SSR Institute of International Journal of Life Sciences
ISSN (O): 2581-8740 | ISSN (P): 2581-8732
Manekar *et al*., 2025
doi: 10.21276/SSR-IIJLS.2025.11.6.39

Original Article

open access

Study of Clinical Patterns of Psoriasis with Emphasis on Associated Systemic Conditions

Vijay V Manekar[1], Vivek V Nikam[2], Bhushan J Telhure[3]*, Marwa Deshmukh[4]

[1]Associate Professor, Dept of Dermatology, Venereology and Leprosy, Dr Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik, Maharashtra, India

[2]Associate Professor, Dept of Dermatology, Venereology and Leprosy, Pacific Institute of Medical Sciences, Umarda, Udaipur, Rajasthan, India

[3]Assistant Professor, Dept of Dermatology, Venereology and Leprosy, Dr Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik, Maharashtra, India

[4]Associate Dermatologist, Cutis Skin and Laser Centre, Nerul, Maharashtra, India

***Address for Correspondence:** Dr. Bhushan J Telhure, Assistant Professor, Dept of Dermatology, Venereology and Leprosy, Dr Vasantrao Pawar Medical College, Hospital and Research Centre, Nashik, Maharashtra, India
E-mail: bhushan.telhure@gmail.com

Received: 23 Jun 2025/ Revised: 15 Aug 2025/ Accepted: 17 Oct 2025

ABSTRACT

Background: Psoriasis is a chronic, immune-mediated inflammatory skin disease with multisystem involvement and variable clinical presentation. Increasing evidence suggests a strong association between psoriasis and metabolic, cardiovascular, and other systemic comorbidities, highlighting its systemic nature.

Methods: A hospital-based cross-sectional study was conducted in the Department of Dermatology of a tertiary care centre. A total of 117 adult patients with clinically diagnosed psoriasis were enrolled after obtaining informed consent. Detailed clinical evaluation, laboratory investigations, dermoscopic assessment, and histopathological examination were performed, and data were analysed using appropriate statistical methods.

Results: The majority of patients were middle-aged males with a disease duration of 1–5 years. Common sites involved were the back and scalp, with nail changes seen in a minority of patients. Diabetes mellitus and hypertension were the most frequent comorbidities. Laboratory evaluation revealed a high prevalence of anaemia, dyslipidaemia (notably elevated LDL and reduced HDL), abnormal liver and renal parameters, and raised serum homocysteine levels. Scalp involvement showed a statistically significant association with comorbidities, while nail changes did not show a significant association.

Conclusion: Psoriasis demonstrates significant systemic involvement with notable metabolic and cardiovascular comorbidities. Early recognition and comprehensive evaluation of psoriasis patients are essential for holistic management and reduction of long-term systemic complications.

Key-words: Psoriasis, Systemic comorbidities, Dyslipidaemia, Dermoscopy, Chronic inflammatory disease

INTRODUCTION

Psoriasis is a common chronic systemic inflammatory skin disease that affects people of all ages worldwide. The prevalence of psoriasis is highly variable, depending on the geographic area (ranging from 0.09% to 11.4%) [1], and in the Western population is estimated at 2–4% [2].

Although the aetiology of the disease is unclear, psoriasis is widely regarded as a complex disorder caused by the interaction between inherited susceptibility alleles and environmental risk factors, termed triggers (e.g. trauma, bacterial and viral infections, smoking, stress, obesity, and alcohol consumption) [3].

The most common type is plaque psoriasis, which is characterized by inflammatory plaques on the skin. These papulo-squamous lesions, often itchy and/or painful, can appear in typical areas of the skin, such as

How to cite this article
Manekar VV, Nikam VV, Telhure BJ, Deshmukh M. Study of Clinical Patterns of Psoriasis with Emphasis on Associated Systemic Conditions. SSR Inst Int J Life Sci., 2025; 11(6): 8875-8883.

Access this article online
https://iijls.com/

doi: 10.21276/SSR-IIJLS.2025.11.6.39

the knees, elbows, scalp, and lower back, but also in more challenging regions, including the nails, scalp, palms and soles [4]. The main molecular signatures of the disease are the overproduction of inflammatory cytokines, which alter the immune response. In particular, myeloid dendritic cells play a key role, secreting interleukin (IL)-12 and IL-23 that activate T-helper-cells, which produce IL-17, tumour necrosis factor (TNF), interferon (IFN)γ and IL-22. This mechanism causes premature maturation of keratinocytes, infiltration of the dermis by leukocytes, and dilatation of blood vessels, leading to hyperproliferation of the epidermal layer with consequent plaque formation [5].

