A CLINICAL TRIAL WITH "COTARYL CREAM" IN HYPERKERATOTIC SKIN CONDITIONS

RADHA RANI AGGARWAL,* F. HANDA † AND RAJ KUMAR ‡

Summary

A clinical trial with Cotaryl Cream was undertaken on sixty patients suffering from various hyperkeratotic skin conditions, attending the Skin & VD Outdoor from 1st March, 1977 to 28th February, 1978 Main constituent of Cotaryl Cream is 12% urea and it is known for its antipruritic, keratolytic, hygroscopic and antibacterial action. Our results were very encouraging and results were recorded as excellent in 11 patients, good in 25, moderate in 15, poor in 7. No response was observed in two patients. Only two patients experienced untoward effects such as mild erythema and burning sensation over the exposed areas. 60% patients had excellent to good results.

In dry rough scaly conditions such as ichthyosis, the skin contains much less water than normal skin. When exposed to high humidities dried normal skin regains its water content, in contrast to ichthyotic skin. Attempts at treatment have centred on trapping water in the skin by a film of grease, adding a hygroscopic substance to the skin in the hope of binding water there, or attempting to disperse the masses of keratin present in the horny layer with keratolytics such as salicylic acid. None of these treatments is particularly effective. Urea is a polar binder of water and it can rehydrate and swell ichthyotic scales. So it has been tried in dry scaly conditions by Augustine & Thambiah[1] 1973. In an O/W cream base urea is helpful in the treatment of ichthyosis[2]. Cotaryl Cream contains:

Urea I.P. - 12%, Lactic acid IP-6%,
Aminoacetic acid NF (glycine) - 3%,
Ammonium chloride IP - 0·5%,
Sodium Chloride I.P. - 0.5%,
Potassium Chloride - 0.5%,
Calcium Lactate - 0.5%,
Magnesium Chloride - 0.3%,
Sodium acid phosphate - 0.5%,
Base - qs

Material and Methods

The present study included sixty patients with various skin diseases (showing in chart No. 1) attending the skin outdoor of Medical College, Patiala

TABLE 1

Showing the type of disease in 60 cases

Diagnosis	No. of cases	Percentage
Ichthyosis vulgaris	32	53.33
Acquired Ichthyosis	2	3.33
Tylosis with Ichthyosis vulgaris	5	8.33
Ichthyosiform erythroderma	2	3.33
Tylosis	19	31.67

* Asstt Prof Skin & VD.
† Prof & Head of the Deptt Skin & VD.
‡ Sr. Lecturer Skin & VD
Govt Medical College, Patiala.
Received for publication on 2—9—1978.

and treated with cotaryl cream. The diagnosis was made on the basis of history and clinical picture. The patients were of either sex and in the age group of 10 months to 55 years. All patients were instructed to apply Cotaryl Cream once daily in the summer season and thrice in the winter season after taking bath. All other drugs both topical and systemic were withheld during the course of this study. Patients were instructed to report any untoward effect. Each patient was advised to attend for follow-up after a week. At each visit, patients were carefully assessed with respect to the degree of scaling, erythema, thickening of the skin, dryness, fissuring and pigmentation. Any other side effects of treatment, if noted, were recorded.

TABLE 2
Response of Cotaryl Cream in 60 cases

Response	No. of cases	Percentage
Excellent	11	18.33
Good	25	41.67
Moderate	15	25.00
Poor	7	11.67
No response	2	3.33

Observations

On completion of trial, an overall assessment of the improvement observed was made on a five point scale based on the clinical features.

Excellent — With treatment patients' skin returned to almost normal. No erythema, scaling or pigmentation was present. No abnormal sensation was observed. Fissures healed in cases of tylosis and thickness decreased.

Good — Scaling, pigmentation, erythema and feeling of tightness disappeared but slight dryness of the skin remained and patient still remained conscious of the disease. Fissures healed and disappeared but thickness of the skin persisted in cases of tylosis.

Moderate — Thick scaling, erythema and feeling of tightness disappeared, but dryness and fine scaling remained. Thickness of palms in soles with superficial fissures did not disappear. Deep fissures healed.

Poor — Scaling, pigmentation and feeling of the tightness were less. In palms and soles there was some improvement like decrease in the thickness of the skin initially but afterwards there was no further improvement.

No Response — No improvement at all.

Discussion

Urea has been used in dermatological preparations to a varying extent over many years. Its main pharmacological properties are antibacterial activity, protein solvent and denaturing, increased hydration i.e. water holding capacity of protein and accelerated skin penetration. The ability of urea to increase the amount of water held in the stratum corneum may, therefore, explain its beneficial effect on ichthyotic skin[2].

Results from Cotaryl cream were quite encouraging. Out of sixty cases, excellent response was observed in 11 cases, good response in 25 cases, moderate response in 15 cases, poor response in 7 cases. There was no response in two cases. I was especially surprised to note the response of Cotaryl in two cases of Ichthyosiform erythroderma in 2 sisters who improved a lot. Fifteen cases who were previously using Zinc boric ointment also showed much better response with Cotaryl. Cotaryl is much better as compared with zinc boric ointment and other bland oils like coconut oil and liquid paraffin as it dose not stain and has an agreeable smell. Side effects are negligible. However, two patients experienced mild erythema with burning sensation over the exposed areas. To sum up, Cotaryl cream is

quite effective in cases of ichthyosis vulgaris, ichthyosiform erythroderma and cases of tylosis.

References

1. Augustine SM & Thambiah AS: Trial with Calmoril Cream 10% in hyperkeratotic conditions. The Anticeptic, 70:535, 1973.
2. Rook A, Wilkinson DS and Ebling FJG: Text Book of Dermatology 2nd Ed Blackwell Scientific Publications, Oxford, London 1972 p 2073.

Felicitation

We offer our sincere felicitation to Dr. P. N. Behl, New Delhi, who has been elected Vice-President of the International Society of Tropical Dermatology at their conference in New Orleans.

— *Managing Editor*