CLINICAL TRIAL WITH JADIT AND JADIT-H IN DERMATOMYCOSES

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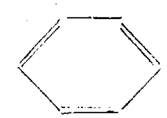
Mycotic infections of skin and its appendages occupy high incidence in tropical countries where temperature is high and atmosphere humid. Like most of the dermatoses topical treatment is favoured in mycotic infections of skin because of the ready accessibility. The topical usage of many antimycotic agents has long been known. Still the search for an ideal, safe and more effective topical anti-mycotic preparation continues as most of them that are used at present are not only irritant but loose their efficacy in presence of tissue proteins. The advent of systemic antifungal antibiotic-griseofulvin has not limited the use of topical anti-mycotic agents as its use is not completely free from toxic effects and should be restricted to generalized infections of skin, hair and nail.

Methods and Materıal. In the present study JADIT and JADIT-H ointment in 5 G-tubes supplied by Hoechst Pharmaceuticals Ltd., Bombay were used. JADIT is a colourless non staining anti-mycotic ointment containing 10 percent Buclosamide and 2 percent salicylic acid in an ointment base which is a bland mixture of higher aliphatic hydrocarbons and esters of several higher fatty acids, together with monovalent alcohols. The solvent is a mixture of several alcohols to which castor oil has been added. JADIT-H in addition to the above ingredients contains 0 5 percent hydrocortisone acetate.

Pharmacology. Buclosamide (4 chloro-2 hydroybenzoic acid-N- butyla mide.

Cl  - C(=O) - NH - CH2 - CH - CH3 is active principle of JADIT

Acute toxicity studies have shown tnat white mice tolerate oral doses upto 10 G per Kg., as a 10% suspension in starch broth. When given sub-cutaneously the amounts tolerated are 500 mgs/kg. Local tolerability was also found to be very satisfactory. Cutaneous application and intradermal injection in rabbits produced no evidence of irritation. When applied to the conjunctiva of the rabbit's eyes there were no changes observed. Its antimycotic action is not significantly impaired even in the presence of tissue proteins. The protein factor of JADIT at the most is 4 in sharp contrast to other colourless antimycotic preparations which have a protein factor of approximately 30. This property is said to enable JADIT to penetrate deep into the epidermis and exert an optimum therapeutic action.

*Received for publication on 2-2-1970.

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Salycylic acid is a well known keratolytic and "anti-fungal" agent which softens the superficial layers of epidermis to enable deeper penetration of the ointment into the skin.

Hydrocortisone, due to its antinflammatory antiallergic and antipruritic. properties, has an important role to play in combination with antifungal prepartions, which suppresses the inflammatory reactions which may constitute the presenting or even the dominating feature of fungal infections.

JADIT is said to be effective against most known members of genus Microsporon, Trichophyton, Epidermophyton and several strains of candida albicans affecting skin.

Topical therapy with the ointment was tried in 53 cases of various dermatomycoses that attended the department of Dermatology Out-patient of Gandhi Hospital, Secunderabad. The details of sex, duration, and their response to therapy are given in Table I & II.

Patients included in this study were supplied with 5 G-tubes of ointment. They were advised to apply intially on a small affected area for the first 3 days and when they were sure of no untoward reactions, they were advised to apply to the entire affected area, twice daily. In patients who compained of severe itching or where severe inflammatory signs were present the treatment was initiated with JADIT-H. When signs of inflammation subsided, treatment was continued with JADIT. The treatment was continued beyond seven to ten days after regression of lesions in order to prevent relapse. Mucosal surfaces were avoided. Patients were observed thrice weekly for the first three weeks and later twice a month.

TABLE I

Clinical types	No.	Male	Female	KOH (+)	KOH (−)	Remarks
Tinea corporis	20	11	9	19	1	—
Tinea cruris	10	8	2	10	Nil	—
Tinea pedis	8	5	3	6	2	—
Tinea manus	3	2	1	3	Nil	—
Tinea versicolor	8	6	2	8	Nil	—
Erythrasma	4	3	1	4	Nil	—

TABLE II.

Clinical types.	No.	Duration of Therapy.			Response to therapy.			
		Less than one month	1-2 months	2-3 months	Good 70-100 %	Fair 40-70 %	Poor No Improvement.	Remarks.
Tinea corporis.	20	14	6	Nil	18	2	Nil	—
Tinea cruris.	10	8	2	Nil	8	2	Nil	—
Tinea pedis.	8	5	2	1	6	1	1	—
Tinea manus	3	2	Nil	1	2	Nil	1	—
Tinea versicolor.	8	Nil	6	2	3	4	1	—
Erythrasma.	4	Nil	2	2	Nil	1	3	—
Total.	53	29	18	6	37	10	6	—

Results and Discussion. In the present study a total of 53 cases of dermatomycoses were subjected to a trial of topical application of JADIT-H and JADIT. The cases selected were clinically typical new cases with no previous topical or systemic treatment. Thirty five cases were males and 18 females. All were adults between 25 to 35 years of age. Twenty cases were of tinea corporis, 10 tinea cruris, 8 tinea pedis, 3 tinea-manus, 8 tinea versicolor and 4 were Erythrasma (Table. I). Fifty cases showed mycelia from the scrapings after KOH treatment (Table I). The response to therapy was very good in 37 cases (69 6%), and 10 case (18.7%) showed fair response, only six cases did not show any improvement (11.3%). Three cases of Erythrasma and one case of tinea pedis, tinea manus and tinea versicolor did not respond. Twenty nine cases showed response with less than one month's therapy 18 cases required treatment for more than one month. Such of the cases that did not respond for 2 months therapy never showed any clinical improvement even after prolonged rherapy. The response in cases of Erythrasma was poor most probably because the causative factor is not fungal but bacteria (Corynebacterium).

Except for few cases that complained transient stinging sensation in the initial stages no untoward symptoms appeared with the treatment. No adjuvant therapy was given along with local therapy with JADIT.

Summary. Fifty three cases of various dermatomycoses were studied with topical therapy with JADIT and JADIT-H. Thirty seven cases showed good response, 10 cases showed fair response and 6 cases showed poor response. Average duration of local therapy required in 29 cases was less than a month while 18 cases required about 6 weeks. No cases showed untoward reactions. JADIT being a colourless, non-staining and non-irritating ointment was acceptable to all patients. Our experience shows JADIT is a safe and effective antimycotic preparation for topical therapy.

Acknowlodgements. Out thanks are due to Dr. N. R. V. Swamy, M.B., MRCP., (Lond), Superintendent, Gandhi Hospital, Secunderabad for permitting us to use hospital records and publish this paper. Our thanks are also due to Messrs. Hoeschst Pharmaceuticals Ltd., Bombay for their liberal supply of JADIT and JADIT-H ointment tubes and also the relevent literature.

REFERENCES

(1) Banerjee et al—Fungus Diseases in India, 1962, Pp. 181-187.

(2) Kandhari K. C. et al—Indian Practitioner Nov., 1968 Pp. 1009.

(3) Nagabhushnam. P. et al; Indian Journal of Dermatology and Venereology Vol., 35-May-June, 1969. Pp. 121-124.

(4) Parmesh et al—Mediscope vol. 472, 1965.