

A clinical study on latest trends of psoriasis in patients attending dermatology OPD in a tertiary care center

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Abstract

Background Psoriasis is a chronic papulosquamous disorder of skin associated with systemic manifestations. Genetic and environmental factors play a major role in the development of psoriasis. Studies in India reveal a prevalence of 0.44 to 2.8%. Updated data of clinical trends will help in the diagnosis and management.

Methods To calculate hospital-based prevalence and the clinical patterns of psoriasis among patients attending dermatology out patient department, Kakinada, Andhra Pradesh, India, a descriptive cross-sectional study was designed and conducted for 6 months from October 2020 to March 2021. A total of 430 patients with psoriatic features attended our OPD during this 6 months' period. Histopathological examination was done for relevant cases.

Results A total 9821 patients attended to the dermatology out patient department during this period. Out of which 430 patients had psoriatic features, so it gives a hospital based prevalence of 4.4%. Out of 430 patients, 58% were males and the disease was most common in 25 -50 years' age group (53%). Most common clinical pattern observed irrespective of age and sex was Chronic Plaque psoriasis. Palmoplantar psoriasis (35%) and Scalp psoriasis (10.1%) were also common. Obesity, diabetes mellitus, hypertension, dye allergy and detergent allergy were frequently associated with the disease.

Conclusion There is a slight increase in the hospital-based prevalence of psoriasis in our study which may be attributed to the lifestyle changes and comorbidities like obesity, diabetes and hypertension. Increased incidence of allergic contact dermatitis with use of dyes, detergent and cosmetics may be the trigger for scalp and palmoplantar psoriasis.

Key words

Psoriasis, comorbidities, dye allergy, detergent allergy, palmoplantar psoriasis.

Introduction

Psoriasis refers to a chronic inflammatory disease manifested mainly as skin lesions on the elbows, knees, scalp, genitals and trunk.¹

Clinical description of psoriasis was given by Robert Willan who is also the father of modern dermatology. So it is also known as *Willan's lepra*.² Previous data reveals a prevalence of 0% to 11.8% for psoriasis in different populations.³⁻⁶ Chronic plaque psoriasis accounts for more than 90% of all cases. Other types include palmoplantar psoriasis, pustular psoriasis and recalcitrant psoriasis. Updated data of clinical trends will help in the diagnosis and management.

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Methods

A cross-sectional study was designed and conducted in a descriptive method during the period from October 2020 to March 2021 among the patients attending dermatology out patient department of a tertiary hospital in Kakinada located in Andhra Pradesh state of southern India. All clinically diagnosed cases of psoriasis irrespective of age, sex, nationality or social status were included in our study excluding those who were not willing to give consent. After obtaining ethical clearance and written consent, a detailed history taking including demographic data, past history, personal history, treatment history was obtained from study subjects. Relevant laboratory investigations were done to diagnose any co morbidities or other organ/systemic involvement. Skin biopsy, whenever necessary, was done for making the diagnosis of psoriasis. Co-morbidities, types of psoriasis, scalp, nail and joint involvement and age of onset were the main variables of consideration for descriptive analysis of the data.

Results

A total of 430 patients with psoriatic features attended our OPD during this period giving a hospital-based prevalence of 4.4%. A total of 9821 new diagnosed cases have been reported during this period in whole DVL OPD. Our study gives a male preponderance (58%) (Table 1) with a sex ratio of 1.38 (Figure 1).

Age distribution In our study, psoriasis was

Table 1 Distribution of age and gender.

Age (Yrs)	Male		Female		Total	
	n	(%)	n	(%)	n	(%)
<15	16	64%	9	36%	25	6%
15-25	20	51%	18	49%	38	8%
25-50	128	55%	101	45%	229	53%
50-75	84	62%	50	38%	134	31%
>75	3	75%	1	25%	4	1%
Total	251	58%	179	42%	430	100%

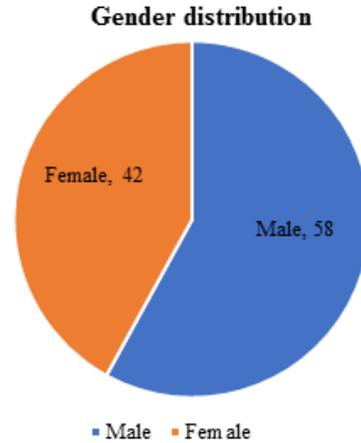


Figure 1 Gender distribution.

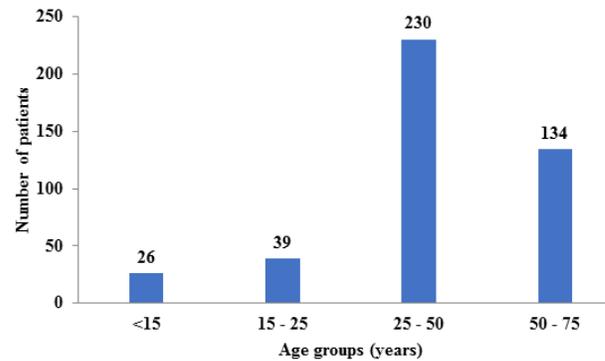


Figure 2 Age distribution (in years).

found to be more common in the age group of 25 -50 years which constitutes 229 (53%) of the total cases.134 cases (31%) were recorded in the group 50-75 years. 38 (8%) and 25 (6%) cases belong to the groups of 15-25 years and <15 years respectively. Just 4 cases were diagnosed in the age group >75 years (1%) (Figure 2).

