Acta Allergologica, 1966, XXI, 337–342

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THE ANTIPRURITIC EFFECT OF FENISTIL (DIMETHPYRINDENE) IN ALLERGIC CONDITIONS

Double Blind Clinical Study

By

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In 1959 the new antihistaminic compound Fenistil (Dimethpyrindene) had been introduced in the treatment of allergic conditions. It belongs to the indene group and its structural formula is: 2-(1-(2-(2-dimethylaminoethyl)-3 indenyl)-ethyl) -pyridine maleate.

Dimethpyrindene (Fenistil, N. V. Zyma-Nederland) possesses the very high therapeutic index[2] of 13.355; it is rapidly absorbed orally, producing maximal effect in experimental animals within one hour (2). Fenistil possesses both antihistaminic and strong antiprurigenic potency in allergic and in non allergic skin diseases (5,9). The only reported side-effects are: slight drowsiness which appears in 7 to 15 per cent cases (3, 7, 11) and slight dryness of the mounth (7).

The purpose of this study was to evaluate the effectiveness of Fenistil in the treatment of long-standing itching disorders.

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[2] The therapeutic index is the oral LD 50 divided by the oral ED 50 (that is the dose giving protection against one lethal dose of histamine).

It is a well-known fact, that the emotional factor plays a very important part in the appearance and the disapperance of allergic symptoms. In prurigo there is no objective assessment other than the patient's statement, so the double blind method of study was chosen.

MATERIAL AND METHODS

Only out-patients of the Allergic Clinic of Warsaw have been chosen for the trial. All of them suffered from chronic itching for at least 3 months, mostly because of different chronic allergic skin diseases. Only in 10 patients itching was either of unknown or of psychogenic origin.

No patients with a short morbid history or with an acute illness *e.g.* acute urticaria or drug sensitivity was included into the group.

The trial was carried on for two weeks.

Both, Fenistil and placebo, were packed in the original Fenistil bottles which contained 20 sugar coated tablets each. Each patient received two numbered bottles, one containing Fenistil and the other placebo. Neither the patient nor the doctor who examined him and noted his reactions, knew whether placebo was given in the first or the second week. The patient was informed only that the treatment would last for two weeks, regardless of the result after the first week.

Every patient was examined 6–8 days after receiving the first bottle and at that time received the second one. Usually there was an 1–3 days break between the two courses of treatment. The dose was 1 mg tablet of Fenistil or placebo three times a day. All the patients were asked not to take any other drug during the treatment.

RESULTS

During the observation 5 patients were excluded from the group because of lack of co-operation and one who received two weeks Fenistil both with good result.

The observation was completed on 43 patients who received both Fenistil and placebo. The results are shown in Table 1.

Twelve patients obtained benefit from placebo (groups B, C, F, see Table 1) and 17 patients from Fenistil (groups A and D). Ten patients showed no reaction either to Fenistil or to placebo (groups G and H) and four patients (group E) felt well on both treatments after starting with Fenistil.

There were 9 males (age from 8 to 71 years) and 34 females (age from 21 to 67, average 42 years). No difference

TABLE 1

	Good result after first week or first week better than the second	Good result after second week or second week better than the first	No difference Both weeks good	No difference Both weeks no effect
Fenistil-first week	Group A —	Group C —	Group E —	Group G —
Placebo-second week	4	6	4	6
Placebo-first week	Group B —	Group D —	Group F —	Group H —
Fenistil-second week	2	13	4	4
Total	6	19	8	10

TABLE 2

	Improvement after treatment with:				
	Fenistil	Placebo	Both first Fenistil	No improvement	Total
Contact dermatitis with or without general itching	6	1	0	1	8
Bacterial eczema	4	1	0	2	7
Chronic drug allergy	3	0	0	0	3
Chronic urticaria or quincke's oedema	3	0	1	0	4
General prurigo + neurosis	1	2	0	4	7
General prurigo + atopy	0	3	1	0	4
Atopic eczema	0	2	2	2	6
Prurigo simplex	0	1	0	1	2
Prurigo ani	0	2	0	0	2
Total	17	12	4	10	43

in reaction between males and females or between older and younger patients has been observed. There is only one striking difference (P between 0.05 and 0.01), namely that in the second week the treatment irrespective of the drug was more effective than in the first week.

The results in various diagnoses are listed in Table 2.

From the clinical point of view, Fenistil was effective in patients with contact dermatitis, drug allergy, chronic urticaria or Quincke's Oedema and bacterial eczema. The other patients did not respond in a satisfactory way.

Drowsiness was observed in 3 patients, only after Fenistil, never after placebo.

DISCUSSION

All the patients received the lowest recommended dose of dimethpyrindene (3 mg/daily) and only for a short period of 6 days. For that reason, it was impossible to divide the results into excellent, good or mild. Both, the disappearance of itching or its marked diminution have been marked as good. It seems that in some cases the increased dose of Fenistil could change the final results. If one assumes, that all patients from group D (see Table 1) truly felt better because of Fenistil and not because of second week of treatment (as they subconsciously could expect the improvement at that time) 21 patients (49 per cent) reacted positively to Fenistil. This number is definitely lower than obtained by other authors, 60 per cent (6), 66 per cent (8), 70 per cent (1), 73 per cent (10) and 83 per cent (11) and in our experiment not significantly different from the number of patients which reacted positively to the placebo. Our results are similar to those obtained by Jeanneret (50 per cent) (4) whose clinical material was very similar to ours.

That Fenistil has a strong antiprurigenic potency irrespective the origin of the prurigo, as is mentioned in the literature (4,8), is not confirmed by our observations.

On the other hand it is clear that in patients with a contact dermatitis, bacterial eczema, chronic drug allergy and chronic

urticaria, the therapeutic result with Fenistil differs from that in patients with prurigo simplex, prurigo ani, general prurigo and atopic eczema. ($P = < 0.005$). For the first group Fenistil seems to be useful as an antipruritic drug, for the second group it is of no value.

It shows the danger of combining patients with the same symptom irrespective the genesis in one group and to handle them as an aselect and unbiased group.

CONCLUSIONS

1. Dimethpyrindene (Fenistil, N. V. Zyma-Nederland) was effective in the treatment of itching in allergic skin diseases in about 50 per cent (33 per cent–65 per cent) of our patients, placebo in 28 per cent (15 per cent–44 per cent).

2. In our series there was no statistical difference between placebo and Fenistil in relief to the symptom of itching; irrespective of the drug, the results were better after 14 days than after 7 days of treatment.

The results obtained in patients with contact dermatitis, bacterial eczema, drug allergy and chronic urticaria were statistically different from the results in patients with general prurigo, prurigo ani and prurigo simplex.

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