

PDA Treatment Guideline

Timing of Initial echocardiogram

- 22 0/7- 25 6/7 weeks or <750g: Obtain a routine echocardiogram on day 3-5
- 26 0/7- 28 6/7 weeks: Obtain an echocardiogram on day 7 or after if clinical score is ≥ 3
- Discuss with the Cardiology team about potential limited echo if the infant is critically ill

Medical Treatment of PDA

- Medical treatment is indicated if McNamara Echocardiographic score is ≥ 3
- Decision for subsequent treatment courses based upon clinical judgement if echocardiographic score ≥ 3
- Total of three courses of medical treatment is recommended
- Choice of medication based on provider preference and clinical status of the patient
- Medication and dosing
 - Ibuprofen: 10 mg/kg NG x 1, then 5 mg/kg q24h x 2 more doses NG
 - Do not use if evidence of renal dysfunction; SCr >1 , AKI in past 7 days (rise of SCr by 0.3 or UOP < 0.5 mL/kg/d)
 - Do not use if GI bleeding or platelets $< 100K$
 - Do not use if hydrocortisone administration within 24 hours
 - Acetaminophen: 15 mg/kg NG q6h x 5 days
 - Do not use if evidence of liver injury/ cholestasis
 - Use IV ibuprofen or IV acetaminophen if on < 60 ml/kg/day of feeds
- Lab monitoring prior to each course:
 - Ibuprofen: BMP and platelets
 - Acetaminophen: nutrition panel
- No need to reduce or withhold advancing feeds while on medical treatment for PDA

Definitive Closure of PDA (Transcatheter closure/ PDA Ligation)

- If combined score is ≥ 7 after three courses of medical treatment or if medical treatment is contraindicated, consider definitive PDA closure
- Preferred time for transcatheter closure of hemodynamically significant PDA is 21-35 days

Table. Modified McNamara Scale

Points	Clinical Score	Echocardiographic Score
1	RSS < 1.5	Continuous flow and increasing velocity flow into the branch PAs: <0.15 m/sec in diastole in LPA
2	RSS 1.5 – 1.8	Small PDA, Continuous flow and increasing velocity flow into the branch PAs : >0.4 m/sec in diastole in LPA
3	RSS 1.8 – 3.0 OR hypotension requiring a single vasopressor	Moderate PDA, Diastolic flow reversal in the descending aorta below the level of the PDA
4	RSS >3.0 OR hypotension requiring more than 1 vasopressor	Large PDA, A dilated LA (typically 2 times larger the aorta in PLAX view)
5		Large PDA, LV dilation

RSS – Respiratory Severity Score (MAP x FiO₂)

Revised 3/17/2023