
- Daily fetal movement counts and non-stress testing
- Delivery at term unless indicated earlier for maternal / fetal reasons

THERE IS AN INCREASED INCIDENCE OF REPEATED ABRUPTION IN LABOUR WITH A HISTORY OF ABRUPTION IN THE CURRENT PREGNANCY.

Suggested Readings

1. Baskett, Thomas F.; **Essential Management of Obstetric Emergencies**, 4th edition, Clinical Press Ltd., UK, 2004.

2. SOGC, **Advances in Labour and Risk Management (ALARM) Course Syllabus**, 12th Edition, 2005.

3. Managing Obstetrical Risk Efficiently (MORE^{OB}) 2006 [internet] https://www.moreob.com/en/index.htm