Given its multifactorial nature, the disease may present with heterogeneous manifestations. Several studies have reported that one-third of patients have concomitant psoriatic arthritis (PsA), an inflammatory spondyloarthropathy, as well as other metabolic diseases, such as obesity, diabetes, fatty liver disease, metabolic syndrome, and cardiovascular diseases [6,7]. The complexity of the possible manifestations leads the patients to experience reduced health-related quality of life (QoL), resulting in physical and mental disability [8].

Epidemiological studies have revealed that hypertension, heart failure, and diabetes are considerably more prevalent in patients with psoriasis compared to control groups [9]. These associations between psoriasis and comorbidities may be related to their chronic and inflammatory nature, especially due to increased proinflammatory cytokines that are part of the pathophysiology of such disorders [10]. Similarities also exist among psoriasis, the metabolic syndrome and atherosclerosis, with all three conditions characterized by an inflammatory process driven by Th1 cytokines [11].

Results of epidemiological reports and studies investigating the association with comorbidities vary depending on the population studied. This study was designed to define the epidemiological, clinical, and laboratory profile of patients seen at our hospital and to investigate the association with comorbidities and psoriasis.

MATERIALS AND METHODS

Study Setting- The cross-sectional study was conducted in the Department of Dermatology at a tertiary healthcare centre.

Study Population- Patients attending the dermatology outpatient department (OPD) during the study period were screened for eligibility.

Inclusion Criteria

- Patients diagnosed with psoriasis, irrespective of gender, attending the dermatology OPD.
- Patients aged more than 18 years.
- Patients willing to participate in the study.
- Patients willing to undergo laboratory investigations for systemic evaluation.

Exclusion Criteria

- Patients unwilling to undergo laboratory investigations.
- Patients with any skin disorder other than psoriasis.

Sample Size and Enrollment- A total of 117 patients fulfilling the eligibility criteria were enrolled in the study. Written informed consent was obtained from all participants before enrollment.

Data Collection and Clinical Assessment- A detailed clinical history and thorough dermatological examination were performed for each participant. Patient particulars, clinical findings, and relevant history were recorded using a structured, printed pro forma. Digital clinical photographs were taken after obtaining informed consent.

Laboratory Investigations- All participants underwent the following investigations for systemic evaluation:

- Complete blood count
- Liver function tests
- Renal function tests
- Lipid profile
- Random blood sugar level
- Thyroid function tests
- Serum homocysteine levels

Histopathological Examination- Skin punch biopsy was performed after obtaining informed consent and the samples were sent for histopathological examination.

Dermoscopic Examination- Dermoscopy was performed using a handheld dermoscope. Images were captured using a digital camera. To ensure optimal image quality, the dermoscope was fully charged before use. Four

doi: 10.21276/SSR-IIJLS.2025.11.6.39

dermoscopic images were obtained from affected areas in each patient. Images were analysed independently, and dermoscopic patterns were interpreted based on descriptions available in the literature.

Follow-up and Patient Management- Participants were advised follow-up visits for review of investigation reports. Findings were communicated to the patients, and those with abnormal results were appropriately counselled and managed or referred as required.

Statistical Analysis- Data were analysed using SPSS software. Continuous variables were expressed as mean±standard deviation, while categorical variables were presented as frequency and percentage. Association between categorical variables was assessed using the Chi-square test or Fisher's exact test as appropriate. A p-value of <0.05 was considered statistically significant.

RESULTS

The majority of participants (28.2%) were aged between 30 and 40 years. A smaller proportion of participants (15.4%) were aged between 20 and 30 years, and only 1.7% were younger than 20 years. The remaining participants were distributed across the age groups of 40-50 years (18.8%), 50-60 years (17.1%), and older than 60 years (18.8%). The mean age of participants was 44.77 years (SD=14.69), with ages ranging from 18 to 78 years (Table 1).

Table 1: Age-wise distribution of the study

	Frequency	Percentage (%)
<20	2	1.7
20-30	18	15.4
30-40	33	28.2
40-50	22	18.8
50-60	20	17.1
>60	22	18.8
Total	117	100
Mean±SD	44.77±14.69	Range (18-78)

Out of 117 participants, 37 participants (31.6%) were female, while 80 participants (68.4%) were male (Fig. 1).

