

Illness Scenario 2 Refresher Course

This is a Teaching Scenario. Some flexibility in how it progresses is possible according to individual learner needs

History {initial candidate briefing prior to arrival of child}

A 5 day old infant is brought to the emergency department by his parents. He was born at full term, normal delivery, weighing 3 kg. He was sent home at 48 hrs of age after a normal neonatal examination. Initially he was well, but over the last 24 hours he has become increasingly lethargic and has not fed for 8 hours. Estimated weight 3 kg.

Initial impression {provide information as candidate assesses child and applies monitoring}

His colour is pale and greyish with decreased GCS, responding to pain. RR 75 with some recession, HR 195 and pulses are difficult to feel. CRT 7.

Additional History & Observations

Mum was well through the delivery. There are no risk factors for sepsis. No O₂ sat trace in lower limbs, low perfusion with O₂ sat 89% in upper limbs. BP 40/31 in upper limbs.

Clinical Course {to be given to candidate as they progress}

Access is only possible via the intraosseous route. The infant becomes more tachypnoeic after the fluid bolus and femoral pulses are still absent. When the candidate listens to the chest, state that a gallop rhythm and systolic murmur is heard. This is a duct dependant lesion and requires treatment with IV alprostadil (prostaglandin E1). This condition can be difficult to differentiate from sepsis in the neonate so intravenous antibiotics should be considered. Blood sugar should be checked.

INSTRUCTORS INFORMATION

Key Treatment Points



Airway	Airway opening manoeuvres High flow O ₂ via face mask commenced early Titrate O ₂ therapy to SpO ₂ 94-98% when stable	
Breathing	Arrange for intubation (alprostadil and apnoea risk)	
Circulation	IV/IO access 1 x fluid bolus	
Specific Therapy	IV alprostadil (prostaglandin E1) Contact paediatric cardiac centre	

Diagnosis: Shock secondary to coarctation of the aorta

Learning objectives. At the end of this session participants should be able to:

- Apply the structured approach to assessment and management of shock
- Recall, classify and apply the differential diagnosis of shock in a neonate
- Recall and apply the principles of management of shock in a neonate with reference to sepsis and duct dependent lesions in their own practice

Potential Issues to be Discussed

- Presentation of duct closure in first two weeks of life in duct-dependent systemic or pulmonary circulations
- use of alprostadil (prostaglandin E1), inotropes, fluids and role of intubation (pg 76-77)
- discuss differentiation of respiratory problems v sepsis v congenital heart disease
- discuss apnoea as a possible complication of prostaglandin in non-intubated transfers

Resources

[Fifteen minute consultation How to spot serious heart disease in the newborn Menahem Sehgal Link](#)

Diagram courtesy of Dr John Gavranich

