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Treatment of Chronic Idiopathic Urticaria with Topical Steroids

An Open Trial

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Twenty-three patients with chronic idiopathic urticaria and 3 patients with urticaria pigmentosa received a 2-week treatment with daily application of potent topical steroid using plastic occlusion. Seventy per cent of the chronic urticaria patients had a statistically significant, immediate response, which, however, did not last until the final evaluation after 1.5 years. Relapse occurred after on average 3 weeks, but 39% reported less severity. The 3 patients with urticaria pigmentosa remained free from attacks for 6 to 9 months, after which they gradually relapsed. Two women were diagnosed during the follow-up period to have a carcinoma of the breast, and one patient developed systemic lupus erythematosus.

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Patients with chronic idiopathic urticaria and urticaria pigmentosa (mastocytosis) represent a therapeutical problem despite the beneficial effect of antihistamines among more than 80% of the patients. At present these patients are left with a symptomatic treatment hoping for a spontaneous remission to come.

Experimental and clinical data have shown that topical application of potent steroid can reduce the number of mast cells in the skin, and it will significantly improve the symptoms in patients with skin mastocytosis (1–5). Although patients with urticaria do not exhibit an increased number of mast cells in skin, we wanted to evaluate the effect of a 2-week treatment course using potent topical steroid in adults with chronic idiopathic urticaria and urticaria pigmentosa.

MATERIAL AND METHODS

From 1986 to 1992 a total of 181 patients were investigated in our department for chronic urticaria. The diagnosis was confirmed by clinical examinations. The disease history of each patient was carefully recorded. Skin prick tests were performed using our standard and food allergen series, and blood tests were taken including hemoglobin, leukocytes, complements C3 and C4, IgE, rheumatoid factors and ANA. Physical tests were conducted according to disease history. If no obvious cause for the urticaria could be found, then the patients were put on a 3-week diet and daily symptom score. Provided a significant improvement occurred, the patients were admitted for single-blind provocation studies with food conservatives, colouring agents, *Candida albicans* extract and salicylic acid.

Since January 1, 1986, we have offered patients with chronic idiopathic urticaria a 2-week treatment with daily application of potent topical steroid using occlusion. By December 31, 1992, we had evaluated 17 women and 6 men, mean age 39 years (range 17 to 55 years). At the time of treatment their daily urticaria had lasted for 2 months to 16 years. The mean treatment period was 11.6 days (range 7–14 days). There were different causes for a treatment schedule shorter than 2 weeks, most often because the therapy was quite demanding. Furthermore we have evaluated one woman and 2 men (age 43 to 62 years) with urticaria pigmentosa; disease duration was 15 to 22 years. All had daily urticaria when the therapy was started.

Control group

A control group was chosen among patients not given topical steroid. This group comprised 13 patients, 10 women and 3 men, mean age 40 years (range 24 to 74 years). They had suffered from daily urticaria for 3 months to 5 years.

Treatment

Daily application of clobetasole propionate (Dermovate®) crème was given in all regions except face, neck and genital area. The application was followed by plastic occlusion for 6 h. This can only be given to half of the body (upper or lower part) to avoid increased body temperature, so the occlusive therapy was interchanging. Four of the 23 patients received the therapy without occlusion due to excessive sweating. Because of the small number of patients their results have not been looked at separately. The intended treatment plan was 2 weeks. The total amount of applied clobetasole propionate ranged between 50 to 100 g, average 80 g.

Evaluation

The final evaluation of the intervention group took place on average after 20.5 months following therapy (range 4–58 months). All 23 patients and the 3 urticaria pigmentosa patients were asked to fill in a questionnaire. The control group was contacted with the same questionnaire and by telephone; the observation period was 32.2 months (range 14–46 months). All patients were asked to indicate "cure" = no urticaria, "improvement" = urticaria, but not daily as before, or "no effect" = continued daily urticaria attacks. They were also asked about other diseases.

RESULTS

One of the female patients, aged 34, who had had severe daily urticaria for more than 2 years, died before the final evaluation was performed and was therefore not included. Initial investigations had shown normal thyroid function, but acute thyrotoxicosis was diagnosed 2 months before her sudden death.

The efficacy of the therapy is illustrated in Table I. We found a statistically significant immediate effect of the treatment ($p < 0.01$), but no statistically significant difference at the final evaluation. Among the 7 patients with unchanged urticaria at the first evaluation we later diagnosed leukocytoclastic vasculitis in 3 patients. Following therapy relapse

Table I. *The clinical outcome of occlusive topical steroid therapy in patients with chronic idiopathic urticaria and controls*

Effect	First evaluation		Final evaluation	
	Steroid	Controls	Steroid	Controls
No urticaria	6	3	6	1
Improvement	10	0	5	7
No change	7	10	12	5

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Table II. *Observed side-effects following a 2-week course of topical steroid under occlusion in 23 patients with chronic idiopathic urticaria*

Symptoms	No. of patients
No physical complaints	11
Increased skin fragility	11
Bleeding in skin	4
Menstrual bleeding	3
Acne	2
Weight increase	2
Psychological complaints	2

occurred after an average of 3 weeks; however, 9 reported less severity.

The 3 patients with urticaria pigmentosa had been without urticaria for 6–9 months one year after therapy. Then they gradually relapsed, with two to three urticarial attacks a week.

Eleven patients had no physical side-effects. Side-effects are presented in Table II. Two patients with urticaria pigmentosa complained of weight gain.

One patient developed systemic lupus erythematosus during the follow-up period. Two women were later diagnosed to have a carcinoma of the breast with regional metastasis. The urticaria was in retrospect considered a prodromal symptom of these disorders.

DISCUSSION

This open clinical study indicates that topical steroid application can significantly improve chronic urticaria just following therapy and maybe continue to have an effect, when evaluated following 1.5 years. It must, however, be emphasized that the patients were highly selected; our patients had idiopathic urticaria despite thorough investigations. Their disease duration was on average more than 3 years. This group constitutes less than 10% of all urticaria patients (6, 7).

The topical application schedule of 2 weeks is acceptable to most of the patients and was efficacious among the 3 patients with systemic mastocytosis, which is in contrast to former findings (3). Our results indicate that 2 weeks occlusive therapy is sufficient, which is also indicated by the reduction in tryptase release from 2 patients before and after therapy (8).

The treatment carries a high degree of side-effects (52% of cases), although of minor severity. There is no doubt that a significant systemic absorption takes place, as indicated by menstrual bleeding in 3 patients and acne in 2 patients. We did not measure plasma cortisol during our study, but the findings above document systemic absorption. We found 4 patients with internal disorders, which is remarkably high (7, 9).

Our preliminary report indicates that some of the patients with chronic urticaria may be helped. If they do not respond to this treatment, then further careful investigations should be conducted for an eventual underlying internal disorder. In women we recommend mammography.

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