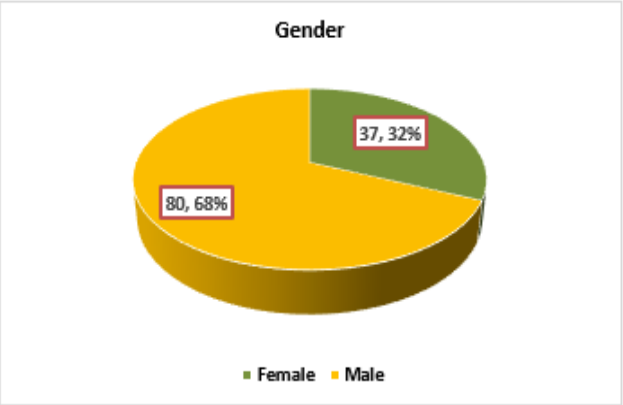

Fig. 1: Gender wise distribution of the study

The distribution of participants based on the duration of psoriasis revealed results: 33 participants (28.3%) had the condition for less than 1 year, 62 participants (52.9%) had the condition for between 1 and 5 years, and 22 participants (18.8%) had the condition for more than 5 years. This data indicates that the majority of participants had the condition for a duration of 1 to 5 years, with a substantial proportion experiencing it for less than 1 year. A smaller segment of the sample had the condition for more than 5 years (Table 2).

Table 2: Duration-wise distribution of the study

	Frequency	Percentage (%)
<1 year	33	28.3
1-5 years	62	52.9
>5 years	22	18.8
Total	117	100

The results indicated that 31 participants (26.4%) reported alcohol use, while 10 participants (8.5%) engaged in smoking. Tobacco chewing was reported by 24 participants (20.5%). A significant majority, 66 participants (56.4%), reported no use of these substances (Table 3).

Table 3: Addiction-wise distribution of the study

	Frequency	Percentage (%)
Alcohol	31	26.4
Smoking	10	8.5
Tobacco Chewing	24	20.5
None	66	56.4

doi: 10.21276/SSR-IIJLS.2025.11.6.39

The results showed that 15 participants (12.8%) had irregular deep pitting, while 10 participants (8.5%) exhibited subungual hyperkeratosis. A substantial majority, 92 participants (76.9%), did not display any of these conditions (Table 4).

Table 4: Nail changes: wise distribution of the study

	Frequency	Percentage (%)
Irregular deep pitting	15	12.8
Subungual hyperkeratosis	10	8.5
None	92	76.9

Hemoglobin (Hb) levels ranged from 6.4 to 17.1 g/dL, with a mean of 12.95 g/dL (SD=2.08). Total leukocyte count (TLC) varied widely, with a range from 3,120 to 16,230 cells/µL and a mean of 7,510.47 cells/µL (SD=2,351.35). Platelet count (PLT) showed a mean of 2.885x10^3/µL (SD=10,036.16), ranging from 67,000 to 5.53x103/µL, indicating a high degree of variability. Liver function tests revealed that serum glutamic-pyruvic transaminase (SGPT) ranged from 9.9 to 216.0 U/L, with a mean of 29.87 U/L (SD=21.42), while serum glutamic-oxaloacetic transaminase (SGOT) levels ranged from 8.1 to 112.0 U/L, with a mean of 25.78 U/L (SD=11.77). Total bilirubin levels ranged from 0.1 to 9.0 mg/dL, with a mean of 0.78 mg/dL (SD=0.87). Direct bilirubin levels ranged from 0.1 to 1.0 mg/dL, with a mean of 0.33 mg/dL (SD=0.20), and indirect bilirubin levels ranged from 0 to 1.3 mg/dL, with a mean of 0.38 mg/dL (SD=0.27).

