Sir Charles Gairdner Emergency Department Obstetric Guidelines

Post-Partum Haemorrhage Management

Post-partum haemorrhage is defined as a blood loss of 500ml or more during puerperium and severe PPH as a blood loss of 1000ml or more.

Resuscitation:

- Massage atonic fundus and apply pressure to perineal trauma during resuscitation. (NB: Both may be achieved by bimanual compression)
- Ensure you have bilateral IV access: 2x 16 gauge cannulas and take bloods
- Group and x-match 2 units, FBC, coag profile, ROTEM
- Given 10 units Oxytocin (Syntocinon) by intramuscular injection
- Activate the Massive Transfusion Protocol
- Fluid resuscitate with packed red blood cells (uncrossed O-Negative Blood if necessary)
- Give 1g Tranexamic acid IV
- Insert an arterial line for blood pressure monitoring
- Insert indwelling urinary catheter (IDC)
- Keep the woman warm
- Identify and treat the cause (4Ts):
    - Tone
    - Trauma
    - Tissue
    - Thrombin

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Management of the 4Ts

TONE: Uterine atony

- Ongoing fundal massage / bimanual compression
- Administer Ergometrine 250microg IM or slow IV push
  - *Beware of women with cardiac disease or hypertensive women who may develop extreme hypertension following the administration of ergometrine*
- Commence an oxytocin infusion:
  - 40IU in 500mL CSL at 125mL/hr; increase to 250ml/hr if ongoing bleeding.
  - Titrate down when PPH controlled (decrease by 40ml/hr every 30 min)
- Examine the placenta for completeness if delivered and the vagina to exclude uterine inversion

If ongoing uterine atony:

- Administer Carboprost 250microg IM = 1 ml ampoule.
  - Carboprost is located in theatre (SAS drug)
- Continue uterine massage as required.
- If uterus still atonic after 15 minutes administer 2nd dose Carboprost 250 microg IM.
- Arrange transfer to theatre: Call the on call Obstetric Consultant at KEMH to attend.
  - Contact the Duty Anaesthetist (Dect phone 71242) to organise theatre.

TRAUMA: Genital tract trauma

- Examine genital tract and repair all trauma as necessary.
- Place pressure on the trauma whilst awaiting repair.

TISSUE: Retained placenta

- Transfer to theatre for manual removal

THROMBIN: Seek and Treat Coagulopathy

- Repeat ROTEM and refer to ROTEM guideline or consult Haematology to guide blood product replacement with FFP, platelets and cryoprecipitate
- Keep the patient warm

Whilst awaiting Obstetric Consultant and theatre:

- Maintain bimanual compression if atonic
- Continue haemostatic resuscitation
- Continue Oxytocin infusion
- Ergometrine 250mcg every 15 mins
- Carboprost 250mcg IM every 15 mins to a total maximum of 8 doses (if available)

Aetiology of PPH

Abnormalities of uterine contraction (Tone) ~70%

- Atonic uterus
- Over distended uterus
- Uterine muscle exhaustion
- Intra-amniotic/uterine infection
- Drug induced hypotonia
- Functional or anatomical distortion of the uterus

Genital tract trauma (Trauma) ~20%

- Episiotomy or lacerations (cervix, vagina or perineum)
- Uterine rupture
- Uterine inversion

Retained products of conception (Tissue) ~10%

- Retained products
- Abnormal placenta
- Retained cotyledon or succenturiate lobe.

Abnormalities of coagulation (thrombin) ~1%

- Coagulopathies
    - Coagulation disorders acquired in pregnancy
    - Idiopathic / thrombotic thrombocytopenia purpura
    - Von Willebrand's disease
    - Haemophilia/ carrier
    - Thrombocytopenia with pre- eclampsia
- Disseminated Intravascular Coagulation (DIC).

Risks of developing coagulopathy include:

- Abruption
- Amniotic fluid embolus
- Fetal death in utero- prolonged
- Severe infection/ sepsis
- Pre-eclampsia/ HELLP syndrome
- Therapeutic anticoagulation