

Montelukast

A Viewpoint by Carl Burgess and Julian Crane

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Leukotrienes are mediators of airway inflammation and bronchoconstriction in humans. Two groups of anti-leukotrienes have been developed, leukotriene receptor antagonists and 5-lipoxygenase inhibitors (this enzyme is the rate-limiting step in leukotriene synthesis). Montelukast is a new selective leukotriene receptor antagonist. Like other members of this drug class it has been shown to protect against bronchoconstriction caused by inhaled allergens, exercise, cold air and nonsteroidal anti-inflammatory drugs,^[1] although the number of patients included in these trials was small and several are available only as abstracts, making interpretation of efficacy and tolerability difficult.

Montelukast improves lung function compared with placebo in patients with asthma but appears to

have a modest effect when compared with inhaled steroids.^[2] Dose response studies indicate a flat dose response curve, with no additional clinical benefit from doses above 10mg. One advantage of montelukast over other leukotriene antagonists is once daily administration.

Clinical experience will be required to properly determine the place of montelukast in the management of asthma, and its potential for reducing inhaled steroid dosages, particularly in children. In countries where inhaled therapy for asthma has been vigorously promoted, the introduction of a new oral therapy such as montelukast will need to be accompanied by appropriate prescriber and patient education. ▲

References

1. Spector SL. Leukotriene activity modulation in asthma. *Drugs* 1997; 54: 369-84
2. Reiss TF, White R, Noonan G, et al. Montelukast (MK-0476), A CysLT1 receptor antagonist, improves the signs and symptoms of asthma over one year of treatment [abstract]. *Eur Resp J* 1997 Sep; 10 Suppl. 25: 437s