

SNIPPETS FROM THE JOURNALS

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In this edition, I review articles that deal with two controversial topics. The first deals with adherence and the second addresses the role of viral infections predisposing to asthma and the benefit of oral corticosteroids for viral wheezing.

Cynthia Rand *et al.* Adherence with montelukast or fluticasone in a long-term clinical trial. *J Allergy Clin Immunol* 2007; 119: 916-923.

The April 2007 *Journal of Allergy and Clinical Immunology* features an article on adherence by Cynthia Rand *et al.* This article uses data collected during the 'mild asthma montelukast versus inhaled corticosteroid trial' (MIAMI study).

MIAMI was a randomised, parallel group study that was designed to compare the effects of montelukast and fluticasone in patients with mild asthma. MIAMI reported in the *American Journal of Medicine* (2005; 118: 649-657) that in patients with mild persistent asthma, rescue-free days and some other asthma control measures improved similarly with fluticasone or montelukast over the short term but more with fluticasone with prolonged open-label treatment.

Lung function and night awakenings were better with fluticasone over the short and long term. Improvement of asthma control with fluticasone was better in those with decreased lung function and greater salbutamol use at baseline.

Patient adherence with both inhaled and oral therapies was measured by using electronic medication monitors. This current study evaluates the independent contribution of regimen characteristics to adherence.

During the 12-week double-blind period subjects were required to take an oral tablet once daily and an inhaler twice daily (one active, one placebo). Adherence was 70.2% for inhaled therapy and 77.5% for oral therapy. During the 36-week open-label period adherence was 63.9% for twice-daily inhaled therapy and 71.4% for once daily oral therapy.

The authors point out however that during the 12-week double-blind period subjects used at least one dose of inhaled therapy on 83.3% of days vs 77.5% of days for oral therapy.

During the open-label period inhaler therapy was used at least once a day on 76.8% of days and oral therapy on 71.4% of days. Subjects were less likely to have a no-use day with twice-daily inhaled therapy than with once-daily oral therapy. In fact, inhaled therapy was used as a once-daily medication approximately a third of the time.

The authors studied the dose-response relationship between active treatment and study outcomes, and found no significant association.

A unique feature of the study was that after the 12-week double-blind period, the regimen was simplified in the 36-week open-label period. Yet, adherence deteriorated, highlighting that regimen simplification alone is not sufficient to improve adherence.

Although the presumed benefit of increased adherence with asthma therapy is improved clinical outcomes, for the majority of subjects in this study, variations in adherence with therapy did not influence most indices of asthma control.

The authors conclude that patients are less likely to be fully adherent with twice-daily therapy than once-daily therapy. Twice-daily therapy resulted in fewer no-dose days. Many patients with mild persistent asthma may achieve control with adherence levels lower than prescribed.

Pasi Lehtinen *et al.* Prednisolone reduces recurrent wheezing after a first wheezing episode associated with rhinovirus infection or eczema. *J Allergy Clin Immunol* 2007;119:570-575.

Acute wheezing affects one-third of young children and half of these will continue to wheeze until school-going age. Respiratory syncytial virus (RSV) usually induces wheezing during infancy. These episodes are followed by recurrent wheezing in 36-68% of cases and by school-age asthma in 18-37% of cases.

Rhinovirus is the second most common virus triggering early wheezing in 45% of cases. It is followed by third-year wheezing in 65% of cases and school-age asthma in 60% of these cases.

This group from Turku, Finland, recently showed that a short course of oral prednisolone during a first episode of wheeze reduced recurrences if the wheezing was associated with rhinovirus or high blood eosinophil counts.

This article is a 1-year follow-up. The results showed that recurrent wheezing during the 1-year follow-up affected 37% of the children and was equal in the prednisolone group and the placebo group.

Subgroup analysis however showed that prednisolone reduced the episodes of recurrent wheezing if the children had eczema or if the episode was rhinovirus induced. Although the difference is more favourable in the first 3 months, it persisted for the entire 1-year follow-up.

Miles Weinberger in an editorial entitled 'Should corticosteroids (oral) be used for first-time young wheezers?' addresses the findings in the above study. He also debates the many studies showing benefit or not for the use of corticosteroids during first episodes of viral-induced wheezing.

He concludes that for viral-respiratory-infection-induced wheezing in infants and young children '...there appears to be justification to error on the side of treating with systemic corticosteroid until more definitive prospective studies are performed'.

F Tahan *et al.* Clarithromycin in the treatment of RSV bronchiolitis. *Eur Respir J* 2007; 29: 91-97.

Finally, this interesting article from Turkey describes the use of 3 weeks of clarithromycin therapy for RSV bronchiolitis.

This double-blind, randomised, placebo-controlled trial was conducted on 30 children hospitalised with RSV bronchiolitis. The clarithromycin group had a shorter length of stay (51 hours vs 88) and a shorter duration of oxygen use (31 vs 72 hours).

Interestingly, 1 child in the clarithromycin group and 4 children in the placebo group were re-admitted during the 6 months post-treatment.

The authors also show that clarithromycin has a suppressive effect on interleukins 4 and 8 and eotaxin. This immune regulation restores the TH1/TH2 cytokine balance to the relative type 1 predominance and may ameliorate the short- and long-term effects of RSV disease.

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