Morphological types Among the cases studied, Chronic plaque psoriasis (Figure 3) accounted for the most common type with 225 cases (52%). 152 cases of palmoplantar psoriasis (figure 4) accounted for about 35% cases followed by scalp psoriasis (Figure 5) which was seen in 44 cases (10%). Flexural, guttate and erythrodermic psoriasis (Figure 6) together constituted only 12 cases (<3%).



Figure 3 Chronic plaque psoriasis.



Figure 4 Palmoplantar psoriasis.



Figure 5 Scalp psoriasis.



Figure 6: Erythrodermic psoriasis.

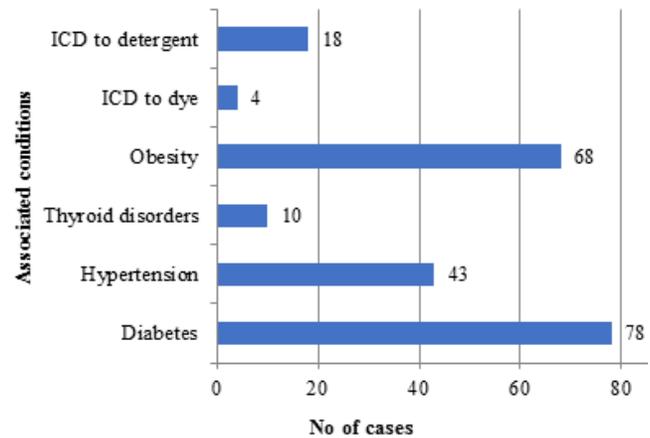


Figure 7 Associated conditions.

Nail and joint involvement Nail involvement was seen in 93 cases (21%). These included pitting -72%, Subungual hyperkeratosis - 49%, Splinter hemorrhages, Leukonychia (whitish discoloration of nails), thickening of nail plate and Oil drop sign seen in 4%. 20 cases (5%) of psoriatic Oligoarthritis were seen in our study.

Associated conditions Obesity (16%), diabetes (18%) and hypertension (10%) were the 3 major comorbidities seen in the patients. Allergic contact dermatitis to detergents was seen in 18 cases of palmoplantar psoriasis. Similarly irritant contact dermatitis to dye was associated with 4 cases of scalp psoriasis (**Figure 7**).

Discussion

Psoriasis is a chronic, recurrent inflammatory skin disease of papulosquamous type with some genetic predisposition and environmental triggers.⁷ Characteristic lesion constitutes an erythematous plaque with well-defined borders and associated with silvery white scales mainly over the extensor aspects of extremities or Lumbosacral area. It is characterized by some cellular changes in the level of skin which includes epidermal hyperplasia, lymphocytic and neutrophilic infiltration, hyperplastic vasculature and ectasia.⁸

Previous studies in India reveals a prevalence of psoriasis ranging from 0.44 to 2.8%.⁹ In contrary to this, we got a prevalence of 4.4% which

matches with western studies. Males outnumber the females with a maximum incidence in 25-50 years' age group. 52% of the patients had chronic plaque psoriasis which is same like the study conducted by Griffyhs *et al.*¹⁰ Nail involvement (21.4%) and psoriatic arthritis (5%) in our study is matching up with the Indian study conducted by Ghosal *et al.*¹¹ Irregular pitting is most common nail involvement followed by Subungual hyperkeratosis. Oligoarthritis is the most predominant feature in patient having joint involvement associates with psoriasis. Our study revealed a prevalence of diabetes (18%) and hypertension (9%) in psoriasis patients which is similar to that of Alexander *et al.* study.¹²

Obesity is most commonly associated with psoriasis in our study with a prevalence of 19%. Basko-Plluska *et al.* study postulated that obesity being a proinflammatory state may be associated with psoriasis.¹³ Cytokines and inflammatory mediators which contribute to the features of metabolic syndrome like hypertension, dyslipidemia and insulin resistance are being shared by both.¹⁴ Adiponectins, leptin, TNF- α are some of them.

11% of palmoplantar psoriasis had ICD to detergent and 9% of scalp psoriasis had ICD to dye. These two factors could be the triggering factors and this has to be proved by detailed prospective and randomized controlled studies.

Conclusion

There is increase in hospital-based prevalence of psoriasis in the study which may be attributed to lifestyle changes and diseases like obesity, diabetes and hypertension. Increased incidence of allergic contact dermatitis with use of dyes, detergent and cosmetics may be the trigger for scalp and palmoplantar psoriasis. Triggering factors influencing different people have to be

investigated more in detail. Prospective studies in this aspect will enlighten us with better knowledge on the risk factors and clinical pattern of the disease.

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