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STUDIES

EVALUATION OF H2- RECEPTOR ANTAGONISTS IN CHRONIC IDIOPATHIC URTICARIA

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H1-antagonist (hydroxyzine hydrochloride) in dosage of 10 mg-25 mg thrice a day failed to elicit satisfactory response in 60 out of 170 patients of chronic idiopathic urticaria. Additional administration of H2-antagonist (cimetidine) in dosage of 200 mg four times a day, in patients not responding earlier to H1-antagonist alones exhibited moderate to good improvement of various parameters of urticaria in approximately 85% patients.

Key Words: Urticaria, H2-antagonists

Introduction

The most important aspect of therapy in urticaria is elimination of the cause which may remain undetermined in a majority of patients comprising of chronic idiopathic urticaria and treatment of such patients depends largely upon H1-antihistaminic drugs providing symptomatic relief. Certain proportion of patients may remain unresponsive even after an increase in the dose or change in the type of H1-antihistaminic drug. This failure may be explained by the fact that apart from histamine, release of other mediators also plays a role in producing vascular changes in the skin. An alternative explanation is advanced by recent investigations demonstrating that human skin blood vessels possess H2-receptors along with H1-receptors.[1] Administration of H2-antagonists along with H1-antagonists in the therapy of chronic idiopathic urticaria was evaluated by various workers but the results are controversial.[2-7] This study was undertaken to evaluate the efficacy of combination therapy of H1 and H2 antagonists in patients with chronic idiopathic urticaria not responding to H1-antagonists alone.

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Materials and Methods

One hundred and seventy patients with chronic idiopathic urticaria included in this study comprised of 80 males and 90 females varying in age from 6 to 65 years, majority of them being in the age group of 31-40 years with duration of disease ranging from 6 weeks to 5 years. Patients of chronic idiopathic urticaria were selected as per criterion reported earlier by excluding various causative factors after detailed history, general physical examination, systemic examination and investigations.[8]

A detailed record of clinical parameters e.g., first phase, all the patients were treated with hydroxyzine hydro-chloride initially administered in dosage of 10 mg thrice a day and later increasing the dosage upto a maximum of 25 mg thrice a day for a period of two weeks. The clinical response of each parameter was graded as good, moderate or poor depending upon amelioration of signs and symptoms. Good response being indicated by complete eradication of signs and symptoms of urticaria, moderate response by partial remission and poor

response by no improvement.

In the second phase, patients not responding to hydroxyzine with a maximum dose of 25 mg thrice a day for two weeks, were treated with cimetidine (H2-antagonist) in dosage of 200 mg four times daily for a period of another two weeks and reassessment of clinical response was done regarding the parameters of itching, frequency, size and number of lesions separately. Objective assessment was made by calculating the mean score for each parameter before and after the clinical trial.

Average clinical score was calculated by designating scores of 3, and 1 for severe, moderate and mild symptoms and signs respectively. The scores were initially calculated for each patient individually followed by calculation of average score for each clinical parameter and Student's t-test was applied for analysis of data.

Results

Out of 170 patients with chronic idiopathic urticaria treated with hydroxyzine hydrochloride during the first phase, 60 patients did not respond satisfactorily. Addition of H2-antagonist during the second phase resulted in significant improvement of various clinical parameters in a majority of these patients (Table I).

There was a significant improvement in mean clinical scores of various parameters with combination therapy of H1 and H2 antagonists (hydroxyzine hydrochloride and cimetidine) in patients who did not respond to H1-antagonist (hydroxyzine) alone.

There was no significant difference in clinical response in relation to age, sex and duration of the disease.

No major side effects were observed with H1-antagonist alone or combination therapy except for sedation and dryness of mouth in 19 patients, constipation in 4 patients and loss of appetite in 8 patients. Exacerbation of lesions and itching occurred in 2 patients.

Discussion

The inability of H1-antagonists to suppress chronic idiopathic urticaria in non-responders has been ascribed to high concentration of histamine at the receptor site inadequately blocked by the antihistamines, release of autacoids or existence of sub-class of histamine receptor (H2) at the lesion site.[9] Robertson and greaves[10] introduced H2-antagonists in the therapy of chronic idiopathic urticaria particularly in patients which failed to respond satisfactorily to H1-antagonists alone.

Although, beneficial effects of the combination therapy have been reported by several workers,[1,2,6] there are some contradictory reports showing no additional advantage of combination therapy.[3,4]

This study further supports the reports

Table I. Mean Score of Various Clinical Parameters Before and After Treatment with Anthistaminics.

Clinical Parameters	Hydroxyzine (n=170)			Hydroxyzine and Cimetidine (n=60)		
	Before	After	%	Before	After	%
Itching	2.34	0.78	66.67	2.23	0.55	75.33
Frequency of lesions	2.17	0.50	76.96	1.71	0.31	81.87
Number of lesions	2.41	0.87	68.88	2.16	0.58	73.15
Size of lesions	1.94	0.67	65.47	1.91	0.51	73.30

of additional beneficial effects of combination therapy with H1 and H2 antagonists in chronic idiopathic urticaria, as substantiated by occurrence of improvement in the same patients not responding earlier to H1 antagonists alone.

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