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Omalizumab

A Viewpoint by Anthony J. Frew

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The development of anti-IgE monoclonal antibodies has allowed us to explore a number of previously unanswerable questions in asthma. In particular, we know that the development of IgE against environmental allergens is a risk factor for asthma but it has not been clear whether these antibodies play an important role in the maintenance of the disease once it is established. Treatments targeted against allergens (specific immunotherapy, allergen avoidance) have not been particularly effective in controlling patients with more severe asthma and it has been argued that the inflammatory process in asthma may become self-sustaining rather than remaining dependent on reactions to external allergens.

The introduction of omalizumab makes it possible to knock out the IgE driven component of the disease. The antibody is clearly effective in allergen challenge models where one would expect IgE to be important, but since the target patient group is patients with severe asthma, the key question is how omalizumab performs in patients with more established disease. This includes patients resistant to current therapy and those who respond only to high doses of corticosteroids. Early trials do look encouraging, but they leave open a number of questions. In particular, the Milgrom trial[1] included asthmatics on oral corticosteroids, many of whom had relatively minor lung function deficits and may not have needed such intensive treatment. Certainly a very high percentage of patients in the placebo arm were able to withdraw corticosteroids. Thus, omalizumab does seem to offer some benefits as an add-on therapy, but further trials and practical experience will be needed to determine which groups of patients are most likely to benefit and in which groups the expense can best be justified. ▲

Reference

1. Milgrom H, Fick Jr RB, Su JQ, et al. Treatment of allergic asthma with monoclonal anti-IgE antibody. rhuMAb-E25 Study Group. N Engl J Med 1999 Dec 23; 341: 1966-73