

CLINICO EPIDEMIOLOGICAL STUDY OF PALMOPLANTAR PSORIASIS

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ABSTRACT: CONTEXT: psoriasis is chronic inflammatory disease. Depending on the site of involvement psoriasis is classified into many types. Among them, palmoplantar psoriasis causes much pain and discomfort to the patients. **AIM:** is to study the causative factors associated with psoriasis mainly the relation of palmoplantar psoriasis and occupation. **MATERIALS AND METHODS:** 100 patients with psoriasis of palms and soles were studied with respect to their age, occupation, major presenting complaints, sites of involvement and nail changes associated. **RESULTS AND CONCLUSION:** palmoplantar psoriasis most commonly occurs in middle age. Occupation plays an important role in the appearance of lesions. Housewives, coolies and agricultural workers are more commonly affected. Palmar psoriasis was more commonly seen than plantar psoriasis.

KEYWORDS: psoriasis of palms and soles, occupational dermatoses, quality of life.

INTRODUCTION: Psoriasis is a chronic, disfiguring, inflammatory skin condition, clinically characterized by erythematous plaques with silvery white scales. Incidence of psoriasis in India is around 0.5 to 2%. Depending upon the site of involvement various types of psoriasis are described. Among them palmoplantar psoriasis affecting palms and soles is very difficult to treat and affects the patient's quality of life. It is a major cause of physical and mental disability even though it involves a relatively small percentage of body surface area.¹ Palmoplantar disease severity appears to be independent from the degree of body surface involvement.²

Diagnosis of psoriasis is usually clinical. Palmoplantar psoriasis poses diagnostic difficulties with chronic eczema or fungal infections.

Palmoplantar psoriasis involves palms, soles and the dorsal surface of the hands and feet. Usually exhibit less scaly plaques with fissuring which cause pain. Many patients also complain of itching. Palmoplantar psoriasis occurs in approximately 1/3rd of psoriatic population. Many patients with this disease do not have psoriasis of other parts of the body.³

Noble distinguished four clinical variants of palmoplantar psoriasis

1. Typical red patches sharply demarcated and covered by adherent psoriatic scales.
2. Diffuse mild hyperkeratosis with rhagades and scales
3. Thick hyperkeratotic layer resembling hereditary type of palmoplantar keratoderma
4. Diffuse erythema

The pathogenesis is not fully understood. Any type of trauma can cause the lesions. Even the irritant effects of soaps, detergents and smoking⁴ have been known to induce the lesions.

This study aims to study the epidemiological aspects and clinical features of palmoplantar psoriasis.

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MATERIAL AND METHODS: This study was conducted during 2011 and 2013 in our outpatient department of dermatology. 100 patients with psoriasis involving only palms and/soles were included in the study. Patients were included irrespective of age, sex, and duration of disease; Diagnosis was made on history, clinical examination and confirmed by histopathological examination in doubtful cases. A detailed history was taken and dermatological examination was done in all cases.

RESULTS: Total of 100 patients was studied. In the present study, majority of patients belonged to age group of 41 to 50 years(26%) followed by age group of 51- 60 years (24%). Thus most of the patients belonged to the age group of 41- 60 years (50%) i.e., most of the patients were in the middle age group. The incidence below the age of 20 years was 8% and beyond 61 years was 12%. The average age of the patients in the present study was 44.54. (TABLE 1).

Age	MALE		FEMALE		TOTAL	
	No	%	No.	%	No.	%
11-20	6	9.6	2	5.26	8	8
21-30	12	19.35	2	5.26	14	14
31-40	10	16.1	6	15.78	16	16
41-50	14	22.56	12	31.57	26	26
51-60	12	19.35	12	31.57	24	24
>61	8	12.9	4	10.52	12	12
Total	62	100	38	100	100	100

TABLE 1: AGE AND SEX DISTRIBUTION

Occupation	Total	
	No.	percentage
House wife	30	30
Agriculture	12	12
Daily wage workers	14	14
Business	12	12
Officials	6	6
Student	6	6
Painter	2	2
Driver	4	4
Security guard	6	6
Electric work	2	2
Retired personnel	6	6
Total	100	100

TABLE 2: OCCUPATION OF THE PATIENTS

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As per our observation, the disease involved housewives (30%) most commonly, followed by daily wage workers (14%) and agriculturists (12%) (TABLE 2). Most of the housewives had both palms and soles involvement. All housewives included were performing washing clothes and utensils routinely. Daily wage workers are coolies who are involved in heavy weight lifting, cement work etc.; Agriculturists are individuals doing farming work.

