Ketotifen, an Anti-Allergic Drug

Pharmacological Figures and Clinical Experience

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One of the most interesting new drugs now being introduced in the therapy of allergic reactions, in particular asthma, is ketotifen, which shows clearly distinguishable anti-anaphylactic and antihistaminic effects. In animal experiments it inhibits passive cutaneous anaphylaxis and experimental asthma in rats as well as the 48/80 induced histamine release from peritoneal mast cells [1]. In clinical use one of its advantages is the oral administration, serum levels of 1–2 µg/ml being achieved with only two doses of 1 mg daily. In clinical experimental trials ketotifen inhibits bronchoconstriction following challenge by histamine, acetylsalicylic acid, allergens and exercise. On the other hand bronchospasm induced by acetylcholine is not influenced [2]. Ketotifen has been shown to be at least as effective as disodium cromoglycate (DSCG) in clinical therapeutic studies, and a progressive improvement in the patients' condition has been noted during prolonged treatment. Likewise it is pos-

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sible to reduce or withdraw concurrent medication (corticosteroids and bronchodilators) [3–6]. Not all patients who respond to treatment with DSCG will necessarily respond to ketotifen and vice versa. In our investigations a single dose of 2 mg ketotifen protected to the same extent as DSCG against allergen-induced bronchoconstrictions (table I). Late reactions were not influenced. As regards side-effects, DSCG can cause unpleasant local irritation apart from the problems many patients experience with the use of the spinhaler. Ketotifen mainly causes tiredness and dizziness. Although they usually decrease after a few days, patients driving a car or operating machinery should be informed.

In conclusion, ketotifen is a valuable drug particularly in the treatment of allergic asthma but also in exercise induced and some cases of intrinsic asthma. No final statement can be made about long-term treatment although the results available are very positive. Future investigations should also be directed towards the best possible prediction of response in a single patient or in different categories of patients.

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Table I. Comparison between ketotifen and DSCG: resistance (cm H₂O/l/sec) after allergen provocation

No medication

Ketotifen

DSCG

7 patients: blockade with ketotifen and DSCG (4 pollen, 3 housedust and mite)
7 patients without blockade (3 pollen, 4 housedust and mite)

mean 6.70
2.35
2.58
SD 2.29
0.79
0.86
mean 8.26
8.75
8.36
SD 2.63
2.43
3.38

1 patient: blockade with ketotifen but not with DSCG (housedust)
7.83
1.57
8.85

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