Renal function tests indicated that blood urea ranged from 8.7 to 212 mg/dL, with a mean of 26.91 mg/dL (SD=23.15), and serum creatinine ranged from 0.3 to 8.2 mg/dL, with a mean of 1.05 mg/dL (SD=0.70). Lipid profile analysis showed that serum cholesterol ranged from 79.0 to 318.0 mg/dL, with a mean of 166.12 mg/dL (SD=36.05). Triglycerides (TG) varied from 56.8 to 663.0 mg/dL, with a mean of 117.02 mg/dL (SD=69.91). HDL levels ranged from 17.9 to 67 mg/dL, with a mean of 43.43 mg/dL (SD=8.18), while low-density lipoprotein (LDL) levels ranged from 25 to 170.8 mg/dL, with a mean of 88.52 mg/dL (SD=30.18). Very low-density lipoprotein (VLDL) levels ranged from 10.8 to 132.6 mg/dL, with a mean of 25.95 mg/dL (SD=17.61). RBS ranged from 73 to 326 mg/dL, with a mean of 107.76 mg/dL (SD=34.53). Thyroid function tests showed that T3 levels ranged from 0.4 to 12.4 ng/mL, with a mean of 1.51 ng/mL (SD=1.33), T4 levels ranged from 0.6 to 846 ng/dL, with a mean of 15.19 ng/dL (SD=77.50), and TSH levels ranged from 0.2 to 16.2 µIU/mL, with a mean of 2.58 µIU/mL (SD=2.04). Serum homocysteine levels ranged from 5.6 to 68.3 µmol/L, with a mean of 18.51 µmol/L (SD=11.82).

Regarding CBC, out of 117 participants, 59.0% of participants had abnormal hemoglobin levels (anaemia) (n=69), while 41.% had normal levels (n=48). For total leukocyte count (TLC), 18.8% of individuals had abnormal levels (leukocytosis) (n=22), compared to 81.2% with normal levels (n=95). Regarding platelet count, 5.9 of participants had abnormal levels (n=9), while 94.01 % had normal levels (n=108), out of which 2.5% had thrombocytopenia and 3.4% had thrombocytosis. Of all participants, 6.8% had abnormal SGOT levels (n=8), while 93.2% had normal levels (n=109). For SGPT, 12.0% of individuals had abnormal levels (n=14), compared to 88.0% with normal levels (n=103). Regarding total bilirubin, 19.7% of participants had abnormal levels (n=23), and 80.3% had normal levels (n=94). Direct bilirubin levels were abnormal in 57.3% of individuals (n=67), with 42.7% showing normal levels (n=50). Lastly, 41.9% of participants had abnormal indirect bilirubin levels (n=49), while 58.1% had normal levels (n=68).

Among the study population, 12.0% of participants had abnormal blood urea levels (n=14), while 88% had normal levels (n=103). For serum creatinine, 18% of individuals had abnormal levels (n=21), compared to 82.0% with normal levels (n=96). In the study population, 14.5% of participants had abnormal total cholesterol levels (n=17), while 85.5% had normal levels (n=100). For TGL, 6.0% of individuals were classified as abnormal (n=7), compared to 94.0% with normal levels (n=110). Regarding HDL, 34.2% of participants had abnormal levels (n=40), and 65.8% had normal levels (n=77). LDL levels were abnormal in 40.2% of participants (n=47), with 59.8% showing normal levels (n=70). Lastly, 15.4% of individuals had abnormal very low-density lipoprotein (VLDL) levels (n=18), while 84.6% had normal levels (n=99).

Among the study population, 25.6% of participants had abnormal random blood sugar levels (n=30), while 74.4% had normal levels (n=87), with a total of 117 individuals assessed. Nearly 50.4% of participants had abnormal serum homocysteine levels (n=59), whereas 49.6% had normal levels (n=58), a total of 117 individuals assessed.

doi: 10.21276/SSR-IIJLS.2025.11.6.39

The majority of individuals exhibited normal thyroid function test results. Specifically, 88% of participants had normal T3 levels, with only 12% showing abnormal triiodothyronine (T3) levels. For thyroxine (T4), 92.3% of participants were within the normal range, while 7.7% had abnormal levels. Similarly, TSH levels were normal in 92.3% of individuals, with only 7.7% presenting with abnormal thyroid-stimulating hormone (TSH) levels. Out of those, 5.1% had Hypothyroidism and 2.5% had Hyperthyroidism (Table 5).

