

Use of Postnatal Corticosteroids

1. **CORTICOSTEROIDS SHOULD NOT BE USED TO MANAGE THE LUNG DISEASE CAUSED BY RESPIRATORY DISTRESS SYNDROME IN THE FIRST WEEK OF LIFE¹.**
For treatment of hypotension see section X. (But note that low dose hydrocortisone has been associated with an increased risk of gastro-intestinal perforation).
2. There is still a place for corticosteroids in management of preterm infants who are ventilator-dependent after the first week of life to facilitate extubation and to reduce risk/severity of chronic lung disease^{2,3}. Corticosteroids should be reserved for such infants who fail to be weaned from assisted ventilation after other potentially less harmful strategies have been tried.
3. Use in these circumstances should be discussed with parents, taking into account risks and benefits.
4. The lowest possible dose for the shortest possible duration should be used. Although the precise dose and duration are not known there is recent evidence from a randomised controlled trial that a 10 day tapering course of dexamethasone (0.89 mg/kg total dose) facilitates extubation in very preterm infants after the first week of life⁴. In this low dose dexamethasone study 0.15 mg/kg/day for 3 days was followed by 0.10 mg/kg/day for 3 days, 0.05 mg/kg/day for 2 days and 0.02 mg/kg/day for 2 days. (There is also some anecdotal evidence that even lower doses of dexamethasone - 0.05 mg/kg/day for 3 days followed by 0.025 mg/kg/day for 3 days - is effective in allowing extubation in infants who are ventilator-dependent and more than 3 weeks old). See point 6.
5. Inhaled corticosteroids are less effective than systemic corticosteroids and their long-term safety has not been established.
6. Further studies are needed to determine the most effective and safest corticosteroid drug, its dose, duration and route of administration.

References

1. Halliday HL, Ehrenkranz RA, Doyle LW. Early postnatal (< 96 hours) corticosteroids for preventing chronic lung disease on preterm infants (Cochrane Review). In: The Cochrane Library, Issue 2, 2004, Chichester, UK: John Wiley & Sons, Ltd.
2. Halliday HL, Ehrenkranz RA, Doyle LW. Moderately early (7-14 days) postnatal corticosteroids for preventing chronic lung disease in preterm infants (Cochrane Review). In: The Cochrane Library, Issue 2, 2004, Chichester, UK: John Wiley & Sons, Ltd.
3. Halliday HL, Ehrenkranz RA, Doyle LW. Delayed (> 3 weeks) postnatal corticosteroids for chronic lung disease in preterm infants (Cochrane Review). In: The Cochrane Library, Issue 2, 2004, Chichester, UK: John Wiley & Sons, Ltd.
4. Doyle LW, Davis PG, Morley CJ, McPhee A, Carlin J. Low dose dexamethasone facilitates extubation in ventilator-dependent infants – a multicentre international randomised controlled trial, the DART study investigators. To be presented at the European Society for Paediatric Research Meeting in Stockholm, September, 2004.

Postnatal Corticosteroid Sub-Group

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