



## CLINICO-EPIDEMIOLOGICAL STUDY AND TREATMENT PATTERN OF PSORIASIS IN A TERTIARY CARE HOSPITAL OF NORTH INDIA.

### Dermatology

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### ABSTRACT

**Background:** Psoriasis is a chronic papulosquamous inflammatory disease which varies in its clinical profile and epidemiology. It is a common dermatosis but insufficient regional clinico-epidemiological data is available. The aim of this study was to determine the clinico-epidemiological and treatment patterns of psoriasis. It was a hospital based descriptive study.

**Methods:** One hundred four patients with psoriasis were included in the study. History including basic demographic data, personal, dietary habits and form of treatment received for psoriasis were noted. Clinical examination with calculation of BMI & PASI were done.

**Results:** The mean age at presentation was 29.5 years. Male predominance (56.7%) was observed with a M:F ratio of 1.31. Majority (65.33%) were vegetarian, history of alcohol intake was reported in 17(16.3%) while smoking in 15(14.4%) followed by tobacco chewing in 12(11.5%). Mean BMI was 24.98(Kg/m<sup>2</sup>). Most (64.00%) had mild disease severity. Plaque psoriasis was the most common (65.3%) clinical pattern observed. Nail involvement was present in 25(24.00%) and joint involvement in 10(9.33%). Majority of the patients 76(73.07%) were on topical treatment only.

**Conclusions:** The study revealed a slight male preponderance with peak incidence in third and fourth decade of life. Mild disease severity was noted in most. Plaque psoriasis was the most common clinical subtype. Nail and Joint involvement were common. Majority were on topical treatment only.

### KEYWORDS

Psoriasis, Clinical, Epidemiology.

### INTRODUCTION:

Psoriasis is a chronic papulosquamous inflammatory disease most commonly manifested by skin lesions on the elbows, knees, scalp and trunk that has been estimated to affect 1% to 3% of the population worldwide.<sup>1</sup> The prevalence of psoriasis varies in different parts of the world. As per the available literature the prevalence of psoriasis in different regions may vary from 0% to 11.8%.<sup>2,3</sup> A previous study from north India showed that psoriasis accounted for 2.3% of all dermatology outpatients.<sup>4</sup> There are only few studies from India which have analysed the clinical spectrum of the disease in psoriasis patients.<sup>5</sup> This study aims to highlight the clinico-epidemiological features and treatment pattern in psoriatic patients attending the Outpatient Department (OPD) of a tertiary care medical college in North India.

### SUBJECTS AND METHODS:

The study was conducted in the department of dermatology, government medical college, Jammu from December 2019 to January 2020. It was a hospital-based descriptive study in which patients reporting to the postgraduate department of dermatology were evaluated for entry into the study. A written informed consent was taken from the patients & controls. Patients who were clinically diagnosed as psoriasis by a dermatologist were taken up for study.

**Inclusion criteria:** Clinically diagnosed patients of psoriasis and patients willing to participate in the study. **Exclusion criteria** included patients who refused to give consent to undergo investigations and clinically doubtful cases not confirmed on histopathological investigation.

Patients were subjected to full history taking and clinical examination regarding age of onset, type and distribution of lesions, duration, dietary and personal history like smoking & alcohol intake. Calculation of Body mass index (BMI) was undertaken.<sup>6</sup> Relevant information was taken & recorded on a predesigned proforma. Grading of the severity of the disease was done on the basis of PASI Score. PASI Score < 10 was categorised as mild disease whereas PASI Score > 10 was categorized as Moderate to Severe disease.<sup>7</sup> Clinically doubtful cases were advised histopathology of skin specimen for confirmation.

