

Guidelines for the Use of DEXAMETHASONE (Decadron)

Recommended Neonatal Dose, Route, and Interval

For airway edema or extubation: 0.25 mg/Kg/dose given IV ~ 4 hours prior to scheduled extubation and then every 8 hours for 3 doses total. Range 0.25-1 mg/kg/dose for 1-3 doses; maximum dose: 1 mg/kg/day.

For BPD: 0.075 mg/kg/dose q12 hours for 3 days, 0.05 mg/kg/dose q 12 hours for 3 days , 0.025 mg/kg/dose q 12 hours for 2 days, and 0.01 mg/kg/dose q 12 hours for 2 days. Doses may be administered IV slow push or PO.

Chief Indications

1. Bronchopulmonary dysplasia - to promote weaning from ventilator in infants on significant O₂ (FiO₂ > 40%) and ventilator support
2. Immunosuppressive agent
3. Anti-inflammatory agent to reduce vocal cord edema (pre-extubation) or cerebral edema

Possible Adverse Reactions

1. Hypertension
2. Sodium retention and edema
3. Immune suppression
4. Delayed wound healing
5. Gastric and duodenal perforation
6. Hyperglycemia, glycosuria
7. Hypokalemia, hypocalcemia
8. GI hemorrhage (esp. with indomethacin or ibuprofen use)
9. Increased triglyceride levels
10. Increased LV wall thickness with long-term use
11. Long term neurologic sequelae

Contraindications & Precautions

1. Acute infections
2. Systemic fungal infections
3. Persistent positive sputum cultures of *Candida albicans*

Nursing Implications

1. Monitor BP q8hr while on steroid therapy
2. Follow every day weight and electrolytes
3. Assess for hyperglycemia and glucosuria
4. Follow triglyceride levels closely on infants receiving lipids, particularly those infants < 1.5kg

Special Considerations and Calculations

1. Wean off steroids slowly - DC by tapering if used for more than 4 days (acute adrenal insufficiency may occur if abruptly discontinued after more than 1 week of treatment)
2. Barbiturates, phenytoin and rifampin decrease absorption of steroids
3. Use cautiously with furosemide and Amphotericin - may increase potassium loss
4. Solution compatibility: D5W, D10W, NS
5. Pharmacy will supply dexamethasone as a 0.5mg/mL or 4mg/mL pediatric syringe; infuse over 20 - 30 min
6. IV - PO conversion 1:1
7. It is recommended that medication not be held or discontinued due to side effects, but instead try to treat side effects - e.g. hydralazine for increased BP, insulin for hyperglycemia. Medication should be discontinued if there is definite sepsis
8. There can be systemic absorption with nasal decadron drops; hence its use is limited to 3 days at a time. May want to consider normal saline drops.

References:

1. Neofax 2009
2. Pediatric Dosage Handbook, Edition 10th.

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Samir Alabsi, MD

Kelli DeVore, Pharm. D, BCPS

Rebecca Willson MSN, NNP-BC