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EVALUATION OF AN INJECTABLE SCABICIDAL PREPARATION — SCABIEZMA

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Summary

Twelve cases of scabies were treated with "Scabiezma" and followed up. Results were assessed clinically for objective and subjective clearance of symptoms. Laboratory examination for liver damage studies and nephrotoxicity studies were undertaken. No untoward reaction was noticed in the cases under study. Remarkable and sustained antipruritic effect was observed after the first injection which was maintained for the duration of the treatment which lasted for four days and the follow up showed complete clearance of the infection.

Introduction

Of late, Scabies is assuming alarming local and general epidemic outbreaks in most parts of our country and in the world as well[1]. It is also understood that a National Symposium is being arranged in the Medical School, University of Minesota, U.S.A. showing the importance it has assumed. Very many factors have been adduced for the sudden spurt in the incidence of this common communicable parasitic infestation. Among them, the following factors are considered to be of importance.

1. Wide and constant use of Topical Steroid Skin Ointments by self medication and otherwise by the public, without recognizing the inherent dangers of undermining the dermal immunological factors, thus lowering its resistance against parasitic infestations.

2. Widespread use of oral and parenteral antibiotics for every conceivable infection whether indicated or not, thus upsetting the delicate ecological balance between the host and the parasite.

3. Lowering of personal hygiene standards in developing countries due to non-availability of washing facilities.

4. Congested living conditions where people live close together for want of proper accommodation.

5. Atypical varieties such as Urticarial, Norwegian, Infantile, Lichenoid and Scabies in Hansen subjects which are often misdiagnosed.

The traditional topical applications for the treatment of Scabies are time consuming and very messy and necessitate the strict observance of certain important pre-treatment and post-treatment procedures which the present day patients loathe to observe. Patients expect quick relief from the intractable itching.

"Scabiezma" was offered to the author as a rapid approach for use by the injectable route by the Industrial and Research Institute (Private) Ltd.,

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Bombay. A clinical evaluation of the drug in Scabies is presented in this transaction.

Material and methods

The clinical study was confined to adult patients of both sexes belonging to the age group 25 to 45 years attending the consulting practice of the author. None of them had any treatment with other drugs elsewhere. During the course of treatment with the above drug, no other drug was used.

The drug was supplied as 1 ml sterile ampoules for deep intramuscular injections. It contained the following:

Precipitated Sulphur	I.P.	2.0mg
Benzyl Benzoate	I.P.	0.1gm
Solvent Ether	I.P.	0.5%
Lidocaine	U.S.P.	1.0%
Olive Oil	B.P.	Q.S.

It is for the first time that Benzyl Benzoate, a well known topical acaricide is presented in combination with another ancient and equally well known acraiside for systemic injectable therapy. The prescribed dosage was 1 ml daily by deep intramuscular injection for the adult for four or five days. The ampoule was dipped in boiling or warm water to reduce the viscosity of the solution and to minimise the pain and help proper dispersion of the solution.

A total number of 24 adult male and female patients belonging to the age group of 20 to 45 years underwent the treatment for an average duration of four days. Routine clinical examination and laboratory examinations were carried out at the beginning and end of treatment. Patients were followed up for a period of one week after cessation of treatment. Clinical photographs before and after treatment were also taken. All the patients were given the injections in the gluteal region. The identity of the product was not revealed to the patients. They were asked to report daily and advised not to use any other medication. They were forewarned about the possibility of a pyrexial reaction and were advised to ignore it as part of the therapy. Complete records of only 12 patients were available. Their data are presented in Table 1.

TABLE 1

S. No.	Age	Sex	Occupation	Duration	No. of Inj.	Results
1.	24	M	Punch operator	4 months	4	3 Plus
2.	20	F	W/o above	4 months	4	3 ,,
3.	27	M	Driver	20 days	3	2 ,,
4.	22	F	W/o above	20 days	3	2 ,,
5.	31	M	Agriculture	4/5 months	4	3 ,,
6.	39	M	Electrician	15 days	5	3 ,,
7.	29	F	W/o above	7 days	5	3 ,,
8.	32	M	Cafe Manager	3 months	3	2 ,,
9.	30	F	W/o above	2 months	3	2 ,,
10.	32	F	Housewife	1 month	3	3 ,,
11.	42	M	H/o above	1 month	3	3 ,,
12.	29	M	Clerk	2 months	4	2 ,,

Assessment

3 Plus : Excellent : Cure in 4 days. 1 Plus : Fair : More than 6 days.
2 Plus : Good : Longer than 4 days. Neg : Ineffective :

Rationale and mode of action

The probable mode of action was envisaged to consist of the following combination of factors.