Table 5: Lab Investigations in patients of Psoriasis

	Minimum	Maximum	Mean	Std. Deviation
Hb	6.4	17.1	12.95	2.07
TLC	3120	16230	7510.47	2351.35
PLT	67000	553000	288500	10036.15
SGPT	9.9	216	29.86	21.41
SGOT	8.1	112	25.78	11.77
Total bilirubin	0.1	9	0.77	.87
Direct bilirubin	0.1	1	.32	0.19
Indirect bilirubin	0.01	1.3	.37	0.27
Blood urea	8.7	212	26.91	23.15
S creatinine	0.3	8.2	1.052	.70
S cholesterol	79	318	166.12	36.04
TG	56.8	663	117.01	69.90
HDL	17.9	67	43.42	8.17
LDL	25	170.8	88.51	30.17
VLDL	10.8	132.6	25.94	17.60
RBS	73	326	107.76	34.52
T3	0.4	12.4	1.51	1.33
T4	0.6	8.46	15.18	77.50
TSH	0.2	16.2	2.58	2.04
Sr. Homocysteine	5.6	68.3	18.51	11.82

Among the study participants, 14.4% of those with a body surface area (BSA) greater than 10% had comorbidities, compared to 26.3% of those with a BSA between 5 and 10%. However, this difference was not statistically significant (p=0.19) (Fig. 2).

Scalp involvement was significantly associated with the presence of comorbidities. Among participants with comorbidities, 22.2% had scalp involvement, compared to 49.5% without comorbidities. Conversely, 77.8% of those with comorbidities did not have scalp involvement, while 50.5% of those without comorbidities did not have scalp involvement. The difference between the groups was statistically significant (p=0.03), suggesting that scalp involvement is more likely in individuals without comorbidities (Table 6).

doi: 10.21276/SSR-IIJLS.2025.11.6.39

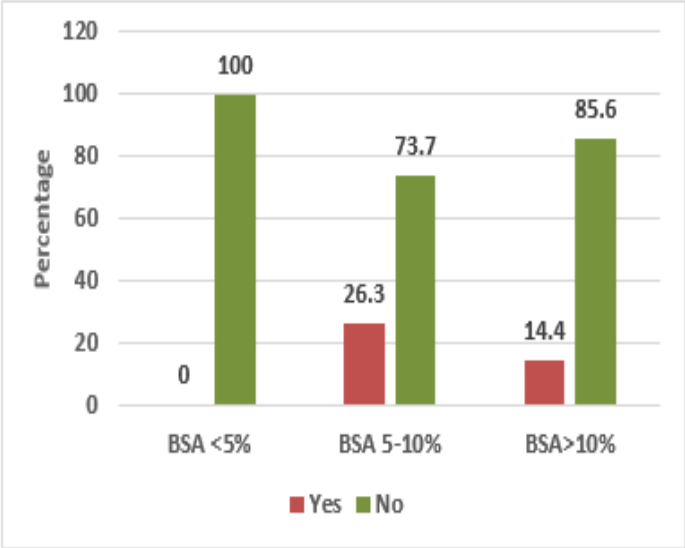

Fig. 2: Comorbidity and Severity of Lesions in BSA

Table 6: Association of Scalp Involvement with Comorbidity

Scalp involvement	Comorbidity-Yes		Comorbidity-No		p-value
	n	%	n	%	
Total	18		99		
Yes	4	22.2	49	49.5	0.03
No	14	77.8	50	50.5	

Nail changes were observed in 33.3% of participants with comorbidities, compared to 20.2% of those without comorbidities. However, this difference was not statistically significant (p=0.21), indicating that the presence of comorbidities was not significantly associated with the occurrence of nail changes in this sample (Table 7).

Table 7: Nail changes association with Comorbidity

Nail changes	Comorbidity-Yes		Comorbidity-No		p-value
	n	%	n	%	
Total	18		99		
Yes	6	33.3	20	20.2	0.21
No	12	66.7	79	79.8	

DISCUSSION

Psoriasis is associated with numerous comorbidities that have a significant impact on affected patients and contribute to increased morbidity and mortality [2]. In addition to psoriatic arthritis, metabolic syndrome and cardiovascular diseases are now recognized as important comorbidities. Diabetes mellitus is also frequently associated with psoriasis and related skin disorders [12]. These associations are largely attributed to the chronic inflammatory nature of psoriasis, which shares common pathogenic pathways with several systemic diseases [4].

In the present study, the majority of participants (28.2%) were aged 30-40 years, with a mean age of 44.77 years. A comparable proportion of participants were aged 40–50 years (18.8%) and aged 60+ (18.8%). These findings closely align with those reported by Bin Rakan *et al.* [13], who observed a mean age of 45.5 years, and by Oliveira *et al.* [14], who reported a slightly lower mean age of 42.5 years. The consistency of age distribution across studies suggests that psoriasis predominantly affects middle-aged adults. Minor variations may reflect demographic differences across populations; however, the overall trend indicates a higher burden of disease in this age group.

