

A study of the prevalence and precipitating factors of pruritus in pityriasis versicolor

Sir,

Pityriasis versicolor (PV), also referred to as Peter Elam's disease, is one of the most common infectious skin diseases that is seen in abundance during summer. In tropical areas, PV is found in up to 50% of all patients consulting a dermatologist.^[1]

Patients can present with symptoms ranging from hypopigmented to hyperpigmented patches associated with erythema, scaling, and itching. *Malassezia* species yeasts are a part of the normal flora in seborrheic areas, but some contributing factors, such as the application of oily preparations, creams, an increase in ambient humidity, corticosteroid abuse, or genetic predisposition can cause *Pityrosporum* to change from saprophytic to pathogenic form.^[2] Exposure to sunlight stimulates the production of azelaic acid, which causes the appearance of hypopigmented spots.^[3]

Pruritus in patients with PV has been inconsistently described. Surprisingly, even though it is a common disorder, the prevalence and the factors responsible for this symptom are not properly documented. Hence, we conducted this study to know the prevalence and factors responsible for itching in PV.

A total of 200 cases aged between 15 and 60 years were selected for the study. The patients were recruited from March 2012 to September 2012. All cases were diagnosed on the basis of clinical suspicion and confirmed by the demonstration of *Malassezia furfur* on KOH (potassium hydroxide) examination of skin scraping and Wood's lamp examination. Parameters considered to precipitate itching were type of pityriasis versicolor (hypopigmented or hyperpigmented), extent of involvement (localized or extensive), site of the lesion, and association with sweating, sun exposure, and following bathing. The extent of involvement was calculated using the rule of

nine. Patients were asked regarding the association of itching with sweating, sun exposure, and following bathing. Patients with serious concurrent medical conditions and other fungal infections were excluded. Statistical analysis was done using the Chi-squared test and Fisher's exact test.

Out of 200 patients, itching was an associated complaint in 44 (22%) patients (39 with hypopigmented macules and 5 with hyperpigmented macules). Itching was noticed in patients with lesions predominantly distributed over the neck (69%) and chest and back (87.2%), following sweating (100%), sun exposure (78%), and bathing (7%). Localization of the lesions reflected the distribution of sebaceous glands. We did not find any significant association between the extent of involvement and prevalence of itching.

Morais *et al.*,^[4] in a study of 116 patients with pityriasis versicolor who presented at a referral center in Brazil, observed itching in 48.3% of the patients. In another study, Rao *et al.*^[5] noted mild itching as a presenting complaint in 30% which is consistent with the findings of this study. Krishnan *et al.*^[3] found that severe itching was associated with combined and hyperpigmented types. However, in our study, itching was also reported following bathing, sweating, and sun exposure, commonly over the hypopigmented lesions. Krishnan *et al.*^[3] in their study found that itching was mainly present during sweating.

The literature suggests that the lipoperoxidation process by *Pityrosporum* accounts for the clinical hypopigmented lesions^[6] and the theory proposed for hyperpigmented lesions is the increased thickness of the keratin layer and more pronounced inflammatory cell infiltrate acting as a stimulus for melanocytes.^[5] However, there is no scientific explanation for itching associated with these hypopigmented and hyperpigmented lesions. So, we hypothesized that a humid and moist environment enhances the virulence of the fungus, which manifests as itching immediately after sun exposure, sweating, and bathing.

To conclude, according to our study, the prevalence of itching in PV does not depend on the extent of involvement. Perhaps, it depends on the areas of involvement (seborrheic areas) and predisposing factors like sun exposure, bathing, and sweating. However, this requires to be further investigated and substantiated.

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Quick Response Code:	Website: www.idoj.in
	DOI: 10.4103/2229-5178.131141