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Tranexamic Acid (Cyklokapron®) in Chronic Urticaria: A Double-blind Study

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Received January 24, 1977

Abstract. A double-blind study with tranexamic acid (Cyklokapron®) was carried out in 17 patients with chronic urticaria. All patients had slightly depressed C_1-esterase inhibitor value. No significant differences were found between TA and placebo treatment periods.

Key words: Chronic urticaria; Tranexamic acid

Within recent years several workers have reported good results with the plasmin inhibitor epsilon-aminocaproic acid or its analogue tranexamic acid (TA), in hereditary angioneurotic edema (HAE) (1, 3, 4, 5, 7).

HAE manifests itself by attacks of edema in subcutaneous as well as in submucous tissue. The disease in general is believed to result from an inborn defect in the synthesis of a serum alfa$_2$-globulin that inhibits the first component of complement, and most patients with HAE have, besides a family history, very low values of C_1-esterase inhibitor (2).

Chronic urticaira (CU) is often followed by angio-edema, and in some cases patients with CU may be found to have slightly depressed C_1-esterase inhibitor values. In preliminary studies (6) a number of these patients seemed to benefit from TA. The purpose of the present investigation was to test the possible effect of TA in patients with chronic urticaria combined with depressed C_1-esterase inhibitor value, in a double-blind study.

MATERIALS AND METHODS

The trial was carried out on 17 patients, 13 women and 4 men, aged 10–60 years (average 34.6 years). The mean C_1-esterase inhibitor value was 90 units, range 72–100 (normal: 101–172 units). The randomized double-blind study lasting 9 weeks was split up into a 4 week treatment period with TA or placebo, 1 week without treatment, followed by a 4 week cross-over period with placebo or TA. The dose of TA was 1 g three times daily.

The patients recorded daily the severity of urticaria, angioneurotic edema and itching. The physician's evaluation was performed once weekly, together with a laboratory investigation including a leukocyte and differential count, se-creatinine, GP-transaminases and a urine examination for albumen and sugar.

RESULTS

The results of the study can be seen in Table I. No statistically significant differences were recorded between treatment period for TA and placebo. All laboratory tests were normal throughout the study. The only side effect noted was diarrhoea (reported by one patient).

DISCUSSION

Although antihistaminics may be helpful in CU, their value is often limited, and alternative treatments have to be sought. Activation of plasminogen and formation of plasmin appears to be an important factor in HAE (5). Plasmin formation may also lead to formation of kinins, which can induce urticaria. It was therefore natural to try TA in CU, especially in patients with low C_1-esterase inhibitor values.

Table I. *Results of treatment expressed in average units for severity of disease and itching* ±*S.D.*

0=no reaction or itching, 1=minor reactions or itching, 2=moderate reactions or itching and 3=severe reactions and intense itching

Period	Urticaria	Angio-edema	Itching
TA	0.88±0.8	0.45±0.69	0.98±0.92
Pause	1.03±0.86	0.64±0.85	1.09±0.93
Placebo	0.92±0.72	0.40±0.64	1.07±0.86

Unfortunately the present study failed to show any effect of TA in CU. Good results in the preliminary studies (6) must have been due to a placebo effect, which often is recorded in CU (8). The lack of effect could either be because plasmin plays no part at all in the development of symptoms of CU, or because patients with only a slightly reduced C_1-esterase inhibitor level have an almost normal inhibition of plasmin, so that treatment with an inhibitor will not give rise to any noticeable change in the symptoms.

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Treatment of Alopecia Areata with DNCB—An Immunostimulation?

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Received January 31, 1977

Abstract. Ten patients with long-standing areate type alopecia totalis were sensitized with 1-chloro, 2, 4-dinitrobenzene (DNCB). Following sensitization they were painted once weekly on a 40×20 mm area of the vertex with DNCB in acetone, in concentrations adjusted to the allergic response.

After 7 weeks, growth of hair was seen in the painted area in 3 patients and after 8 weeks all over the scalp in 3 other patients.

Key words: Alopecia areata; DNCB; Immunostimulation

Alopecia areata is often combined with atopy, thyroid diseases, vitiligo, chronic mucocutaneous candidiasis, and the presence of specific autoantibodies.

At the Department of Dermatology, the Finsen Institute, Copenhagen, 60 patients with alopecia areata were screened clinically and immunologically and 10 patients with alopecia totalis were treated with 1-chloro, 2, 4-dinitrobenzene (DNCB) according to the method described by Rosenberg (1).

Close relatives of two-thirds of the 60 patients had alopecia areata, atopy, or autoimmune-endocrine diseases. Abnormal immunological reactions and conditions usually connected with reduced resistance to infections were found in two-thirds of the patients. A group of 10 patients with alopecia totalis (average duration 2 years) were sensitized with 1 mg DNCB in acetone (closed patch test). 14 days later a DNCB dilution series was applied and the weakest dilution in $\mu g/cm^2$ to give ++ reaction was recorded as the sensitization titre. The reactions to DNCB did not differ from sensitization titres in normal individuals. Thereafter a 40×20 mm area symmetrically over the centre line of the scalp was painted with DNCB in acetone. A

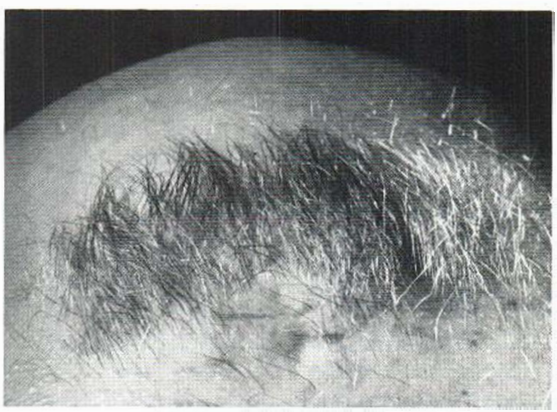

Fig. 1. Hair growth after twelve applications of 1-chloro, 2,4-dinitrobenzene in acetone.