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A CLINICO-EPIDEMIOLOGICAL STUDY OF PSORIASIS IN TERTIARY CARE CENTRE: A RETROSPECTIVE ANALYSIS

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ABSTRACT **Background:** Psoriasis is an immune-mediated chronic proliferative skin disorder, predominantly involves skin, nails, and joints This research was conducted to study the clinical presentation, and management of psoriasis among patients in tertiary care hospital in South India **Methods:** The medical records of 257 psoriasis patients over the past one year (from January 2022 till December 2022) were examined by the investigators. Data were collected using a semi-structured form. **Results:** Total 257 patients were included in this study. Majority of patients were belonging to 50 and above age group. Male predominance (63%). Most common clinical variant was chronic plaque psoriasis (65.7%) followed by palmoplantar psoriasis (15.9%). Relapse of psoriasis was seen more among patients with a history of disease exacerbation in winter and in rainy season. Co-morbidities like diabetes mellitus and complications like PsA were associated with greater disease durations among the patients. **Conclusion:** In the current study, the proportion of patients with chronic plaque psoriasis was high, most likely due to delayed diagnosis, followed by palmoplantar psoriasis and scalp psoriasis. Topical steroids for psoriasis in limited areas, oral methotrexate, and phototherapy for extensive psoriasis.

KEYWORDS : Psoriasis, risk factors, co-morbities, seasonal variation.

INTRODUCTION

Psoriasis is an immune-mediated, proliferative, recurrent inflammatory, and papulo-squamous disorder, which involves skin, nails and joints[1]. Its global prevalence ranges from 2 to 3%. It is typically characterized by well-defined erythematous plaques with silvery white scales over the extensor surfaces mainly- lumbosacral region, trunk, scalp, palms, and soles[2]. It is also associated with systemic manifestations, including psychological, metabolic, arthritic, and cardiovascular comorbidities[3].It is also one of the components of metabolic syndrome. Its chronicity can have negative impact on patient's quality of life. In addition to the psychological and social burden related to psoriasis, the expenditure of healthcare system is high[4]. Psoriasis has a strong genetic component but environmental factors play an important role in the presentation of this disease. The disease is known for its variations in distribution, periodicity of flares, and duration.

MATERIALS AND METHODS

It is a retrospective study conducted on 257 psoriasis patients who were attended in the department of Dermatology, Venereology, and leprosy, Govt Siddhartha medical college / Govt General hospital, tertiary care hospital in Vijayawada over a period of 1 year i.e., from January 2022 to December 2022. Institutional Ethics Committee approval was taken.

Inclusion Criteria

- Patients of all age groups in both sexes who were newly registered in psoriasis specialty clinic.

Exclusion Criteria

- Patients who were already on follow up for psoriasis at the specialty clinic

A total of 257 psoriasis patient's data was enrolled in the study. Socio-economic and demographic data like age, gender, education status, occupation, waist circumference, height and weight were noted and body mass index (BMI) was calculated and documented. A detailed history regarding symptoms, duration, and treatment was taken and thorough dermatological examination was done. Patients were assessed Clinically the for cutaneous involvement with body surface area, nail involvement and evidence of psoriatic arthritis. Basic parameters like blood pressure, Relevant blood investigations like blood sugar, lipid profile as a part of metabolic syndrome were carried out. Data was compiled and analysed with the help of episoft 2.0.

RESULTS

Table 1: Age & gender distribution

Age group	Male n (%)	Female n (%)
0-20	8(3.1)	11(4.3)
21-30	15(5.8)	12(4.6)
31-40	35(13.6)	18(7
41-50	39(15.2)	25(9.7.)
50-60	67(26.1)	27(10.5)
Total	164(63.8)	93(36.2)

After applying inclusion and exclusion criteria total 257 patients with confirmed diagnosis of psoriasis were considered for present study. Most common age group affected was 50-60 years (36.57 %), followed by 41-50 years age group (23.33 %). Males clearly outnumbered female patients (67.5% male and 32.5% female). Male to female ratio in present study was 1.7:1.

