

Introduction

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Priorities in the treatment and management of asthma include recognition of disease, abolition of symptoms, restoration of normal lung function, and reduction in the risk of acute attacks (1). However, the physician needs to perceive the patient's own interests when deciding on an appropriate treatment. Their overriding concern is likely to be the abolition of symptoms, to allow a normal lifestyle, and the avoidance of side-effects from the treatment, rather than restoration of normal lung function or a decreased risk of acute attack. Thus, it has become very important for physicians to realize that their initial aims in the treatment of asthma may be very different from those of the patients. It is necessary to recognize this and advise the patient about the need for appropriate therapy, allay fears about drug therapy, and enter into a contract of management. This contract should be devised with the patient to include individualized treatment plans with clear written instructions and regular follow-up assessments, including re-evaluation of the patient's inhalation skills.

The recognition and avoidance of triggers for asthma is an important component in disease management and should be regarded as complementary to drug treatment (2). In many countries, house-dust mite exposure is an important trigger factor for bronchial asthma. It has been shown that positive skin prick tests to house-dust mite, cat dander, and moulds are extremely important predictive risk factors for bronchial asthma (3). Furthermore, it has been shown that the avoidance of trigger factors may be important in the reduction of asthma symptoms, both in children (4) (Fig. 1) and in adults (5, 6). Hence, physicians need to be aware that simple measures can be taken to avoid allergens. These include the use of mattress covers, replacement of pillows, removal of carpets, and regular cleaning of the home and pets (7). Possible allergy should be assessed in all asthma patients and allergen-avoidance procedures should be recommended to patients who have a clear allergy diagnosis, based on their clinical history with supportive

data from skin tests or the radioallergosorbent test (RAST) (allergen-specific IgE in serum).

The recently published and revised British Thoracic Society guidelines on asthma management, developed in conjunction with the National Asthma Campaign and the Royal College of Physicians, give a standard step-up guide similar to previous international guidelines (8). Step 1 recommends the use of bronchodilators as required; step 2, the introduction of low-dose topical corticosteroids; step 3, the introduction of high-dose topical corticosteroids; step 4, the introduction of long-acting bronchodilators; and step 5, the use of oral corticosteroids.

Topical corticosteroids represent the first-line, anti-inflammatory treatment in patients who need to use inhaled bronchodilators more than once daily (9). However, concerns have been raised over the possibility of systemic side-effects with oral corticosteroids and inhaled corticosteroids in doses of 1600 µg or above (10). The new inhaled corticosteroids, such as budesonide and fluticasone propionate, have the advantage of topical potency at a much lower dose, reducing the likelihood of systemic side-effects. Moreover, it has recently become clear that in selected patients, long-acting bronchodilators may be used earlier in asthma management (11, 12). The precise role of inhaled long-acting bronchodilators is further considered by Professor Romain Pauwels in this symposium.

For the above reasons, recent guidelines recommend an initial higher dose of preventative therapy (1). For example, patients can be treated at a step higher in the guidelines than that anticipated by the physician to achieve early control of symptoms, followed by a "stepping down" of treatment to an effective controlling dose. This is in contrast to the previous concept of "stepping up" treatment as the patient's symptoms deteriorate. This will have the effect of early control of the patient's airway inflammation and asthma followed by optimal control at the lowest effective dose of corticosteroids, either with or without long-acting bronchodilators

