### Neonatal Scenario 1: Collapsed Neonate – Septic vs Cardiac

**SET UP:**

<table>
<thead>
<tr>
<th>Mannequin/Confederate</th>
<th>Moulage</th>
<th>Equipment available</th>
<th>Drugs available</th>
</tr>
</thead>
<tbody>
<tr>
<td>SimNewB</td>
<td>IO access</td>
<td>Resuscitaire/Overhead warmer</td>
<td>Volume (NSaline)</td>
</tr>
<tr>
<td>Parent</td>
<td>Cold peripherally</td>
<td>Self inflating bag / neopuff</td>
<td>AB’s</td>
</tr>
<tr>
<td>NETS/neonatal consultant on the phone</td>
<td>IV available in resuscitaire</td>
<td>Airway trolley</td>
<td>Prostin</td>
</tr>
<tr>
<td>Referring doctor (if enough)</td>
<td>Glucometer</td>
<td>Adrenaline</td>
<td></td>
</tr>
<tr>
<td>triage nurse</td>
<td>Blood gas</td>
<td>Inotropes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV tubing</td>
<td>Intubation drugs: fent, morphine/sux/atropine</td>
<td>glucagon</td>
</tr>
</tbody>
</table>

**Monitor:**

Basic ICU – Saturation probe with heart rate & ECG leads

**Paperwork Required:**

- Observation Chart ✓
- Drug Chart ✓
- Arrest chart
- Blood gas – arterial
  - venous
  - capillary ✓
- Blood results - glucose ✓
- CXR ✓
- Other imaging –
- ECG N/A

**Learning Objectives:**

1. Medical
   - Resuscitation of Collapsed Neonate at 12 days
   - Sepsis vs Cardiac clinical decision making

2. CRM
   - Teamwork, communication between team and with RWH

**Synopsis of Scenario**

12 day old collapsed term baby. Uncertain if septic or duct dependant cardiac lesion. Expected to resus & start treatment for both including Intubation & Ventilation.

**Mode of bringing participants into the scenario**

Triage nurse assesses and asks for help from the emergency team. Emergency team start assessing and instigate treatment put a call out to RWH for a neonatal code blue.

**PATIENT DEMOGRAPHICS**

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>Freddie Smith</th>
<th>DOB/Age:</th>
<th>12 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Record#:</td>
<td></td>
<td>Weight:</td>
<td>3.2 kgs</td>
</tr>
<tr>
<td>Allergies:</td>
<td>nil</td>
<td>Male:</td>
<td>✓</td>
</tr>
<tr>
<td>Dx/Procedure:</td>
<td>nil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Introductory information**

A mother was bringing her sister to the ER and asked the team to see her 12 day old male baby (wt 3.2kg) She described the following:

- just regained BW
- feeding poorly last 3 days
- unsettled overnight
- ‘funny breathing’ this morning
- ‘not waking’ for feeds
- ‘felt cool’
Mother presents an ISBAR Handover

I  Hi, I am Alicia Smith and this is Freddie who is 12 days old.
S  He looks really unwell
B  He was born normally and I had a normal pregnancy but hasn’t been feeding well for the past 3 days and seems to be breathing fast
A  & R together  I am very worried that he needs to see a doctor urgently

### INITIAL OBSERVATIONS:

<table>
<thead>
<tr>
<th>Appearance</th>
<th>↑, N, ↓, absent</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pale, mottled, cold periph</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HR</th>
<th>↑ (200)</th>
<th>weak pulses/ femorals off</th>
</tr>
</thead>
<tbody>
<tr>
<td>RR</td>
<td>↑ (75)</td>
<td>deep</td>
</tr>
<tr>
<td>Temp – peripheral</td>
<td>35</td>
<td>Only if asked for</td>
</tr>
<tr>
<td>- central</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturation</td>
<td>absent</td>
<td>Poor trace</td>
</tr>
<tr>
<td>Non- invasive BP – upper limb</td>
<td>50/39</td>
<td>narrow pulse pressure if cuff placed on (unrecordable in LL)</td>
</tr>
<tr>
<td>- lower limb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invasive BP</td>
<td>48/40</td>
<td>If PIA inserted</td>
</tr>
<tr>
<td>Pupils</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

### Ideal Mx:

**Examination:**
- Perfusion
- Fontanelle
- Respiratory
- Cardiac
- pulses (upper vs lower)
- liver
- BSL

**Management:**
- Oxygen
- Monitoring
- respiratory support
- attempted IV access
- Bloods, glucose (1.8) & gas (acidotic)
- Volume given
- Antibiotics (pen & gent)
- Temperature regulation
- Prostin

### Progression Good:

**CUES:**

**Ideal Management:**
- Intubate & Ventilate
- Secure IV access (consider IO)
- Consider inotropes
- Discuss with Neonatal consultant/cardiologist

**Scenario:**
- HR ↓ to 180/min, RR 55, SpO2 91% if intubated, volume given, antibiotics given and prostin commenced

### Progression Poor:

**CUES:**
- Resp: ↑ rate
  - Then apneic (RR 0)
- CVS: cue: perfusion worsening
- Set on monitor:
  - absent pulses
  - bradycardia (40/minute)

**Ideal Management:**
- Bag mask support
- Intubated & Ventilated volume
- CPR & resus drugs
- Discussion with Neonatal consultant

**Scenario:**
- HR 100/min and RR 50 if intubated, given volume, and appropriate CPR given

**Scenario finishes after 10 minutes or after intubation and volume given, consideration for sepsis &/or cardiac discussed, with appropriate management, and discussion with NETS consultant & parents.**

**References:** NETS guidelines Neonatal Handbook