Inhaled steroids for episodic viral wheeze of childhood

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Authors' objectives

Background: Recurrent episodic wheeze in association with viral upper respiratory tract infection (URTI) is a specific clinical illness distinct from persistent atopic asthma. Objectives: The objective of this review was to identify whether corticosteroid treatment, given episodically or daily, is beneficial to children with viral episodic wheeze. Search methods: We searched the Cochrane Airways Group trials register and reference lists of articles. Selection criteria: Randomised controlled trials (RCTs) of corticosteroid treatment versus placebo in children under 17 years of age who suffer from 'episodic viral wheeze', which is defined by wheeze in association with coryzal symptoms with minimal or no intercurrent lower respiratory tract symptoms. Data collection and analysis: Trial quality was assessed independently by two reviewers. Study authors were contacted for missing information. Studies were categorised according to whether treatment was given episodically or daily (maintenance). The primary outcome was episodes requiring oral corticosteroids. Secondary outcomes addressed episode severity, frequency and duration and parental treatment preference. Main results: Five randomised controlled trials in children with a history of mild episodic viral wheeze were identified. Most of the children had previously required no or infrequent oral corticosteroids and had very infrequent hospital admissions. There were three studies of preschool children given episodic high dose inhaled corticosteroid (1.6 - 2.25 mg per day), two using a crossover and one a parallel design. The two studies of maintenance corticosteroid (400 micrograms per day) were parallel in design, one of pre-school children the other of children aged 7 -9 years. Results from the two cross-over studies of episodic high dose inhaled corticosteroids showed a reduced requirement for oral corticosteroids (Relative risk (RR)=0.53, 95% CI: 0.27, 1.04). In these 2 double blind studies, this treatment was preferred by the children's parents over placebo (RR=0.64, 95% CI: 0.48,0.87). Maintenance low dose inhaled corticosteroids did not show any clear reduction over placebo in the proportion of episodes requiring oral corticosteroids (N=2 trials, RR=0.82, 95% CI: 0.23,2.90) or in those requiring hospital admission (N=1 trial, RR=0.21, 95% CI: 0.01,4.11). Authors' conclusions: Episodic high dose inhaled corticosteroids provide a partially effective strategy for the treatment of mild episodic viral wheeze of childhood. There is no current evidence to favour maintenance low dose inhaled corticosteroids in the prevention and management of episodic mild viral induced wheeze.


Bibliographic details

McKean Michael C, Ducharme Francine. Inhaled steroids for episodic viral wheeze of childhood. Cochrane Database of Systematic Reviews: Reviews 2000; Issue 1

AccessionNumber

1000001107

Date abstract record published

13/07/2012

Record Status

This is an abstract for a Cochrane review