METRONIDAZOLE IN SCABIES

V. M. MATHEW * AND ZACHARIAH THOMAS †

Summary

25 Patients with scabies were studied for the evaluation of metronidazole as an oral therapeutic agent These patients were given 400 mg of metronidazole three times daily for 8 days. Good to excellent results were observed in 6 (27.27%) patients, 8 (36.36%) patients showed a fair response and no response was observed in 8 (36 36%) patients. The significance of these results are discussed.

Scabies is one of the very common skin diseases in India. It constitutes about 50% to 60% of cases attending some dermatology clinics in our contry[1]. Of late it is assuming alarming epidemic outbreaks in many parts of the world[2,3]. Control of this disease has become a difficult problem, especially in countries like India where it is endemic.

The classic antiscabietic drugs like benzyl benzoate, sulphur ointment gama benzene hexachloride and crotomiton continue to be effective. Lately it has been observed that the results with these drugs have not been satisfactory[4]. Therapeutic failures due to inadequate use, variable concentration of active drugs or even immunological mechanisms have been reported by several authors[5,6,7]. The constant search for a new remedy also indicates the inadequacy of old drugs. Recently, Thiabendazole has been tried orally and also topically in the treatment of scabies[8]. However the side effects of this drug given systemically limits its use. An injectable scabiecidal preparation has been evaluated by Hemachandra[2].

The author was treating cases of acute amoebic dysentery with metronidazole alone. Two patients had scabies also. The treatment of scabies was postponed because of the acuteness of dysentery. After five days it was observed that the scabies also was cured, without any other treatment. This prompted us to study the effect of metronidazole on scabies. To the best of our knowledge this is the first report on the treatment of scabies with metronidazole.

Material and Method

Twenty five patients with symptoms and clinical signs of scabies, who were not treated previously, were chosen for the study. Patients with eczematised lesions were not included. Detailed history regarding the duration of illness, presenting complaints, family history, etc., were taken and recorded in all cases. Cases selected were between the age of 15 and 45 years.

All the patients were treated with metronidazole 400 mg thrice daily.

* Resident house surgeon.

† Associate Professor and endocrinologist, Department of Medicine, Medical College Hospital, Alleppey.

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They were directed to report on alternate days and specific enquiries were made regarding relief of symptoms and reduction in the number of lesions. They were also examined one week after the cessation of the treatment. Secondary infection was treated, when present, with procain penicillin. Patients were instructed not to use any other drug during the study period. Household contacts when present were simultaneously treated with benzyl benzoate.

Results

Out of the 25 patients 22 completed the treatment and reported regularly for follow up. Of the 22 patients, the symptoms started subsiding, on the third day onwards in 14 cases. Among these in 6 patients all symptoms subsided and lesions healed at the end of 8 days. In the remaining 8 patients, symptoms subsided partially and few lesions persisted. 8 patients did not show any response. It was further observed that the degree of improvement was directly proportional to the duration of illness.

TABLE 1

Age in years	Male	Female	Total
15 to 25	6	4	10
26 to 35	5	3	8
36 to 45	4	3	7
	15	10	25

TABLE 2
Response in relation to duration

Duration of disease in days.	Graded Response				Total
	E	G	F	P	
7 to 14	3	2	1	1	7
15 to 21	0	1	4	2	7
22 to 27	–	–	2	2	4
28 to 35	–	–	1	3	4
Total	3	3	8	8	22

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

Discussion

In the present study 25 patients were chosen and 22 completed the treatment and follow-up. Improvement in pruritus and reduction in the number of lesions were seen by the third day onwards in 14 cases. In these cases improvement was progressive. By the end of 8 days symptoms and lesions completely subsided in 6 patients. In these patients there was no recurrence of lesions or pruritus, even after one week of cessation of treatment. 8 patients who gradually improved, showed only partial response at the end of treatment. In these cases the pruritus persisted and lesions increased after one week. The progressive improvement seen in these cases during treatment suggests that the lesions and pruritus would have completely subsided if the treatment was continued. No response was seen in 8 patients, either at the end of treatment or after one week. A second course of treatment was not given in any case for ethical reasons.

The response was good to excellent in 6 patients (Table 2) who had the disease for 7 to 14 days. One patient in this group showed only fair response. Further it was observed that the response was poor when the duration of illness was long. In 4 patients who had scabies for 28 to 35 days, only one showed fair response and the other 3 no response at all.

Metronidazole is a nitroimidazole derivative, and is extensively used in the treatment of amoebiasis, giardiasis and trichomonas infections. The mechanism of its antiprotozoal action is unknown[9]. It is well absorbed when orally administred. Unchanged metronidazole and its several metabolites are excreted mainly in urine. Low concentration of the drug appears in saliva and breast milk[9]. As a safe drug metronidazole has stood the test of time.

It is not known whether metronidazole is excreted in sweat. This needs

further studies. Since metronidazole is excreted in milk, the possibility of its presence in sweat cannot be ruled out. Perhaps low concentrations of metronidazole excreted in sweat have acted as an antiscabetic agent in those patients who got complete cure in our study. Moreover the response may be related to the amount of sweating. If so a study of topical application of metronidazole may be rewarding.

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TRUE

There is considerable body of evidence to suggest that fundamental defect in lepromatous leprosy (LL) is genetically determined. Earlier work indicates that the immunological defect of LL exist in individuals prior to exposure to M. leprae. It is believed, that man possesses Ir genes which function in the manner analogous to those in experimental animals. Studies in leprosy involving the newer la-like B. lymphocyte markers may reflect associations between Ir gene loci and disease susceptibility. It is hypothesised that prelepromatous individuals have Ir genes which do not permit their T. lymphocytes to respond to crucial antigene of M. leprae.

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