

A COMPARATIVE STUDY OF VARIOUS THERAPEUTIC REGIMENS IN URTICARIA

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127 patients of urticaria were treated with chlorpheniramine maleate alone and in combination with cyproheptadine hydrochloride, ranitidine and doxepin and levamisole. Chlorpheniramine and doxepin combination showed a satisfactory result in 88.46% of patients. Overall study showed that a combination regimen is better than the antihistaminics alone. Drowsiness was the commonest side effect. Levamisole and chlorpheniramine maleate combination was found to be more effective than the antihistamine alone.

Key Words : Urticaria, Chlorpheniramine maleate, Cyproheptadine hydrochloride, Ranitidine, Doxepin, Levamisole

Introduction

Urticaria is a very common problem. The methods and ways of treating urticaria are numerous, which show the dearth of a unanimous mode of therapy. In the present study an effort has been made to evolve and compare the efficacy of the different approaches of drug treatment of urticaria.

Materials and Methods

Out of the 200 patients of urticaria seen during December 1991 to June 1993, 127 patients were taken up for the study. Children below 12 years, pregnant women, patients requiring any other treatment or patients having known contraindications to the drugs of the present study were excluded. The patients were thoroughly examined and complete haemogram, renal function test, liver function test, HBsAg, Chest X-ray, urine, stool examinations etc. were done. After this, patients were given any of the following regimens at random for a period of four weeks.

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- Regimen I - Chlorpheniramine maleate (CPM) - 4mg - thrice daily
- Regimen II - Regimen I + Ranitidine (150mg) twice a day
- Regimen III - Regime I + Cyproheptadine hydrochloride (4 mg) - twice a day
- Regimen IV - Regimen I + Doxepin (25 mg) thrice a day
- Regimen V - Regimen I + levamisole (150 mg) daily for the three consecutive days each week

Response to the treatment was noted at the end of the study as follows :

- Good - Patients got rid of all symptoms and signs.
- Fair - Though got a lot of help from the therapy, skin symptoms did not subside fully.
- Poor - Patients received no significant help or deteriorated.

Later those patients whose responses were "good" or "fair", were grouped together in general as "satisfactory response".

Follow up was done for 3 months. Side effects of all the regimens were noted.

Results

Results of responses to the regimens are shown in Table I. Out of all the five regimens, regimen - IV showed the most satisfactory result (88.46%), followed by regimen-II (81.46%). Least satisfactory result was with regimen-I. The highest number of patients' percentage showing "good" response belonged to the regimen-IV, whereas percentage of patients showing highest "poor" response belonged to regimen-I.

Side-effects of various treatments are shown in Table II. Drowsiness was the commonest side effect. Others were constipation, dryness of mouth, increased appetite, weight gain, blurring of vision and

gastrointestinal disturbances etc.

Discussion

When only CPM was used 70.84% showed satisfactory response whereas Bain et al got it in 82%.¹ With only cyproheptadine Bailey got 84% result,² whereas CPM plus cyproheptadine here gave a satisfactory result of 78.26%. Ranitidine plus CPM showed a satisfactory response in 81.48%. Using H1 plus H2 blocker Shereff et al got a result of 85%,³ Ghose et al showed 92.9% satisfactory response using doxepin alone.⁴ In our study 88.46% of the patients got satisfactory result with CPM and doxepin combination.

So considering all the results, it can be

Table I. Treatment - Satisfactory response = (Good + Fair response)

Regimen	No. of patients	Satisfactory response	
		No. of Patients	Percentage
R I	24	17 (G-10, F-7)	70.84 (G-41.67%, F-29.17%)
R II	27	22 (G-14, F-8)	81.48 (G-51.85%, F-29.63%)
R III	23	18 (G-11, F-7)	78.26 (G-47.83%, F-30.43%)
R IV	26	23 (G-16, F-7)	88.46 (G-61.54%, F-26.92%)
R V	27	20 (G-12, F-8)	74.07 (G-44.44%, F-29.63%)

G=Good, F=Fair

Table II. Side-effects of treatment

Regimen	No. of patients suffered from side-effects (Type of side-effects and percentage)	Total percentage of patients suffered
R I	Drowsiness - 5 (20.83%); Dry Mouth - 1 (4.17)	5 (20.83%)
R II	Drowsiness - 4 (14.81%); Headache - 1 (3.70%) Constipation - 1 (3.70%)	6 (22.22%)
R III	Drowsiness - 6 (26.09%); Weight gain - 1 (4.35%) Increased appetite - 5 (21.74%)	11 (47.82%)
R IV	Drowsiness - 9 (34.62); Dry month - 2 (7.69%) Constipation - 4 (15.38%) Blurring of vision - 1 (3.85%)	12 (46.15%)
R V	Drowsiness - 5 (18.52%) GI. disturbances - 4 (14.81%)	6 (22.22%)

assumed that a combination therapy is superior to antihistaminics alone. Ranitidine and cyproheptadine increased the potential of the combined regimen because they have H2 receptor blocking and serotonin blocking properties respectively. Richelson showed that antidepressants have a very high affinity for H1 receptors in the mouse neuroblastoma cells.⁵ Doxepin has 56 times H1 receptor affinity in comparison to hydroxyzine⁶ and 775 times that of diphenhydramine.⁷ In association with antihistaminic action, doxepin possesses anticholinergic, antiserotonergic and alpha-adrenergic antagonistic actions, which are helpful as far as the aetiopathogenetic aspects of urticaria are concerned.⁸ Moreover, depression may be an underlying cause of urticaria, where antidepressants give good relief.⁹

Developed as an anthelmintic agent, levamisole is an immunomodulant too. Urticaria involves immunological phenomena in its causation. In this study its use has been done with the intention of using its double edged property of immunomodulant and anthelmintic action, because worm infestation has been found as an important cause of urticaria.¹⁰ Levamisole also plays role against various bacterial, viral, collagen diseases, diabetes etc.,¹¹ which are at many times the underlying cause of urticaria. so levamisole may be helpful in this regard. When combined with CPM it gave a better result than CPM alone. It was our general impression from this study that patients with physical urticaria responded better with CPM plus cyproheptadine and patients with signs and symptoms of stress and depression responded well with CPM plus doxepin therapy.

So it can be concluded that the CPM plus doxepin is the best regimen in this study, although it has more incidence of drowsiness. Levamisole, to the best of our knowledge has not been reported to be used against urticaria till date. CPM plus levamisole combination has shown better result than CPM alone, and this may become a new mode of therapy, but it requires further study involving a larger number of patients.

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