Guidelines for the Use of Indomethacin (Indocin)

Recommended Neonatal Dose, Route, and Interval

A. PDA Closure Dose (mg/kg)

<table>
<thead>
<tr>
<th>Age at 1st dose</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 48 h</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
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<tr>
<td>2 to 7 d</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
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<tr>
<td>&gt;7d</td>
<td>0.2</td>
<td>0.25</td>
<td>0.25</td>
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- Given at 12-to24-hour intervals with close monitoring of urine output
- Every 12 hours for urine output greater than 1 ml/kg/hr
- Every 24 hours for urine output 0.6-1 ml/kg/hr
- If anuria or severe oliguria (urine output < 0.6 ml/kg/hr) hold subsequent doses
- Give IV infusion by syringe pump over 30-60 minutes
- Usually given as 3 doses/course, maximum 2 courses
- Longer treatment courses may be used: 0.2 mg/kg q24 hours for a total of 5 to 7 days

B. For IVH prophylaxis

- Indocin will be given prophylactically to neonates with a birth weight \( \leq 1 \) kg or gestational age \( \leq 28 \) weeks at 6-12 hours of age to reduce the risk of major IVH
- 0.1 mg/kg Q24 hours for 3 doses IV over 60 minutes

Chief Indications

1. Closure of the ductus arteriosus (PDA)
2. Prevention of intraventricular hemorrhage

Possible Adverse Reactions:

1. Decreases renal and GI blood flow.
2. Hypoglycemia (within 6 hours of indomethacin administration).
3. Inhibition of platelet aggregation
4. GI hemorrhage.
5. Hypertension, edema

Contraindications & Precautions

- Hypersensitivity to indomethacin, aspirin, or NSAIDs
- Thrombocytopenia (platelet count < 50,000), in which case platelet transfusion is given, count rechecked, and indomethacin administered if repeat platelet count is > 50,000
- Active bleeding/coagulation defects
- Grade II-IV IVH
- Clinical suspicion of a ductal-dependant cardiac lesion
- Suspicion of NEC/ surgical abdomen
- Urine output ≤ 0.6 ml/kg/hr in last 8 hours
- Creatinine ≥ 1.5 mg/dL.
- Risk of gastric perforation is increased if used concurrently with corticosteroids
- Do not administer via umbilical arterial catheter (UAC).

Nursing Implications

- Assess murmur and pulse pressure
- If anuria or severe oliguria occurs, subsequent doses should be delayed.
- Monitor urine output, serum electrolytes, glucose, creatinine, BUN, and platelets.
- Monitor stools and gastric aspirates for signs of GI bleeding.
- Observe for prolonged bleeding from puncture sites.
- Patient will be kept NPO during the course and for 12 hours after completing the course

Special Considerations and Calculations

- Prior to first dose- obtain platelet count, then between doses- platelet count and creatinine
- Initial ECHO whenever PDA or ductal-dependent cardiac lesion is suspected
- Consider repeat ECHO if signs/symptoms persist and surgery is being considered
- Head US prior to therapy

References:
1. Neofax 2009

Reviewed/Revised: 6/2010 by

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