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A comparative evaluation of Terbinafine and Eberconazole in the management of Tinea versicolor

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Abstract
Introduction: Tinea versicolor is one of the most common infectious skin diseases that is seen in abundance during summer. The present study compared Terbinafine and Eberconazole in the management of Tinea versicolor.
Materials & Methods: The present study was conducted on 235 cases (Group I) of Tinea versicolor of both genders. Patients were randomly divided into two study groups, i.e. Group I patients were given eberconazole 1% cream once daily for 2 weeks and Group II were given terbinafine 1% cream once daily for 2 weeks. Safety assessment was recorded.
Results: Out of 240 patients, males were 125 and females were 115. In group I, 96 patients had complete healing while 72 patients in group II had complete healing, 24 in group I and 43 in group II had mild residual disease, 5 in group II had considerable residual. The difference was significant ($P< 0.05$).
Conclusion: Authors found that eberconazole 1% cream was as effective as compared to terbinafine 1% in patients with Pityriasis versicolor.

Keywords: Eberconazole, Terbinafine, Pityriasis versicolor

Introduction
Tinea versicolor (TV) or pityriasis versicolor, also known as Peter Elam's disease, is one of the most common infectious skin diseases that is seen in abundance during summer [1]. It is a chronically recurring fungal infection of the stratum corneum characterized by scaly, hypo or hyper pigmented, irregular macules usually located on the trunk and proximal extremities. It is caused by a fungus, Malassezia furfur which is an opportunistic organism, which changes from the saprophytic phase to the pathogenic mycelial phase under certain conditions, such as increased temperature, greasy skin, sweating, and immunosuppression [2].
Affected areas include the back, chest, abdomen, neck, and upper limbs. However, classically the back carries more lesions. The face is an area commonly affected in children and it is the forehead showing mostly hypopigmented macules. Uncommon but possible locations include axilla, popliteal fossa, fore arms, lower limbs and penis/genitalia [3]. Although PV had been described at the beginning of nineteenth century, until recently classification of its etiologic agent was a matter of doubt. This controversy may be caused by various morphological features and fastidious growth requirements of Malassezia yeasts in vivo. Terbinafine is an allylamine antifungal which inhibits the enzyme squalene epoxidase in the fungal cell membrane. Eberconazole, an imidazole derivative is a newer antimycotic agent [4]. The present study compared Terbinafine and Eberconazole in the management of Tinea versicolor.

Materials & Methods
The present study was conducted in the department of Dermatology. It comprised of 235 cases (Group I) of Tinea versicolor of both genders. The study protocol was approved by the Ethics Committee. All were informed regarding the study and written consent was obtained. Data such as name, age, gender etc was recorded. Patients were randomly divided into two study
groups, i.e. Group I patients were given eberconazole 1% cream once daily for 2 weeks and Group II were given terbinafine 1% cream once daily for 2 weeks. Global clinical response

assessment was done. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

Results

Table I: Distribution of patients

Total- 240		
Gender	**Male**	**Female**
Number	125	115

Table I shows that out of 240 patients, males were 125 and females were 115.

Table II: Distribution of patients in groups

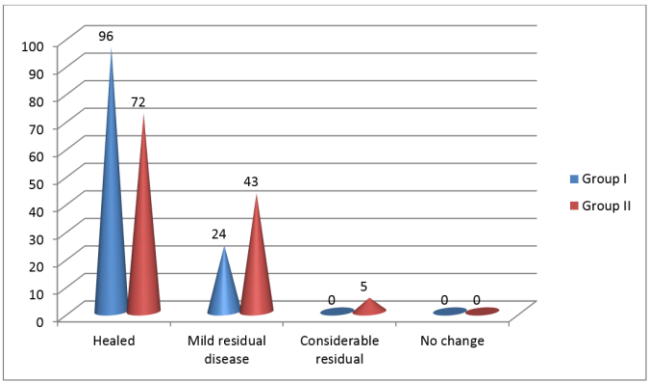
Groups	Group I	Group II
Drug	1% Eberconazole	1% Terbinafine
Number	120	120

Table II shows that group I patients were given eberconazole 1% cream and group II were given terbinafine 1% cream. Each group had 120 patients.