Major presenting complaints	No.	Percentage
Painful fissures	34	34
Itching	46	46
Scaling	2	2
Lesions	18	18
Total	100	100

TABLE 3: PRESENTING COMPLAINTS

The major presenting complaint was itching seen in 46% of patients, followed by fissuring and pain (34%) (TABLE 3). Fissures when deep get secondarily infected and cause more pain. These symptoms cause disability in performing daily activities even walking significantly affecting patient's quality of life. Because of the lesions the mobility of the hands was restricted affecting routine activities. Itching was very severe in 24% of patients which was responsible for their disturbed sleep. More than 90% of the patients also suffered from burning sensation, especially when they wet their hands.

	Only palms	Only soles	Both palms and soles	Total
No of patients	10	6	34	50
Percentage	20	12	68	100

Table 4: LOCALIZATION OF LESIONS

Patients with both palms and soles involvement were more than patients with either palms or soles involved. 88% of patients had palmar involvement and 80% had plantar involvement. The most common nail change observed was pitting present in 38% of patients and second most common was subungual hyperkeratosis seen in 36% of patients, followed by proximal nail fold psoriasis. More nail findings were seen in finger nails than toe nails.

DISCUSSION: Among 100 patients studied, more number of patients was in the age group of 41 to 60 years. As already known from previous studies psoriasis is most commonly seen in the middle age group. According to Sharma et al.,⁵ psoriasis was commonest (76.6%) in the middle age group of 15 to 45 years and least below the age of 15 years (6.66%). In the present study male to female ratio was 1.6:1. There was no significant difference between the prevalence of palmoplantar psoriasis in different sexes. One study showed that the prevalence of psoriasis does not show any sex predilection.⁶ Inderjeet ET al.⁷ Of 782 patients revealed a male to female ratio of 2.3:1. With respect to the occupation housewives were the one most commonly suffered with the disease in our study (Graph I). This may be because of their routine household work where

they get exposed to irritants while washing clothes and utensils which may influence the pattern of involvement. Also with frequent washing the skin over the hands becomes dry making the skin more vulnerable for irritants and further increases the chances of psoriasis.

In patients with palmar involvement, the lesions were found at the sites of continuous trauma or friction. For e.g. in a patient whose occupation was driver, lesions were found over the fingers in the middle third. In electric workers, lesions were more severe over the finger tips. This finding was noticed by Kumar et al.,⁸ in his study on 532 patients with palmoplantar psoriasis. He found half of the men involved in regular manual labor had palmar lesions restricted to areas exposed to pressure. The possible role of occupational trauma in lesions localization in Indian patients with palmoplantar psoriasis was discussed.⁸

Commonest presenting complaint was itching followed by fissuring and pain (Graph II). Itching was very disturbing as the patients used to feel embarrassment to scratch in public. Fissuring and pain severely obstructs the daily activities, office work. Even housewives complained of more pain while washing and cutting vegetables. Lotus M et al. reported the presence of itching in 40% of psoriasis patients.⁹

Weinberg JM reported fissuring associated with much pain, as a unique finding in palmoplantar psoriasis, not usually present in other types.¹⁰ Petty A A et al., reported involvement of palms and soles associated with pain. They reported other symptoms which are bothersome for patients with palmoplantar psoriasis like burning and soreness.⁷

66% of the patients had no seasonal variation. 32% of the patients had winter exacerbation and 2% had summer exacerbation. Inderjeet et al. reported almost half of the patients (45.8%) had no influence of the season on their disease. Bedi reported that 30% of patients felt worse in winter, 16% worse in monsoon. Both palms and soles involvement was common than either palms/soles involvement. Plantar psoriasis was more commonly seen than palmar psoriasis in our study. In a study conducted by Kumar et al plantar psoriasis was more common than palmar psoriasis. Equal incidence of palms and soles involvement was noticed in other studies.

CONCLUSION: The study concluded that even palmoplantar psoriasis is seen more commonly in middle aged individuals. This disease is most commonly seen in housewives, coolies and agricultural workers. The patients present to the healthcare system not mainly because of lesions but because of the symptoms they are suffering with like itching, pain and burning sensation.

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