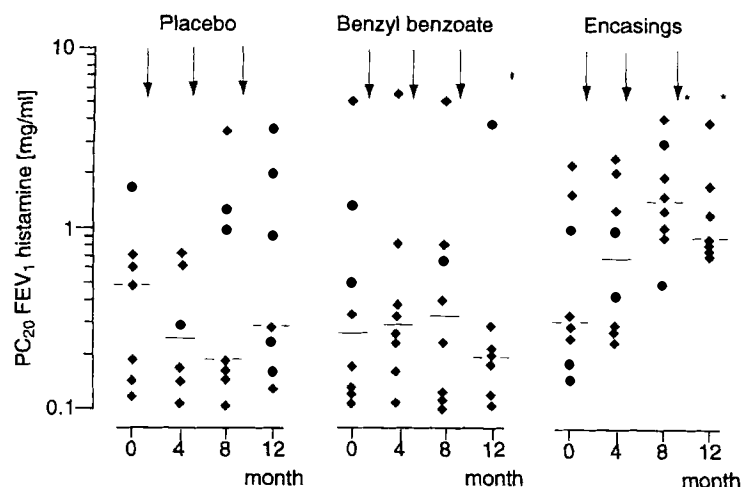


Fig. 1. Improvement in asthma symptoms with long-term avoidance of house-dust-mite allergens. Bronchial reactivity (PC_{20} of histamine) was measured in three groups of children over period of 12 months. House-dust mites were controlled by treating mattresses and carpets with either benzyl benzoate or placebo. A third treatment group encased mattresses, pillows, and soft furniture with allergy-control covers. Reduction in airborne house-dust-mite allergens (Der p I and Der f I) of $\geq 95\%$ with use of covers was accompanied by marked reduction in airway histamine responsiveness; $*P < 0.05$ compared with placebo. Reproduced from Ehnert et al. (4) with kind permission of the *Journal of Allergy and Clinical Immunology*.

for symptom relief (11, 12). The isolated use of long-acting bronchodilators in the absence of effective, preventative, anti-inflammatory therapy is not recommended (1).

It is clear that many different strategies must be used for the treatment of the many faces of asthma. These include patient education and the introduction of allergen-avoidance measures where appropriate, as well as the use of novel approaches to pharmacotherapy. However, whatever approach is undertaken, certain patients are still at risk, and poor appreciation of asthma severity, delay in treatment, and inadequate management are all factors associated with asthma mortality (13). Guidelines on pharmacotherapy are important, but of equal importance is the need to involve patients so that they can understand their disease and participate in its management.

References

1. British Thoracic Society guidelines on asthma management. *Thorax* 1997;52 Suppl 1:S1-S21.
2. Durham SR. British Thoracic Society Asthma guidelines reviews: allergen avoidance measures. *Respir Med* 1996;90:441-5.
3. Sears MR, Herson GP, Holdaway MD, Hewitt CJ, Flannery EM, Silva PA. The relative risk of sensitivity to grass pollen, house dust mite, and cat dander in the development of childhood asthma. *Clin Exp Allergy* 1989; 19:419-24.
4. Ehnert B, Lau-Schadendorf S, Weber A, Buettner P, Schou C, Wahn U. Reducing domestic exposure to dust mite allergen reduces bronchial hyperreactivity in sensitive children with asthma. *J Allergy Clin Immunol* 1992;90: 135-8.
5. Colloff MJ, Ayers J, Carswells F, et al. The control of allergens of dust mites and domestic pets: a position paper. *Clin Exp Allergy* 1992;22 Suppl 2:1-28.
6. Howarth PH, Lunn A, Tomkins S. Bedding barrier intervention in house dust mite respiratory allergy. *Clin Exp Allergy* 1992;22:140.
7. De Blay F, Chapman MD, Platts-Mills TAE. Airborne cat allergen (*Fel d 1*)¹⁻³. Environmental control with the cat *in situ*. *Am Rev Respir Dis* 1991;143:1334-9.
8. National Heart, Lung and Blood Institute. International consensus report on diagnosis and treatment of asthma. *Eur Respir J* 1992;5:601-41.
9. Haahtela T, Järvinen M, Kava T, et al. Comparison of a beta₂-agonist, terbutaline, with an inhaled corticosteroid, budesonide, in newly detected asthma. *N Engl J Med* 1991;325:288-92.
10. Pedersen S, O'Byrne P. A comparison of the efficacy and safety of inhaled corticosteroids in asthma. *Allergy* 1997;52 Suppl 39:1-34.
11. Greening AP, Ind PW, Northfield M, Shaw G. Added salmeterol versus higher-dose corticosteroid in asthma patients with symptoms on existing inhaled corticosteroids. *Lancet* 1994;344:219-24.
12. Woolcock A, Lundback B, Ringdal N, Jacques LA. Comparison of addition of salmeterol to inhaled steroids with doubling of the dose of inhaled steroids. *Am J Respir Crit Care Med* 1996;153:1481-8.
13. Strunk RC. Identification of the fatality-prone subject with asthma. *J Allergy Clin Immunol* 1989;83:477-85.