EMERGENCY MEDICINE · WESTMEAD EMIG

Late Pregnancy Emergencies

HELLP Syndrome & Pre-Eclampsia

- Pre-eclampsia – new onset, persistent (2 readings over 4hrs) Hypertension (HTN) >140mmHg systolic or 90mmHg diastolic with proteinuria (>0.3g per 24 hrs).
- Occurs in 5-8% of all pregnancies.
- Classification by *Society of Obstetric Medicine of Australia and New Zealand* (SOMANZ):
    - Hypertension
    - >20wks gestation
    - Plus 1 or more of the following:
        - Renal Involvement (proteinuria, oliguria or elevated creatinine)
        - Haematological involvement (↑AST/ALT, epigastric/RUQ pain)
        - Neurological involvement (convulsions, hyperreflexia, headache, visual disturbance, stroke)
        - Pulmonary oedema
        - Fetal growth restriction
        - Placental abruption

HELLP syndrome

A characteristic form of pre-eclampsia, HELLP includes the following:

- **H** – Haemolysis
- **EL** – Elevated Liver enzymes (AST, ALT - >70IU/L)
- **LP** – Low Platelet count (<100×10^9/L)

Signs and symptoms

- HTN & Proteinuria*
- Epigastric/Upper Abdominal Pain*
- N & V
- Headache
- Malaise

- Differential Diagnosis includes the following:
    - Gestational HTN
    - Budd-Chiari syndrome
    - Thrombocytopenic purpura
    - Haemolytic Uraemic syndrome
    - Acute fatty liver of pregnancy
    - Infection
    - Drugs
    - Antiphospholipid antibody syndrome
- Management – Close monitoring with admission to hospital for C-section or induced delivery depending on severity and risk to mother and baby. Specific treatment may include steroids for fetal lung maturation (e.g. betamethasone)and antihypertensives (e.g. labetolol).

Eclampsia

"New onset of grand mal seizure activity and/or unexplained coma during pregnancy or postpartum in a woman with signs or symptoms of preeclampsia."

A complication of severe pre-eclampsia and a common cause of maternal mortality worldwide. Approximately 80% of seizures occur in the peri-partum period or within 48hrs postpartum. The seizures may be caused by cerebral oedema associated with dysfunctional dilated cerebral arteries.

Management

- Delivery is the definitive treatment (Call O&G early)
- Consider other causes of seizures – BSL, Toxins, trauma.
- Consider a Head CT if there are neuro signs & symptoms.
- Magnesium Sulphate 49.3% (20mmol over 20 mins, then 5mmol/hr) to prevent further seizures.
- Benzodiazepines and phenytoin can be used in those that do not respond to magnesium.
- Control BP with labetalol (10-20mg bolus then 10-150mg/hr) or hydralazine.
- Be careful to avoid hypotension.
- Diuretics if pulmonary oedema is seen.

Fetal Monitoring

- Steroids (<32wks)
- Continuous CTG
- Early delivery when mother is stable.

Trauma & Pregnancy

A leading cause of maternal mortality (46%), fetal death is often associated with maternal shock.
Aetiology of trauma is usually MVA (66%), falls or violence (33%).
FAST ultrasound is often difficult due to the inability to obtain good Ultrasound views.

Circulation

- ↑ Circulating Volume → blood loss is therefore often masked
- Place in left lateral decubitus,
- Pelvic injury → significant bleeding.
- Typically Tachycardic (80-105)→ CO increases.
- ↑red cell vol. → hypercoagulable state.
- Reduced CVP

Fetus

- Placental autoregulation is minimal, aim for normal BP.
- Care for the baby by caring for mother. Direct fetal injury is rare (<1%).
- In a traumatic arrest, peri-mortem C-section in 4-5mins.

Airway

- Aspiration risk, large breasts, friable soft tissues → difficult intubation and BVM.

Breathing

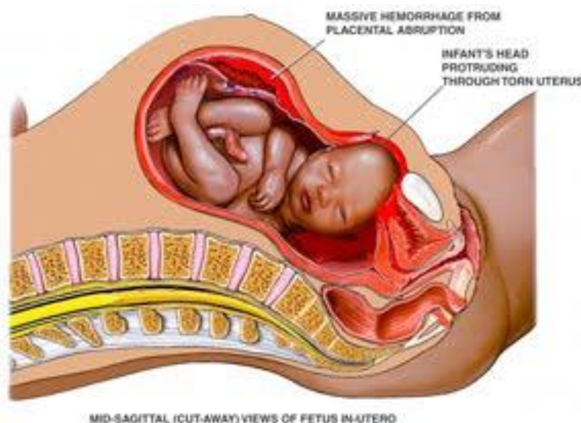
- Require higher chest tube.
- Respiratory Alkalosis (↑TV, minute Vol., RR)
- ↓ FRC → rapid desaturation (Give High Flow O_2)

Other Issues

- Check electrolytes regularly & get BSL early.
- Bladder injury (intra-abdominal). Abdominal exam is unreliable. Pituitary infarct risk (Sheehan's Syndrome)
- High GFR

Uterine Rupture & abruption

- Full thickness uterine wall disruption.
- Always consider domestic violence.
- Massive bleeding can occur as a result due to the high flow, low resistance nature of the system.
- Previous C-section predisposes.



Signs and symptoms

- Fetal distress (bradycardia or abnormal pattern)
- Clinically significant Uterine bleeding (shock, vaginal bleeding)
- Protrusion or expulsion of fetus into abdominal cavity.
- Labor abnormalities (uterine hyperstimulation, cessation of contractions, failure to progress).