Table 2: Distribution of clinical variants

Age group	Chronic plaque psoriasis	Palmo plantar psoriasis	Scalp Psoriasis	Guttate Psoriasis	Pustular psoriasis	Nail psoriasis	Flexural psoriasis	Psoriatic Arthritis	Erythroderma
0-20	9 (5.3)	5(10.9)	2 (8.0)	3(60)	1 (100)	0 (0)	0(0)	0(0)	00(0)
21-30	14 (8.2)	7 (17.07)	2 (8.0)	1(20)		0 (0)	0(0)	0(0)	0(0)
31-40	36 (21.3)	6(13.0)	9 (36.0)	1(20)		1 (50)	1 (33.3)	0(0)	0(0)
41-50	46 (27.2)	8(19.5)	8 (32.0)			1 (50)	2 (66.6)	1 (33.3)	2 (22.2)
50+	64 (37.8)	15 (36.5)	4 (16.0)				0(0)	2 (66.6)	7 (77.8)
Total	169 (100)	41 (100)	25 (100)	5 (100)	1 (100)	2 (100)	3 (100)	3 (100)	9 (100)

The most common type of psoriasis [table2] in our study was psoriasis vulgaris (65.7%), second most common was Palmoplantar psoriasis (15.9 %), followed by scalp psoriasis (9.7%). Other types such flexural psoriasis (1.16%), pustular psoriasis (0.37%), isolated nail psoriasis (0.77%), psoriatic arthritis (1.16%), and psoriatic erythroderma (3.5%) were also noted but in less amount.

Usually, multiple sites are simultaneously involved in patients with psoriasis. Most common affected sites were upper extremities (86 %), lower extremities (72 %), scalp (65 %), trunk (67 %), nails (48 %), generalized involvement (3.5%) in present study.

Table 3: Co morbities

co-morbidities	Total no	percentage
Hypertension	124	48.2%
diabetes mellitus	92	35.7%
Dyslipidaemia	63	24.5%
Obesity	87	33.8%
metabolic syndrome	82	31.9%
depression	12	4.6%
Cardiovascular diseases	23	8.9%
COPD	10	3.8%

Psoriasis has been associated with other auto immune skin and systemic diseases [Table 3]. Multiple co-morbidities like hypertension (48.2%), diabetes mellitus (35.7%), dyslipidaemia (24.5%), obesity (33.8%), metabolic syndrome (32%), depression (13%), were noted in study patients. Other less common morbidities were cardiovascular diseases (9.2%), COPD (6.7%).

Table 4: Other risk factors

Risk factor	Total no	Percentage
Family history	12	4.6%
Personal habits Smoking	26	10.1%
Alcoholism	34	13.2%

Family history of psoriasis present in 4.6% of patients. Other risk factors like smoking and alcoholism were noted 10.1% and 13.3% respectively.

Table 5: Seasonal exacerbations:

Season	Total no	Percentage
Winter	31	12%
Summer	13	5%
Rainy	9	3.5%

Relapses and exacerbations were more seen in winter (12%), followed by summer (5%).

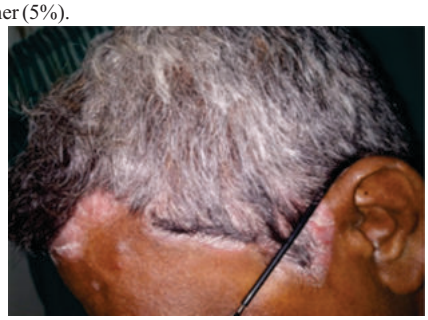

Fig 1: Scalp Psoriasis

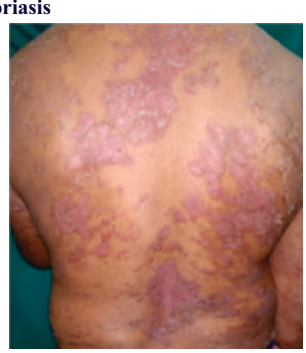

Fig 2: Chronic plaque psoriasis

DISCUSSION

Psoriasis is a chronic, multifactorial disease with variety of clinical presentations. Genetic and environmental factors greatly influence clinical presentation, severity, outcome, and associated morbidity. Many patients with minimal clinical manifestations often do not seek medical attention or take treatment from general practitioner/ Alternate medicine or take over the counter medicines. All these factors are responsible for wide differences in the prevalence of the disease among different ethnic groups and in different parts of the world. The etiology of psoriasis remains unclear, but there is evidence for genetic predisposition. Psoriasis can also be provoked by external and internal triggers, including mild trauma, sunburn, infections, systemic drugs, and stress.

