PERICARDIOCENTESIS

INDICATION

Drain a pericardial effusion only if there is cardiovascular compromise. If time allows, discuss with paediatric cardiologist before drainage

PERICARDIAL EFFUSION

Common causes

- Neonatal hydrops
- Extravasation of PN from migrated long lines

Clinical signs

- Sudden collapse in baby with long line or umbilical venous catheter *in situ* – always consider pericardial tamponade
- Tachycardia
- Poor perfusion
- Soft/muffled heart sounds
- Cardiomegaly
- Decreasing SpO_2
- Arrhythmias

Investigations

- Chest X-ray: widened mediastinum and enlarged cardiac shadow
- Echocardiogram (if available)

EQUIPMENT

- Sterile gown and gloves
- Sterile drapes
- Dressing pack with swabs and plastic dish
- 22/24 G cannula
- 5–10 mL syringe with 3-way tap attached
- Cleaning solution as per unit policy
- Lidocaine

PROCEDURE

Consent and preparation

- If time allows, inform parents and obtain consent (verbal or written)
- If skilled operator available, perform under ultrasound guidance
- In an emergency situation, the most experienced person present performs procedure without delay and without ultrasound guidance
- Ensure baby has adequate analgesia with IV morphine and local lidocaine instillation

Drainage

- Maintain strict aseptic technique throughout
- Clean skin around xiphisternum and allow to dry
- Attach needle to syringe and insert just below xiphisternum at 30° to skin and aiming toward left shoulder
- Continuously aspirate syringe with gentle pressure as needle is inserted. As needle enters pericardial space there will be a gush of fluid, blood or air
- Send aspirated fluid for microbiological and biochemical analysis
- Withdraw needle

AFTERCARE

- Cover entry site with clear dressing (e.g. Tegaderm™/Opsite)
- Discuss further management with paediatric cardiologist