A STUDY ON TREATMENT OF CHRONIC IDIOPATHIC URTICARIA WITH CETIRIZINE

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ABSTRACT

In a prospective study a comparison has been made between the clinical efficacy and safety of cetirizine, a third generation H1 receptor antagonist with chlorpheniramine and cyproheptadine, the most widely used antihistamines in the treatment of chronic idiopathic urticaria. One hundred and five patients with chronic idiopathic urticaria were studied where the effects of chlorpheniramine, 4 mg and cyproheptadine, 4 mg administered twice daily were compared with cetirizine, 10 mg given once daily for 4 weeks or earlier till the relief of symptoms and regression of lesions. Local therapy consisted of calamine lotion in all cases. Out of 35 patients receiving chlorpheniramine excellent response was achieved in 9 (25.7%) cases by subjective evaluation (SE) and 11 (31.4%) by objective evaluation (OE). Out of 35 cases, 7 (20%) and 10 (28.5%) cases treated with cyproheptadine have shown excellent response by SE and OE respectively. Out of 35 patients taking cetirizine 25 (71.4%) had shown excellent response by SE and 22 (62.8%) cases by OE. Drowsiness was an important side effect observed in 19 (54.2%) cases receiving chlorpheniramine, 22 (62.8%) patients taking cyproheptadine and 1 (2.8%) case getting cetirizine. These results suggest that cetirizine has got superior antiallergic activity than chlorpheniramine and cyproheptadine in the treatment of chronic idiopathic urticaria.

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KEYWORDS: Cetirizine; Urticaria.

Introduction

Urticaria is characterised by raised, erythematous wheals involving the superficial part of the dermis. Episodes of urticaria persisting for 8 weeks or more are termed chronic [1]. Although some forms of the condition are related to specific stimuli, in most cases no underlying cause can be identified. Chronic idiopathic urticaria is responsible for 70 per cent cases of persistent urticaria [2].

The mainstay of the management of chronic idiopathic urticaria is usually symptomatic treatment with antihistamines. First generation antihistamines are effective in controlling symptoms and signs of chronic urticaria, but drowsiness and anticholinergic properties are common side effects. Cetirizine, a pharmacologically active oxidized metabolite of hydroxyzine, seems to provide selective H1-receptor inhibition without common side effects and has been used in the treatment of urticaria [3]. It has been shown that the reduced incidence of sedative side effects of cetirizine is due to its diminished capacity to cross the blood brain barrier [4] and may also be the result of greater selectivity for H1 receptors [3].

In the present study a comparison has been made between the clinical efficacy and safety of cetirizine, a

third generation H1 receptor antagonist with chlorpheniramine and cyproheptadine, the most widely used first generation antihistamines in the treatment of chronic idiopathic urticaria.

Material and Methods

One hundred and five patients suffering from chronic idiopathic urticaria with a history of atleast 3 episodes per week for 8 weeks were selected. Pregnant women were excluded from this study. Patients were investigated to rule out any underlying cause of urticaria. Results of total and differential leucocyte count, absolute eosinophil count, routine examination of stool and urine were analysed before starting the treatment.

The patients were divided at random into 3 groups of 35 numbers each. Calamine lotion was used locally in all patients. Group-A was given chlorpheniramine maleate, 4 mg twice a day, Group-B was given cyproheptadine hydrochloride, 4 mg twice daily and Group-C was treated with cetirizine dihydrochloride 10 mg, once a day. Treatment was given either up to the relief of symptoms or up to 4 weeks. All patients were followed up at weekly intervals for 8 weeks after completion of therapy.

The result of treatment were graded according to the subjective and objective criteria. The criteria for the objective evaluation included grade III: no sign or absence of wheals; grade II: mild erythema or a few wheals; grade I: numerous wheals and grade 0: involvement of whole body. The criteria of the subjective evaluation included grade III (excellent): when there was no symptoms and recurrence for 8 weeks; grade II (good): having mild pruritus not disturbing work, without interference with sleep and immediate recurrence on withdrawal of drugs; grade I (fair): intermittent

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pruritus, disturbing work, awoke twice or more from sleep at night and immediate recurrence on withdrawal of drugs; and grade 0 (poor): pruritus which forced patient to interrupt work and disturbed sleep at night.