### RESULTS:

The study consisted of 104 clinically diagnosed cases of psoriasis. Majority of patients 31(29.8%) were between 31-45 years of age group [Fig 1]. The demographics and baseline clinical parameters were tabulated [Table 1]. The mean age at presentation was 29.5 years (standard deviation 10.14 years). Male predominance (56.7%) was observed with a Male: Female ratio of 1.31. Mean BMI was 24.88

### DISCUSSION:

This study included 104 patients with psoriasis with mean age of 29.5 years and standard deviation of 10.14 years. Maximum number of patients (29.8%) were in the age group of 31-45 years. This is similar to study conducted by *Karabudak O et al.* where twenty prospectively selected outpatients of age 23 ± 4 years were included in the study group.<sup>8</sup> There was slight male predisposition in our study (56.7%) with a Male: Female ratio of 1.31. Similarly, in a study conducted by *Ahmed AWS et al.* the study group included 30 psoriasis patients, 22 males (73.3%) and 8 females (26.7%).<sup>9</sup> In our study mean BMI was 24.88 (standard deviation = 4.6) and ranged from 17.65 to 29.67. Similar skewing of BMI towards higher normal in psoriatic patients was seen in another study perhaps indicating towards a relationship with obesity, metabolic syndrome and psoriasis.<sup>10</sup> The duration of psoriasis in our study ranged from two months to 18 years with a mean duration of 34 months (standard deviation = 12 months). Maximum number of cases were seen having the duration of disease between one to five years group 24(32.00%). This was in concordance with a previous study where the duration of psoriasis in the study group ranged between 10 and 60 months with median of 38 months.<sup>8</sup> Based on the classification of cases according to the type of psoriasis, plaque psoriasis was the most common type observed in 68(65.3%) followed by miscellaneous types in 13(12.6%), guttate psoriasis 11(10.5%), scalp psoriasis in 6(5.8%) and palmoplantar psoriasis in 6(5.8%). This was in concordance with a study conducted by *Bedi TR et al.* who analysed data of 530 psoriasis patients seen over a period of five years where chronic plaque type psoriasis was the most common clinical phenotype.<sup>11</sup> In our study, nail involvement was present in 25(24.00%) and joint involvement in 10(9.33%) while both nail and joint involvement was present simultaneously in 3(2.67%) patients whereas 66(64.00%) patients had neither joint nor nail involvement. Nail pitting was the most commonly encountered nail finding. This was similar to study by *Ghosal et al.* who studied nail involvement in 100 psoriasis patients. Finger nails were involved in 32% and toe nails in 24% cases.<sup>12</sup> Another study by *Gladdmaan et al.* reported the incidence of joint involvement ranging from 7% to 42% among all psoriasis patients.<sup>13</sup> According to severity of psoriasis with respect to Psoriasis Area and Severity (PASI) Score, majority of the cases in our study had mild disease severity with PASI < 10 in 67(64.00%) patients and mean PASI score was 16.7. This was similar to a study by *Ahmed AWS et al.* where PASI score ranged from 3.40 to 49.00 with a mean of 16.300±11.880.<sup>9</sup> Major part of our study group was on topical treatment only at the time of study which may be due to the fact that majority of our patients were suffering from mild psoriasis.

It is thus concluded that our study revealed a slight male preponderance with peak incidence during third and fourth decade of life. Majority of the patients had a mild disease severity. Chronic plaque psoriasis was by far the most common clinical subtype

observed in this region. Nail involvement was more common often in the form of nail pitting than Joint involvement. Majority of patients were on topical therapy only.

**Tables:**

**Table 1. Demographics And Baseline Characteristics Of The Study Population.**

Feature	STUDY GROUP (n=104) No (%)	
Age (yrs.), mean+- SD Range (yrs.)	29.510.14 4-72	
Gender	Male	59(56.7%)
	Female	45(43.2%)
Marital status	Married	61(58.6%)
	Unmarried	43(41.3%)
Dietary habits	Veg	67(64.4%)
	Non-veg	37(35.5%)
Domicile	Rural	71(68.2%)
	Urban	33(31.7%)
BMI Mean Range	24.88 4.6 17.65-29.67	
Duration Mean SD (in months), Range	3412 2 months-18 years	
PASI Mean Range	16.766.70 3-27	

SD: Standard Deviation, BMI: Body mass index, PASI: Psoriasis Area and Severity Index.

