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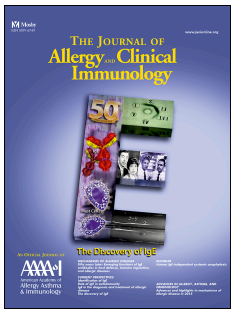


Oral corticosteroids in preschool children with severe episodes of virus-associated wheeze: to treat or not to treat?

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**Clinical Preview**

# Oral corticosteroids in preschool children with severe episodes of virus-associated wheeze: to treat or not to treat?

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Acute episodic wheeze is a common clinical scenario during the preschool years, usually related to an infectious process. Traditionally, more severe episodes have been treated with oral corticosteroids (OCS), largely based on their demonstrated efficacy in acute asthma exacerbations among older children and adults. Despite their widespread use, most clinical trials that investigated OCS efficacy for acute episodic viral wheeze in the preschool population have failed to detect consistent beneficial effects[1]. The exact explanation for this difference in response between preschool children and older children remains uncertain, but may be related to different patterns baseline of airway inflammation (i.e., neutrophilic vs. eosinophilic inflammation) which have differential susceptibilities to corticosteroid effects[2].

In the February 2018 issue of *Lancet Respiratory Medicine*, Foster and colleagues present the results of a randomized, double blind, placebo controlled, clinical trial, performed in Australia, investigating the utility of a 3 day course of oral prednisolone (1 mg/kg/day) compared to placebo among preschool children presenting for emergency department care with acute viral-associated wheeze[3]. The overall conclusion was that children treated with prednisolone experienced significantly shorter durations of hospital stay until they were ready for discharge.

Eligible patients were children aged 24–72 months presenting to the pediatric emergency department with a clinical diagnosis of wheeze and symptoms or signs of a viral upper respiratory tract infection. Exclusion of children below 24 months of age appropriately precluded the participation of children with viral bronchiolitis, a clinical syndrome unresponsive to systemic corticosteroids. Children with other significant medical history or prematurity (<34 weeks gestational age) were excluded. After assessing 3727 patients for eligibility, 624 were randomized, and 605 patients were included in the modified intention-to-treat analysis that was sequentially designed to first examine the hypothesis that placebo was non-inferior to prednisolone. Once this hypothesis was rejected (i.e., placebo was indeed inferior to prednisolone in term of length of stay), a *post hoc* superiority analysis confirmed the hypothesis