Guidelines for PDA Screening and Management in Extremely Preterm Neonates

**Eligibility Criteria:**
- All preterm infants ≤ 26 6/7 weeks GA, Tn-ECHO 18-24h postnatal age + notify Hemodynamics
- PDA screen low risk infants 27 - 29 6/7 weeks GA on a weekday between DOL-4 and DOL-7
- **Excluded:** Fetal diagnosis of congenital heart disease

Small PDA or PDA with a low volume shunt

- **Observe**
  - Repeat Tn-ECHO as clinically indicated. If low volume shunt is due to high PVR, follow Tn-ECHOs every 1-2 days until PVR normalizes or after starting iNO for hypoxic respiratory failure

If PDA with mod-high volume shunt\(\frac{\text{per TnECHO}}{\text{without Tylenol contraindications}}\) = IVH prophylaxis eligible

- **Treat**
  - Tylenol 15mg/kg/IV Q6H for 12 doses

Cardiac dysfunction (LV/RV)

- **Treat**
  - Dobutamine at 2.5-10 mcg/kg/min (titrate to effect) first line; alternate agents as needed

Repeat Tn-ECHO within 12h after at least 12 doses of Tylenol

If remains significant*:
- Complete 28 total Tylenol doses prior to re-evaluation

When RV/LV dysfunction is resolved, re-evaluate for ductal significance and follow PDA guidelines

If remains significant*:
- Indomethacin x 3 days followed by re-evaluation (up to 2 trials of indomethacin)

Congenital heart disease

- **Refer**
  - Consult Pediatric Cardiology

IOWA PDA SCORE\(\frac{\text{mitral E velocity <45}}{\text{IVRT >50}}\)

<table>
<thead>
<tr>
<th>Score</th>
<th>0 points</th>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitral E velocity</td>
<td>&lt;45</td>
<td>45-80</td>
<td>≥80</td>
</tr>
<tr>
<td>IVRT</td>
<td>&gt;50</td>
<td>30-50</td>
<td>≤30</td>
</tr>
<tr>
<td>PV D velocity</td>
<td>&lt;0.3</td>
<td>0.3-0.5</td>
<td>≥0.5</td>
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<tr>
<td>LA:Ao</td>
<td>&lt;1.3</td>
<td>1.3-2.2</td>
<td>≥2.2</td>
</tr>
<tr>
<td>LVO:RVO</td>
<td>≤1</td>
<td>1-1.7</td>
<td>≥1.7</td>
</tr>
</tbody>
</table>

“Peds-Echo” by Cardiology is to verify subtle structural findings [e.g. coronary anatomy, arch branching, absence of left SVC]

- Aorta/peripheral flow
  - Forward
  - Reverse

IVRT = isovolumetric relaxation time, PV = pulmonary vein

\(\text{Score} = \text{sum of points} + [\text{PDA diameter/weight}]\)

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