In the present study most common age group affected was 50-60 years (36.57 %), followed by 41-50 years age group (23.33 %) and 31-40 years (20.6 %). Males clearly outnumbered female patients (67.5% male and 32.5% female). Male to female ratio in present study was 1.7:1.

Several studies noted that the age of onset for psoriasis has an early and late onset (bimodal) distribution. Henseler and Christopher[5] based on phenotype database of 2147 patients, recognized two distinct patient cohorts. One cohort had early onset (type I) of psoriasis in the second decade and the other cohort had late onset (type II) of the disease in the fifth decade. Early onset cohort had more widespread and recurrent disease, and also higher number had affected parents compared to late onset cohort.

Male to female ratio in present study is 1.7:1. Incidence in males was twice as compared to females. The higher incidence of psoriasis in males may be because, males usually come forward and report the symptoms and lesions, while in females there is hesitancy because of the fear of stigma and social rejection. Another reason for Increased incidence in males can also be related to tobacco smoking and alcohol consumption, as both these increases the risk of developing as well as severity of psoriasis which is in line with findings of Ejaz et al[6]

The most common clinical presentation [table2] in our study was chronic plaque psoriasis (65.7%), second most common was Palmoplantar psoriasis (15.9 %), followed by scalp psoriasis (9.7%). Other types such as guttate psoriasis (1.94%), pustular psoriasis (0.3%), flexural psoriasis (1.16%), isolated nail psoriasis (0.77%), psoriatic arthritis (1.16%), and psoriatic erythroderma (3.5%) were also noted but less frequently. Most of the patients with Chronic plaque psoriasis were having scalp lesions, nail changes like nail pitting, subungual hyper keratosis, colour changes and psoriatic arthritis. Similarly, Kaur et al[7] reported Chronic plaque type psoriasis (93%), scalp (25%) were most common clinical variants in their study.

Of the total cases, 0.7% had isolated nail involvement. Pitting was the most common nail change, followed by onycholysis, discoloration, subungual hyperkeratosis, longitudinal ridging and thickening of the nail plate, Kaur et al reported 3% in their study which was higher than this study. About 40% of persons with psoriasis and 80% of those with psoriatic arthritis report changes to their nails. Nail psoriasis has long been proposed as a predictor for the development of PsA.

Psoriatic arthritis was present among 3% patients in this study. It is a progressive condition, a delay in the diagnosis and management of Psoriatic Arthritis would increase the risk of permanent joint damage and disability. In our study Psoriatic Arthritis is similar to study done by Arun et al[8].Guttate psoriasis constituting about 1.94%% of total cases studied. It was more common in children and was associated with upper respiratory tract infection, Arun N, et[8] al reported3.68% % of patients in their study. The most common initial sites of involvement of psoriasis were the legs (20%), hands (9.8%), scalp (10.5%), and trunk (8.2%), which are similar to bedi et al[9]

In this study, our patients were shown to have hypertension (48.2%), diabetes mellitus (35.7%), dyslipidaemia (24.5%), obesity (33.8%), metabolic syndrome (32%). Other less common morbidities were cardiovascular diseases (9.2%), COPD (6.7%) also noted. Similar findings were reported in a study by Cohen et al[10].

In our study depression and other psychiatric morbidity were observed in 13% of patients. Gaikwad et al.[11] in a study of 43 psoriasis patients found that Sixty-seven percentage of the patients had psychiatric comorbidity, which was higher than our study. Other risk factors like

family history of patients reported in 4.6% of patients. In males smoking and alcoholism observed in 10.1% and 13.2% respectively, both were aggravating factors noted in this study.

In our present study seasonal variations were documented in 12% patients with exacerbation in winter and in summer exacerbation in 5% patients. A previous study by Lomholt[12] reported seasonal changes with remission of psoriasis during summer and another study conducted by Yasuda et al [13] noted exacerbation of psoriasis in winter.

CONCLUSION:

The proportion of patients with chronic plaque psoriasis was high in the current setting probably because of delayed diagnosis followed by palmoplantar psoriasis and scalp psoriasis. A greater understanding of the disease, its clinical manifestations, aggravating factors and complications may aid in its early detection. Psoriasis relapse was linked to seasonal aggravation, which was a significant risk factor for the condition. The most common management modalities were topical steroids for psoriasis in limited areas, oral methotrexate, cyclosporin, oral retinoids and phototherapy for extensive psoriasis.

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