1. The parasiticidal drugs in the combination acted by a sustained depot action.
2. The drugs are probably absorbed into the interstial tissue spaces and fluids and reach the site of the habitat of the parasite for parasiticidal action through the interstitial lymphatic channels and to the surface layers and or excreted through sweat and the drug so released interfered with the multiplication of the parasite.

Toxicity

No allergic or anaphylactic reactions were observed. Mild pyrexia associated with the injection was a feature of the daily treatment. Urine examination in all the cases revealed no abnormality. Values of Blood Urea, Serum Creatinine estimation and S.G.P.T. estimation before and after treatment were normal and showed no variations.

TABLE 2

Clinical Study

S. No.	Total Inj.	Pruritus		Skin Lesions		No. of Days	Improvement		Response
		Before T.	After T.	Before T.	After T.		Subj.	Obj.	
		Plus		Plus			Plus	Plus	Plus
1.	4	4	0	4	0	4	3	1	3
2.	4	4	0	4	0	4	3	1	3
3.	3	3	0	4	0	3	3	3	3
4.	2	2	0	2	0	2	3	3	3
5.	4	3	0	3	0	3	3	3	3
6.	3	3	0	3	0	3	3	3	3
7.	3	3	1	3	1	3	3	2	3
8.	2	4	0	4	2	2	3	3	2
9.	3	3	1	4	3	3	3	3	3
10.	3	3	0	3	3	3	3	3	3
11.	3	3	0	4	0	3	3	3	3
12.	2	2	0	2	0	2	3	3	2

Results

In order to determine the antipruritic effect of the drug, and the clearance of the lesion in the skin, the gradation was done as shown in the above table.

4 Plus indicates degree of itchnig before treatment.
3 „ indicates 25% Relief.
2 „ indicates 50% Relief.
1 „ indicates 75% Relieff.
0 „ indicates 100% Relief.

The response of the drug at the end of the schedule period of treatment was evaluated on the following basis.

Rating	Improvement	Percentage
4 Plus	Cured.	100
3 „	Markedly improved.	75
2 „	Moderately improved.	50
1 „	Slightly improved.	25

TABLE 3

Investigations

S. No.	Urine		Blood Urea		Serum Creatinine		S. G. P. T.	
	Before	After	Before	After	Before	After	Before	After
			mgms / 100ml		mgms / 100ml		I. U. / Perlitre	
1.	Normal	Normal	41	40	1.0	1.0	9.1	11.
2.	,,	,,	34	40	1.0	1.0	14	14.
3.	,,	,,	34	38	1.0	1.5	14.1	14.
4.	,,	,,	38	40	1.0	1.5	8	8.
5.	,,	,,	25	30	1.5.	1.5.	8	8.
6.	,,	,,	30	30	1.4.	1.4.	10	10.
7.	,,	,,	33	33	1.0	1.2.	10	10.
8.	,,	,,	36	25	1.8.	1.5.	14	14.
9.	,,	,,	34	38	1.6.	1.6.	16	16.
10.	,,	,,	41	41	1.0	1.0	9	9.
11.	,,	,,	30	30	1.4	1.4	14	14.
12.	,,	,,	33	33	1.0	1.4	8	8.

Discussion

The efficacy of the drug as an ascaricide was evident from the relief of the chief and important symptom-pruritus after the first or second injection. No local reaction barring the pain at the site of injection was noticed. Anaphylactic reactions were completely absent in all the cases under treatment. The results showed that the age group in which it was tried, the drug was therapeutically safe and produced the desired results as claimed by the manufacturers. Children were excluded from the study and the patients chosen had no child contacts to introduce reinfection.

The quantity of the acaricidal drug in the injection, though very small in quantity appeared to have some synergistic action. It did away with the messy topical applications for long periods which involves scrupulous observance of the instructions on the part of the patient. It was cheaper to the patient the cost being insignificant. The drug can be used perhaps as a prophylactic in contact-adults when mass campaigns for the treatment and eradication of local epidemics are planned.

Anckowledgment

Liberal supply of "Scabiezma" was given by the Industrial & Research Institute Pvt. Ltd., Phool Baugh, Bombay-400063, for conducting the above trials.

REFERENCE

1. Cannon AB and Mc Rae ME : Treatment of Scabies. Report of 100 patients treated with Hexachlorcyclohexane in a vanishing cream base J, Am Med Ass 138, 557.