Results

Out of one hundred and five cases majority 72 (68.5%) were young adults between 16-35 years of age. Seventy eight (74.2%) were male and 27 (25.7%) were female. In group A, out of thirty five patients receiving chlorpheniramine twice daily, grade III or excellent response was achieved in 9 (25.7%) cases by subjective evaluation (Table 1) and 11 (31.4%) by objective evaluation (Table 2). In group B out of 35 patients 7 (20%) and 10 (28.5%) patients respectively receiving cyproheptadine have shown excellent results. In group C out of 35 patients taking cetirizine 25 (71.4%) had shown grade III response by subjective evaluation and 22 (62.8%) by objective evaluation. Drowsiness was an important side effect observed. In 19 (54.2%) patients in group A and 22 (62.8%) in group B and 1 (2.8%) patient receiving cetirizine complained of drowsiness (Table 3).

TABLE 1
Subjective evaluation (n=35)

Grades of response	Group A chlorpheniramine		Group B cyproheptadine		Group C cetirizine	
	No	(%)	No	(%)	No	(%)
III (excellent)	9	(25.7)	7	(20)	25	(71.4)
II (Good)	11	(31.4)	10	(28.5)	8	(22.8)
I (Fair)	8	(22.8)	10	(28.5)	2	(5.7)
0 (poor)	7	(20)	8	(22.8)	—	—

TABLE 2
Objective evaluation

Grading of response	Group A chlorpheniramine		Group B cyproheptadine		Group C cetirizine	
	No	(%)	No	(%)	No	(%)
III (excellent)	11	(31.4)	8	(22.8)	22	(62.8)
II (good)	12	(34.2)	9	(25.7)	11	(31.4)
I (fair)	8	(22.8)	12	(34.2)	2	(5.7)
0 (poor)	4	(11.4)	6	(17.1)	—	—

TABLE 3
Incidence of side effects in patients with chronic idiopathic urticaria during treatment

Side effects	No of patients (%)					
	Chlorpheniramine		Cyproheptadine		Cetirizine	
	No	(%)	No	(%)	No	(%)
Asthenia	9	(25.7)	11	(31.4)	2	(5.7)
Drowsiness	19	(54.2)	22	(62.8)	1	(2.8)
Dryness of mouth	11	(31.4)	14	(40)	3	(8.5)
Gastralgia	1	(2.8)	1	(2.8)	2	(5.7)
Increase in appetite	2	(5.7)	7	(20)	—	—

Discussion

Cetirizine, a piperazine derivative the carboxylated metabolite of hydroxyzine is a potent, long acting pe-

ripheral histamine H1 receptor antagonist [5].

Hydroxyzine [6] has been used for number of years as an effective agent for treatment of allergic and inflammatory skin disorders. Juhlin et al [7] found that cetirizine significantly decreased the wheal and flare reaction in patients with idiopathic urticaria induced by several stimuli, including histamine and compound 48/80.

Juhlin [8] studied 10 patients with chronic urticaria. Wheal and flare caused by intradermal injection of platelet activating factor (PAF), Kallikrein, histamine and the patient's own serum were evaluated before and after oral cetirizine administration. Cetirizine markedly reduced the wheal and flare induced by all of these agents as measured 12 minutes after the injections.

In this study by subjective evaluation of the patients 9 (25.7%) cases receiving chlorpheniramine and 7 (20%) receiving cyproheptadine showed excellent response in alleviating pruritus and recurrence of wheals. Twenty five (74.4%) patients receiving cetirizine had shown excellent response. By objective evaluation 11 (31.4%) cases receiving chlorpheniramine and 8 (22.8%) cases receiving cyproheptadine and 22 (62.8%) patients receiving cetirizine have shown excellent response.

The present study has shown that cetirizine is effective and safe in alleviating most of the symptoms of chronic idiopathic urticaria. The treatment was more favourable for cetirizine especially in the case of appearance of wheals according to both investigator's and patient's assessments.

The more number of side effects observed in this study were for patients receiving chlorpheniramine and cyproheptadine (Table 3). The most common being drowsiness which were more severe in patients receiving chlorpheniramine and cyproheptadine and mild in 1 patient receiving cetirizine, which subsided when taken at bed time.

Cetirizine has a carboxyl group on its side chain which is negatively charged at physiological PH values, thus markedly reducing the ability of cetirizine to cross the blood brain barrier [9]. Consequently, adverse central nervous system side effects such as sedation, experienced with first generation H1-receptor antagonists, are less likely to occur during cetirizine therapy.

Superior antiallergic activity of cetirizine has been demonstrated clinically in this study and also in other studies [10,11]. Cetirizine is given as a single dose therapy, which is convenient for the patients. The drug

was well tolerated in patients. The side effect like drowsiness which was common with chlorpheniramine and cyprohepatadine was virtually negligible in patients receiving cetirizine. The cetirizine can be used not only for indoor patients but also for out patient treatment and offers enhanced patient's compliance and safety [13,14].

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