

From the Dept. of Oto-Laryngology, University of Bergen, Norway.

THERAPEUTIC EFFECTIVENESS OF AN ORAL
ANTI-HISTAMINE COMBINATION
(DEXBROMPHENIRAMINE MALEATE/
D-ISOEPHEDRINE SULPHATE) IN THE
TREATMENT OF PATIENTS WITH
ALLERGIC RHINITIS

By

B. KAPSTAD & A. WARLAND

Despite the fact that the number of drugs for the symptomatic treatment of allergic ailments is constantly increasing, the therapeutic effectiveness of these agents has not radically improved during the last 10-15 years. Patients treated with anti-histamines frequently complain of drowsiness, and the effect is not always satisfactory.

The objective of this study was to determine the clinical effectiveness of dexbrompheniramine maleate combined with d-isoephedrine sulphate. The drug was administered in the form of capsules containing 6 mg dexbrompheniramine maleate and 120 mg d-isoephedrine sulphate.* The antihistamine brompheniramine has been used in the United States since 1958, and good results have been reported in controlled (1, 7), as well as uncontrolled (2, 4, 5, 6), clinical studies and it has been suggested that the combination with d-isoephedrine sulphate reduces the sedative effect seen with the use of dexbrompheniramine in some patients.

* Disophrol® Chr. Capsules, Schering Corp., USA.

METHODS

The investigation was carried out as double-blind study over a period of 3 weeks with patients from the E.N.T. Out-Patients clinic at Haukeland Hospital. They were all more than 14 years old and, if pregnant or possibly pregnant, they were excluded. All the patients went through a routine E.N.T. examination including bacteriological examinations, counting of eosinophilic cells in the nasal secretion, and sinus X-rays. Haemoglobin, sedimentation rate, white blood cells and IgE samples in peripheral blood were obtained. The patients underwent intracutaneous testing with a standard series of 38 allergens, as well as conjunctival and nasal provocation tests with the relevant allergens.

Only patients with atopic allergic rhinitis were included in this study which comprised both seasonal and perennial allergies. The patients were examined and treated by various physicians at the Out-Patients clinic, however, each patient was evaluated by the same physician during the entire investigation. Capsules of active substance and placebo were prepared in such a way that neither patient nor physician could distinguish between them, and they were allocated by means of a random code. The patients were instructed to take one capsule each morning and evening for 3 weeks and they were requested to record daily the following four main symptoms: nasal blockage/rhinorrhoea/sneezing/itching, together with the degree of symptomatic discomfort (No symptoms/Moderate/Severe).

All the clinical data were recorded at the initial examination and treatment was started immediately in those patients showing manifest symptoms. After 3 weeks of treatment, the patients were again examined and the effectiveness of the treatment assessed by patient and physician.

Patients suffering from seasonal allergy, but without allergic symptoms at the initial visit, were requested to return at the beginning of the season when the symptoms started to occur. At that time the patients were reexamined and treatment commenced.

Evaluation of the effects of the treatment, based on the patient's personal opinion, was graded as follows:

Marked improvement. The patient became completely or almost free from symptoms during the treatment period.

TABLE 1

Results	Number of pts. treated with Disophrol	Number of pts. treated with Placebo
Marked improvement	7	1
Improvement	4	2
No change	5	13
Worse	1	0

Improvement. The patient was markedly improved, but had still some symptoms during the treatment period.

No change noted.

Worse. The symptoms were intensified during the treatment period.

Any patient who did not carry out the treatment, or failed to complete the assessment form satisfactorily was considered a "drop-out". The effects of treatment were recorded morning, noon and evening on the first day, but afterwards in the evening only.

RESULTS

Thirty-seven patients commenced this study but four were considered drop-outs, as they did not attend for examinations. The material therefore includes 33 patients: 16 men and 17 women. Thirty patients were under 40 years. Seventeen patients received dexbrompheniramine maleate/d-isoephedrine sulphate, and 16 a placebo. No discrimination was made between seasonal and perennial rhinitis. Results of treatment are recorded in Table 1.

Drowsiness was noted by five of the 17 patients treated with dexbrompheniramine maleate/d-isoephedrine sulphate. None of the 16 patients receiving placebo complained of this side effect. All five patients who complained of drowsiness did, however, state that it was very moderate. One of the patients receiving placebo complained of headache during treatment.

DISCUSSION — CONCLUSION

The evaluation of the effects in the treatment of patients with allergic rhinitis for both controlled and uncontrolled studies, is difficult. Even without treatment, the intensity of the symptoms often varies from day to day for each patient and so does the duration of the period of illness. The grading of the symptoms and the effects of the treatment noted by the patient is subjective, and consequently liable to variation. Unbiased estimation of the effectiveness of clinical treatment is not possible.

An investigation using double-blind/cross-over techniques

could eliminate some of the uncertainties caused by subjective assessments. Clinical studies of this kind are particularly applicable to perennial rhinitis (3). However, with our material, which includes some seasonal allergies, such a technique would not prove successful and the number of patients is relatively small. Due to the working routine at our clinic, and the wide geographical spread of patients, frequent examinations during the treatment period are not possible.

Previous studies (1, 2, 4, 5, 6, 7) have shown positive effects, using dexbrompheniramine maleate alone, or in combination with d-isoephedrine sulphate, in the treatment of allergic rhinitis. This is confirmed in our study. However, the sedative effect of dexbrompheniramine maleate does not seem to be effectively eliminated by the combination with d-isoephedrine sulphate.

REFERENCES

1. Fierberg, A. A. (1964): Allergical nasal congestion. Effects of oral treatment with a combination of dexbrompheniramine and d-isoephedrine. *Ann. Allergy* 22, 324-328.
2. Frank, D. I. (1959): Clinical evaluation of dexbrompheniramine maleate in ear, nose and throat allergies. *Curr. ther. Res.* 1, 115-121.
3. Merde, U. & Wihl, J.-Å. (1973): Clinical evaluation of an oral combined antihistaminic sympathomimetic preparation. *Acta allergol. (Kbh.)* 28, 108-117.
4. Olansky, S. & Olansky, M. (1960): Treatment of the allergic reaction with dexbrompheniramine maleate. *Curr. ther. Res.* 2, 81-87.
5. Olansky, S. & Olansky, M. (1960): Antihistaminic activity of dexbrompheniramine. *Ann. Allergy* 18, 415-419.
6. Pullen, F. W. & Montgomery, W. W. (1961): A clinical evaluation of the combination of dexbrompheniramine and d-isoephedrine. *Curr. ther. Res.* 3, 51-54.
7. Rigual, R. (1963): A new oral decongestant. *Eye Ear Nose Thr. Monthly* 42, 58-63.

Authors' address:

B. Kapstad
 Øre-næse-halsavd.
 Haukeland sykehus
 5000 Bergen
 Norway

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.