

EVALUATION OF GAMMA BENZENE HEXACHLORIDE IN TREATMENT OF SCABIES

P. B. HARIBHAKTI* AND THOMAS KOSHY†

Summary

56 patients of scabies were studied for the evaluation of GBH (1%) as a therapeutic agent. All patients received treatment with 1% cream for a period of 7 days and was followed up at 3 and 7 days intervals. Good to excellent response was observed in 51 patients (91.04%) while 3 patients (5.4%) showed a fair response. Only 2 patients (3.5%) failed to show any response to the treatment. The drug has been found to be highly effective and well tolerated by children as well as adults. No evidence of drug sensitisation or irritation was noted.

Introduction

Scabies is an extremely contagious disease affecting infants, children and adults. In a tropical country like India, the disease is endemic, with seasonal outbursts during the winter months. Intractable itching is the presenting symptom which may be present from weeks to months. A typical eruption of pruritic papules, vesicles, pustules or crusted lesions and eezematous reaction in children, is present in most of the patients. Scabies responds well to topical applications of sulphur ointment, benzyl - benzoate emulsion and other antiscabetic drugs. Lately it has been observed that the response to the treatment with these drugs has not been very satisfactory. In order to find other drugs for the treatment of scabies,

gamma benzene hexachloride (GBH) is tried. The aim of the present study was to find out the effectiveness of GBH in scabies.

Materials and Method

71 patients with classical symptoms and clinical features of scabies were chosen for the study. Out of these, 56 patients attended for regular follow-up. After careful history and physical examination they were given 2 tubes of GBH containing 25 gms of 1% GBH in each tube. Patients were instructed to apply the cream after a good hot water bath and the cream was left on the skin for 24 hours. The same treatment was repeated for 7 days. They were seen after 3 days (first follow - up) and again after 4 days for final assessment. All contacts were receiving the treatment simultaneously. The results were graded as excellent, good, fair and poor depending on the subjective and objective improvement. At the time of follow-up specific enquiries were made regarding sensitisation and/or irritation. Those who had complicating septic lesions, also received either inj. strepto penicillin or other antibiotics.

* Consultant Dermatologist
and Hon. Asstt. Professor of
Dermatology and Venereology.

† Post-graduate student in Dermatology
and Venereology.
K. M. School of Post Graduate Medicine
and Research, Vadilal Sarabhai Hospital,
Ahmedabad.

Results

The results are tabulated as follows:

TABLE 1

Age in years	Male	Female	Total
0-10	20	6	26 (46.4%)
11-20	9	4	13 (23.2%)
21-30	9	5	14
31-40	1	—	1
41-50	—	1	1
51-60	—	1	1
	39	17	56

TABLE 2

Duration of disease in weeks	No. of cases
0-2	16
2-4	17
4-6	6
6-8	7
8-10	1
10-12	4
7-12	5
	56

TABLE 3

Specific features	Positive cases		Negative cases		Total
	No.	%	No.	%	
Family history	44	77	12	23	56
Secondary infection	27	48.2	29	51.8	56

TABLE 4

Time interval	Graded response				Total	Irritation Sensitisation
	E	G	F	P		
By end of 3 days	21	26	7	2	56	Nil
By end of 7 days	28	23	3	2	56	Nil

E - Excellent F - Fair
G - Good P - Poor

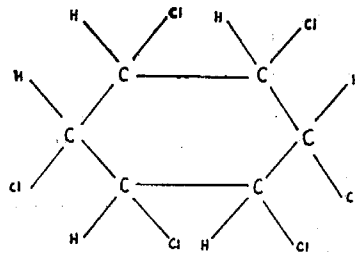
Discussion

The present study has shown different aspects of scabies infection. In this study of 56 patients, 26 patients (46.4%) affected were between the age group of

0-10 years, while 13 patients (23.2%) were between the age group of 11-20 years. It has been observed by many workers that there has been a decreasing prevalence of scabies with increasing age. Nair et al¹ have shown that the highest incidence was in the age group below 5 years. From this study it is also seen that the disease is more common in males than females, in the ratio of 2:1. It is interesting to observe that 33 cases (59%) presented with the history of 4 weeks duration while 23 cases (41%) were seen with a more prolonged history, perhaps because of neglect of the disease or due to resistance to the treatment.

History of contact was obtained in 44 cases (77%) which suggests the high contagious nature of the disease. Secondary infection was present in 27 cases (48.2%), which needs careful attention in the management of scabies.

Gamma benzene hexachloride is the γ isomer of 1, 2, 3, 4, 5, 6 hexa chloro-cyclohexane ($C_6H_6Cl_6 = 290.8$) and



γ ISOMER OF 1,2,3,4,5,6 HEXACHLOROCYCLOHEXANE ($C_6H_6Cl_6 = 290.8$)

is an insecticide, larvicide and acaricide. It has a more rapid action than dicophen and is effective in lower concentration, but as it is more volatile, it has much less residual action. It is also used as residual sprays, solutions in kerosene and other suitable solvents, in 0.1% to 0.5% concentrations which are lethal to dipterous flies including house flies. Topically, a

0.2% alcoholic solution or a 0.1% application is effective against head lice, 1% emulsion or cream is employed in the treatment of scabies.

Cannon and McRae² treated 100 patients of scabies with GBH with 100% cure. Rowland³ treated scabies with single application of 1% GBH and found it to be sufficient to kill the sarcoptes.

Smith and Claypoole⁴ successfully treated 22 patients of scabies acquired through contact with dogs with single application of GBH for 24 hours.

Our results have shown that, good to excellent response was observed in 47 patients (83.9%) after 3 days and in 51 patients (91.07%) after 7 days. Of the seven patients whose response was fair, 4 patients eventually responded to the treatment. Only 2 patients out of 56 (3.5%) failed to show any improvement with GBH. This suggests that GBH is a highly effective antiscabietic drug. In clinical practice, it has been shown that, the good old drugs like Sulphur and Benzyl benzoate emulsion are not as effective as they used to be. In no patients, sensitisation or intolerance was observed with GBH. This is a great advantage over Benzyl benzoate emulsion, which quite frequently causes irritation in children and female patients. The GBH was found to be totally acceptable by all patients.

Our observations in treating scabies suggests that single applications are ineffective. Our patients need more prolonged treatment, for about 5-7 days or even longer in some selected cases. The itching of scabies persist even after the removal of the parasite from the body, apparently because of acquired sensitivity to the mite or its products. This point is stressed to differentiate a

relapse of scabies from persistence of infection. In children, scabies may present as generalised eczematoid eruption and has to be treated as such. Occasionally topical steroids help in its spread. These children need prolonged therapy with antiscabietic drugs and other remedies. Even in the presence of eczematous reaction GBH was found to be acceptable in contrast to Benzyl benzoate emulsions which produces a burning effect on eczematous skin.

To conclude, GBH has been found to be a very effective drug; an important addition to the already available drugs in the treatment of scabies.

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