**Table 2: Distribution Of Patients According To Pasi Score**

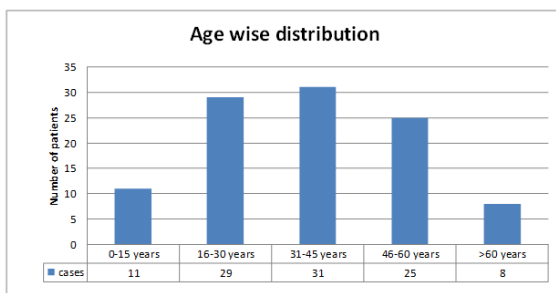
S.no	PASI	Frequency (%)
1.	<10	67(64.00%)
2.	>10	37(36.00%)
Mean, Range	16.766.70, (3-27)	

**Table 3: Distribution Of Patients According To Type Of Psoriasis (n=104)**

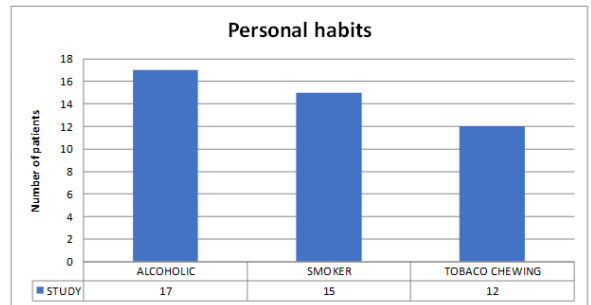
S. No.	Clinical Variety	No of Patients (%)
1.	Plaque psoriasis	68(65.3)
2.	Guttate psoriasis	11(10.5)
3.	Scalp psoriasis	6(5.8)
4.	Palmoplantar psoriasis	6(5.8)
5.	Others	13(12.6)
6.	Total	104

**Table 4: Distribution Of Cases On The Basis Of Joint And Nail Involvement.**

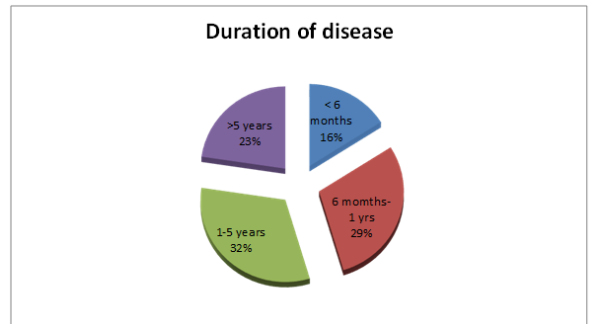
S. No.	Feature	Frequency (%)
1.	Joint involvement	10(9.33%)
2.	Nail Involvement	25(24.00%)
3.	Both	3(2.67%)
4.	None	66(64.00%)
	Total	104(100.00%)



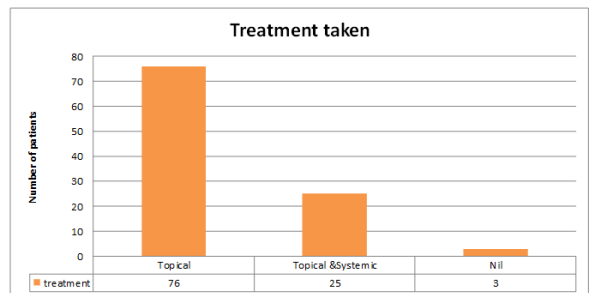
**Fig. 1. Bar Chart Showing Age Distribution Of Patients In Cases And Controls.**



**Fig. 2. Bar Chart Of Study Population According To Personal Habits.**



**Fig. 3. Pie Chart Of Cases According To Duration Of Disease.**



**Fig. 4. Distribution Of Cases According Treatment Taken.**

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