Table III: Evaluation of global clinical assessment

Global clinical assessment	Group I	Group II	P value
Healed	96	72	0.05
Mild residual disease	24	43	0.01
Considerable residual	0	5	0.05
No change	0	0	0

Table III, graph I shows that in group I, 96 patients had complete healing while 72 patients in group II had complete healing, 24 in group I and 43 in group II had mild residual disease, 5 in group II had considerable residual. The difference was significant ($P< 0.05$).



Graph I: Evaluation of global clinical assessment

Discussion

The lipophilic yeasts are associated with various human diseases, especially pityriasis versicolor, a chronic superficial scaling dermatomycosis. High temperatures and humidity favour the occurrence of pityriasis versicolor. Accordingly, tropical areas can have prevalence as high as 40% and the frequency is higher during summer months in temperate climates. Multiple macules and/or patches of variable appearance (hypopigmented, hyperpigmented, dark brown or erythematous) surrounded by normal skin are the typical lesions of pityriasis versicolor [5].

Tinea versicolor occur worldwide more frequently in areas with higher temperatures and higher relative humidities. Although pityriasis versicolor has worldwide occurrence, its frequency is variable and depends on different climatic, occupational and socio-economic conditions. This disease is prevalent in Iran, in which almost 6% of all dermatosis and approximately 30% of dermatomycoses are due to these lipophilic yeasts [6]. The present study compared Terbinafine and Eberconazole in the management of Tinea versicolor.

In this study, out of 240 patients, males were 125 and females were 115. Group I patients were given eberconazole 1% cream and group II were given terbinafine 1% cream. Each group had 120 patients. Sharma *et al.* [7] found that there was a significant improvement in all the parameters in both groups over a period of 2 weeks. Both the treatment groups, i.e., eberconazole and terbinafine were found to be safe and efficacious at the end of 2 weeks, and no statistically significant difference was observed between the two groups regarding complete cure, i.e., mycological and clinical cure (80% vs. 63.33%), respectively. However, early response (at the end of week 1) was observed with eberconazole. No relapse was seen with eberconazole, but one patient had relapse at 8 weeks with terbinafine. Both drugs had similar safety profile.

Global clinical assessment showed that in group I, 96 patients had complete healing while 72 patients in group II had complete healing, 24 in group I and 43 in group II had mild residual disease, 5 in group II had considerable residual.

Repiso Montero *et al.* [8] compared the efficacy of eberconazole 1% cream with miconazole 2% cream applied twice daily for 4 weeks in the treatment of dermatophytosis, it was observed that clinical efficacy with eberconazole was 76.1% versus 75% in miconazole group.

Morbidity results primarily from the discolouration. The adverse cosmetic effect of lesions may lead to significant emotional distress, particularly in adolescents. Tinea versicolor frequently recurs despite adequate initial therapy. Even with adequate therapy, residual pigmentary changes may take several weeks to resolve [9]. Although tinea versicolor usually is more apparent in darker-skinned individuals, the incidence of tinea versicolor appears to be the same in all races. The role of sex in propensity to development of T. versicolor is still unclear. Some studies found that PV is more common in men than women while others indicated that the incidence of this infection is higher in women. Choudhary *et al.* [10] patients with tinea corporis and tinea cruris were treated with topical 1% terbinafine hydrochloride and 1% eberconazole nitrate cream respectively, twice daily for 3 weeks. There was 100% cure rate in both groups at the end of 3 weeks. It was concluded that eberconazole nitrate 1% cream was as effective as terbinafine hydrochloride 1% cream in tinea corporis and cruris.

Conclusion

Authors found that eberconazole 1% cream was as effective as compared to terbinafine 1% in patients with Pityriasis versicolor.

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