ESPERSON IN STEROID RESPONSIVE DERMATOSES

L. K. VASISTHA AND GURMOHAN SINGH

Summary

A fluorinated topical corticosteroid ointment, *Esperson* 0.05% was compared with a placebo in a randomised double blind right-left trial in 52 patients having different dermatoses for a period of 7 days. It was found to be effective and produced no side effects.

A new fluorinated topical corticosteroid **Esperson** with a generic name Desoxymetasone and chemical formula 9 ∝ fluoro 11 β-21 dihydroxy 16 ∝ methyl pregna-1, 4 dien-3, 20 dione was studied for acute and chronic toxicity and local tolerance and found to be very safe[1]. It is a potent anti-inflammatory agent when used on human skin. In a strength of 0.25% it was compared with 0.1% betamethasone 17-valerate in a randomised, double-blind, right-left trial in 44 patients by Meyer-Rohn in 1975 and was found significantly better than the latter.

As it was extremely effective at 0.25% strength, we planned to study its effectiveness at a lower concentration i. e. 0.05% comparing it with a placebo in corticosteroid-responsive dermatoses.

Material and Methods

The study was conducted on 52 subjects having comparable lesions on the two sides of the body, the area of involvement being less than 10% of the skin surface.

There were 39 males and 13 females with the mean age of 30.5 ± 2.18 years. The dermatoses included atopic dermatitis (10), neurodermatitis (10), lichen planus (7), contact dermatitis (5), seborrheic dermatitis (5), nummular eczema (4,) dyshidrotic eczema (2), photodermatitis (2), varicose eczema (1), acute dermatitis (2), sub acute eczema (2) and chronic eczema (2). The duration of illness ranged from less than one month to over 10 years.

Desoxymetasone ointment used was in a water-in-oil emulsion with pH 5.9 and it was compared with the base alone. Both the ointments were provided in identical looking tubes marked with the patient's number and the side on which the particular tube was to be used as per the randomisation table. The patients were instructed to use a particular ointment on the side indicated on the tube and apply it with gentle rubbing with a finger using a finger stall three times a day for 7 days. They were asked to wash the part once a day only in the morning followed by application of the ointment. Occlusion was not used. An attempt was made to examine the patient on every working day.

The efficacy of the two ointments was evaluated on the basis of the following parameters.

1.	Erythema	2.	Oedema
3.	Vesicles/oozing	4.	Scaling
5.	Itching	6.	Burning

The severity of these parameters before and after starting the therapy was recorded as follows on a 4-point scale :-

Very severe +++

Moderately severe ++

Esperson (R) Hoechst Pharmaceuticals limited.

Section of Skin and V.D.,
Institute of Medical Sciences,
Banaras Hindu University,
Varanasi-221005.

Received for publication on 16—8—1978

Mild +
Absent o

On the basis of individual signs and symptoms, an overall assessment was given as follows —

1. Complete disappearance of lesion
2. Marked improvement
3. Moderate improvement
4. No improvement
5. Worsening

Results

The study showed that improvement of the lesions started from the first day of treatment on the side of Desoxymetasone application. It was found significantly superior to placebo regarding improvement in various signs and symptoms individually as well as in the group from 1st day to 7th day of treatment. Complete disappearance of signs and symptoms was observed in 30.43% of patients treated with Desoxymetasone, and in 2.17% of patients treated with placebo at the end of study though difference in the response was evident from the third day of treatment (Table).

No side effects of steroid application were seen during this study.

Discussion

The effectiveness of a steroid ointment cannot be improved above a certain concentration, however local side effects like atrophy has been found proportional to its potency[2]. In search of a better corticosteroid preparation which will combine potency with absence of adverse effects, a new fluorinated steroid Desoxymetasone has been used by Meyer Rohn in 1975 in Germany[1]. It was found better than 0.1% betamethasone 17-valerate but produced drying effect on skin so that it was necessary for them to use a non-steroid ointment in addition. The drying effect was seen on twice a day application. So we have used it in a lower concentration (0.05%) in a similar double-blind trial in 52 patients for 7 days. Its effectiveness is evident from the results obtained. It has not produced any drying effect even on thrice a day application at this concentration.

TABLE
Comparison of percentage of patients showing improvement on global assessment scale

Global assessment	Day 1(n=52)		Day 3(n = 48)		Day 7(n=46)	
	E	P	E	P	E	P
Complete disappearance of signs and symptoms	0.0	0.0	0.0	0.0	30.43	2.17
Marked improvement	1.92	0.0	20.83	2.08	30.43	36.96
Moderate Improvement	34.62	17.31	50.0	52.08	34.78	41.30
No improvement	63.46	82.69	29.17	45.83	4.35	19.57
Wilcoxon's signed rank test P-value	$P < 0.0^{5}$		$P < 0.001$		$P < 0.001$	

E — Esperson P — Placebo

References

1. Meyer-Rohn J : Clinical results with a new local steroid. Z Hautkr : 50 Suppl 2 : 3, 1975.
2. Plano MK : Topical therapy, In : Recent advances in Dermatology, Ed. Rook A, Edinburgh and London, Churchill Livingstone, 1973, p 372 (No. 3)