Comparative study of oral and topical ketoconazole therapy in pityriasis versicolor

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ABSTRACT

Introduction: Both topical and systemic ketoconazole are reported to be effective against pityriasis versicolor. **Material and Methods:** Forty patients suffering from pityriasis versicolor were treated either with oral ketoconazole 200 mg per day or 2% ketoconazole cream topically once daily for 2 weeks. **Results:** On global assessment, after 2 weeks of start of therapy, 18 (90%) out of 20 patients treated with oral ketoconazole were cured while 2 patients had considerable residual disease. In the ketoconazole cream group, 16 (80%) out of 20 patients were cured and 4 patients had considerable residual disease. **Conclusion:** No significant difference was observed in the response rates in the two groups. Relapse occurred in two patients of the systemic ketoconazole group and six patients of the topical ketoconazole group during the follow-up period of three months.

Key Words: Pityriasis versicolor, Systemic ketoconazole, Topical ketoconazole

INTRODUCTION

Pityriasis versicolor is a mild, chronic infection of the skin, caused by *Malassezia* yeasts. It involves the stratum corneum and is characterized by discrete or confluent, scaly, hypo- or hyperpigmented areas, mainly on the upper trunk.[1] Various topical agents have been used with limited success because of objectionable odor, messy and frequent application and the need for application for a prolonged period of time. Systemic therapy has generally been reserved for the management of recalcitrant cases, those with extensive involvement and those who have not responded to other topical monotherapies. The advantage with the azole derivative ketoconazole is that it can be used both topically as well as orally for the treatment of pityriasis versicolor.

The aim of the present study was to compare the relative efficacy and relapse rate of oral and topical ketoconazole therapy in patients with pityriasis versicolor.

MATERIAL AND METHODS

Forty patients with pityriasis versicolor were enrolled for the study. After a detailed history and clinical examination, the diagnosis was confirmed by KOH examination and Wood's lamp examination. Patients who had received any systemic or topical antimycotic therapy within a month of the start of the study or had associated dermatophyte infections or any serious concomitant illness were excluded from the study.

Twenty patients were distributed randomly to each group and treated with ketoconazole 200 mg per day for 14 days (Group I) or 2% ketoconazole cream, once daily after bathing, for 14 days (Group II). They were followed-up one week and two weeks after starting the treatment. Clinical assessment in terms of pruritus, scaling and erythema was made on a scale of 0-3 (3 – severe, 2 – moderate, 1 – mild, 0 – absent). At the end

of two weeks, clinical response was assessed globally with the use of a broad scale of healed, mild residual disease, considerable residual disease, unchanged and deteriorated. Patients with healed or mild residual disease (i.e. response in the top two categories) were considered as responders; in addition, they were considered as cured if they had a negative KOH smear.[2] These patients were examined, clinically and mycologically, at monthly follow-up visits for three months for any relapse.

RESULTS

The demographic characteristics of the two groups were similar. The average age of patients in Group I and Group II was 19.4 and 20.4 years respectively. Clinical assessment showed no significant difference in erythema, pruritus and scaling between the two groups before and after the treatment. There was 90% clinical response in Group I and 80% clinical response in Group II. On global assessment, 90% in Group I and 80% in Group II were considered as cured (clinically and mycologically clear) (Table 1). Two patients (10%) in Group I and four patients (20%) in Group II had considerable residual disease. Fischer's exact test showed no significant difference in the cure rates between the two groups on global assessment.

Relapse was noted in two patients of Group I and six patients of Group II during the follow-up period of three months. Hematological and biochemical parameters, including liver function tests, were within normal limits before and after the treatment. None of the patients complained of any side effects that could be attributed to the treatment.

Table 1: Global assessment of treatment after two weeks

Evaluation	Group I (Oral ketoconazole) No. (%)	Group II (Topical ketoconazole) No. (%)
Mycologic		
Negative KOH examination	18 (90)	16 (80)
Positive KIH examination	2 (10)	4 (20)
Clinical		
Healed disease	18 (90)	16 (80)
Mild residual disease	0 (0)	0 (0)
Responders	18 (90)	18 (80)
Considerable residual disease	2 (2)	4 (20)
No change	0 (0)	0 (0)
Deteriorated	0 (0)	0 (0)
Cured		
(Clinically and mycologically clear)	18 (90)	16 (80)
n = 20 (Chi Square test)	*p > 0.05*	

DISCUSSION

In the present study, the mycological and clinical cure rates were 90% in the oral ketocanazole treated patients (Group I) and 80% in topical ketocanazole treated patients (Group II). However relapse was more common in the group treated with topical ketaconazole.

Shafi and Khatri[3] reported a 88% cure rate after two weeks of oral ketoconazole therapy and Kaur et al[4] reported a 96.6% cure rate after 10 days of therapy with oral ketoconazole. The cure rate with oral ketoconazole 200 mg per day for two weeks in our study was 90%, which is almost similar to the cure rates of previous studies.[3,4] Similarly, Faergemann and Fredriksson[5] observed a 100% cure rate after 3-5 weeks of treatment with 200 mg per day of oral ketoconazole.

Savin et al[2] and Patel et al[6] reported cure rates of 79% and 73.33% respectively with topical therapy. The cure rate with 2% ketoconazole cream once daily for 2 weeks in our study was 80%, which is almost similar to the cure rates of these studies.[2,6]

The results of our study suggest that the efficacy of oral ketoconazole is almost similar to that of topical ketoconazole in the treatment of pityriasis versicolor, although the relapse rate is higher with topical ketoconazole.

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