1.0 PURPOSE AND INTENT

1.1 To provide guidance for safely administering prophylactic indomethacin within 12 hours of birth.

*Note: All recommendations are approximate guidelines only and practitioners must take into account individual patient characteristics and situation. Concerns regarding appropriate treatment must be discussed with the attending neonatologist.*

2.0 PRACTICE OUTCOME

2.1 Administration of indomethacin before 12 hours of life is associated with significant reductions in the incidence of intraventricular hemorrhage, severe intraventricular hemorrhage, clinically significant patent ductus arteriosus and need for ductal ligation in extremely premature infants.

The composite outcome of death or long term disabilities have not been shown to be improved.

3.0 GUIDELINES

3.1 For most infants an echocardiogram is not required prior to starting indomethacin. In infants with a known or suspected syndrome associated with congenital heart disease, indomethacin prophylaxis can be initiated after echocardiography demonstrates the absence of any ductal dependent lesion.

Indications

3.2 Infants less than 27 weeks gestation: Give prophylactic indomethacin within 12 hours of birth.

3.3 Infants born at 27 to 27 weeks 6 days gestation: Consider indomethacin prophylaxis. For infants 28 weeks gestation or greater, prophylaxis is not generally recommended.

3.3.1 Among this age group give strong consideration to those who have not received a complete course of antenatal steroids and are at increased risk of severe intraventricular hemorrhage, clinically significant patent ductus arteriosus and need for ductal ligation. They may be considered candidates for indomethacin prophylaxis on an individual basis.

Contraindications:

3.4 Syndrome associated with congenital heart disease (until ductal dependency ruled out).

3.5 Known or suspected ductal dependent congenital heart disease (until ductal dependency ruled out).

3.6 Platelet count less than 50 x 10⁹/L.

3.7 Clinically significant bleeding.

Dose:

3.8 0.1 mg/kg/dose given intravenously every 24 hours for 3 doses
Monitoring:

3.9 Before the first dose obtain a platelet count.

3.10 Before each subsequent dose infants should have a platelet count, serum sodium, potassium, creatinine and blood urea nitrogen.

3.11 Weigh infant daily with accurate measurement of fluid intake and urine output.

Dose Modifications:

3.12 After the first dose, Hold doses or discontinue drug if urine output is less than 0.5ml/kg/hr in the six hour period prior to the next scheduled dose. Dosing can be restarted once urine output increases. (First dose may be given regardless of urine output, as urine output in the first 12 hours of life is not generally expected to be greater than 0.5ml/kg/hr)

3.13 Hold doses or discontinue drug if serum creatinine is greater than 180 µmol/L or serum sodium is less than 125 mmol/L.

3.14 Hold dose if platelet count is less than 50 x 10⁹/L. Indomethacin can be given to these infants after platelet transfusion. Repeat platelet count 30 minutes after completion of transfusion to ensure adequate platelet response.

4.0 REFERENCES


5.0 PRIMARY AUTHORS
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