AAP Revises Policy Statement on the Use of Postnatal Corticosteroids for Bronchopulmonary Dysplasia

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Bronchopulmonary dysplasia (BPD) is a major morbidity in very preterm infants that negatively affects neurodevelopmental outcomes and is resistant to therapeutic interventions. A 2002 American Academy of Pediatrics (AAP) policy statement determined that the routine use of dexamethasone to prevent or treat chronic lung disease in preterm infants could not be recommended. Although the incidence of BPD has not decreased, the postnatal use of dexamethasone for treatment and prevention has. This revised statement evaluates the information published since 2002 and updates recommendations for the use of corticosteroids in infants with BPD.

Recommendations

The use of high-dose dexamethasone for BPD cannot be recommended if no randomized controlled trials showing improved outcomes exist. High-dose dexamethasone (approximately 0.5 mg per kg per day) has been shown to reduce the incidence of BPD; however, it also has been associated with adverse outcomes. Currently, there are no data to support the idea that high daily doses provide additional benefit compared with lower doses.

To optimize therapy and improve outcomes, additional randomized controlled trials of postnatal glucocorticoids are needed. Persons or groups who perform such trials should try to minimize the use of open-label glucocorticoids, because it has confounded the analysis of some previous trials. They should also evaluate long-term pulmonary and neurodevelopmental outcomes.

There is insufficient evidence to make a recommendation about treatment with low-dose dexamethasone. Low-dose dexamethasone (less than 0.2 mg per kg per day) may help with extubation and may decrease the incidence of adverse effects that occur with higher doses. Additional randomized controlled trials are needed.

Although early hydrocortisone treatment may benefit certain patients, there is insufficient evidence to recommend its use in all infants at risk of BPD. Low-dose hydrocortisone (1 mg per kg per day) for the first two weeks of life may increase survival rates without BPD, especially in infants with prenatal inflammation. It will not adversely affect neurodevelopmental outcomes; however, there is a possibility of increased risk of isolated intestinal perforation associated with early concomitant treatment with prostaglandin synthesis inhibitors. More randomized controlled trials are needed.

There is insufficient evidence to make a recommendation about treatment with high-dose hydrocortisone. High-dose hydrocortisone (3 to 6 mg per kg per day) started after the first week of postnatal age has not been shown to improve survival rates in infants without BPD. Additional randomized controlled trials are needed.

Practice Implications

Physicians should use clinical judgment when balancing the adverse effects of BPD with the possible adverse effects of treatment. Very low-birth-weight infants on mechanical ventilation for longer than one to two weeks after birth are at very high risk of BPD. When treating these infants, physicians who are considering corticosteroid therapy could determine that the risks of a short course of glucocorticoids are warranted. These decisions should be made with the infant's parents. ■

Answers to This Issue's CME Quiz

Q1. B	**Q5.** B	**Q9.** B, D	**Q13.** B
Q2. D	**Q6.** A, D	**Q10.** A	**Q14.** A, B
Q3. A, C	**Q7.** A	**Q11.** C	
Q4. E	**Q8.** D	**Q12.** A, B, C, D	