A clear male predominance was observed in the current study, with males comprising 68.4% of participants. Although Oliveira *et al.* [14] reported a relatively higher proportion of female patients, male predominance has also been documented by Rasool *et al.* [15]. This consistent finding suggests the possible role of gender-related factors, including occupational exposure, lifestyle habits, and hormonal influences. The higher proportion of males also implies that the absolute burden of comorbidities may be greater in this group, highlighting the potential need for gender-specific screening and management strategies. Regarding disease duration, more than half of the participants (52.9%) had psoriasis for 1–5 years, while 28.3% had a disease duration of less than one year, and 18.8% had a disease duration exceeding five years. Similar trends were reported by Rasool *et al.* [15], where longer disease duration was more common among older patients. This association may be explained by the progressive nature of psoriasis, cumulative exposure to triggers, and delayed healthcare seeking. These findings emphasize the importance of early diagnosis and timely intervention to reduce long-term disease burden and systemic complications.

The prevalence of comorbidities in the present study further supports the systemic nature of psoriasis. Diabetes mellitus was observed in 6.8% and hypertension in 8.5% of participants, findings

doi: 10.21276/SSR-IIJLS.2025.11.6.39

comparable to those reported by Rasool *et al.* [15]. Bu *et al.* [16] reported higher prevalence rates of both hypertension and diabetes, which may be attributed to differences in population characteristics, disease severity, or age distribution. Similarly, Oliveira *et al.* [14] reported that nearly 30% of psoriasis patients had at least one comorbid condition, with cardiovascular diseases being the most frequent. Despite variations in prevalence, consistent findings across studies highlight the importance of routine metabolic and cardiovascular screening in patients with psoriasis and reinforce its recognition as a chronic systemic inflammatory disease.

In the present study, bipolar mood disorder was observed in only 0.9% of participants. Psoriasis is known to significantly impair both physical and emotional health-related quality of life, with an impact comparable to that of other major chronic illnesses. This psychosocial burden may predispose patients to mood disorders such as depression, anxiety, and suicidality [14]. Previous studies have suggested that mood disorders, particularly depression, are more prevalent in patients with psoriasis than in the general population, with reported prevalence rates as high as 62% [13]. The relatively low prevalence of bipolar mood disorder in the present study may reflect underdiagnosis, limited sample size, or variations in psychiatric assessment, rather than a true absence of psychological morbidity.

Autoimmune hepatitis was identified in only 0.9% of participants in the current study. Psoriasis severity has been associated with mild liver disease, encompassing conditions such as chronic hepatitis, alcoholic liver disease, and non-alcoholic fatty liver disease (NAFLD). Several studies have demonstrated an increased risk of NAFLD in psoriasis patients independent of alcohol consumption, obesity, and hepatotoxic medications [10]. However, evidence regarding an association between psoriasis and chronic hepatitis B or C infection remains inconsistent [10,11]. Subclinical hepatic inflammation detected through advanced imaging modalities in psoriasis patients further supports a potential pathophysiological link between chronic systemic inflammation and liver dysfunction [13–16].

In the present study, fatty liver grades 1 and 2 were observed in 2.6% and 13.9% of participants, respectively, while fatty liver grade 1 with hepatomegaly was observed in 1.7%. Renal calculus was identified in 4.3% of participants, and splenomegaly in 2.6%. NAFLD is among the most frequently reported systemic comorbidities in psoriasis and is increasingly recognized as part of the metabolic spectrum associated with chronic inflammatory disorders. The accumulation of hepatic fat leading to inflammation and fibrosis further reinforces the concept of psoriasis as a multisystem disease rather than a condition limited to the skin [13].

Laboratory evaluation in the present study revealed that 59.0% of participants had low hemoglobin levels, while nearly half (50.4%) exhibited elevated serum homocysteine levels. These findings are comparable to those reported by Rasool *et al.* [15], who also observed a substantial proportion of psoriasis patients with abnormal hemoglobin and homocysteine levels. They reported a mean hemoglobin value of 13.2 ± 1.5 g/dL, suggesting that mild anemia is a frequent finding in psoriasis, possibly reflecting anemia of chronic disease due to sustained systemic inflammation. In contrast, Yamazaki *et al.* [17] reported a lower prevalence of abnormal hemoglobin levels, highlighting potential population-based differences. The high prevalence of anemia in the present study suggests an increased risk of hematological and metabolic disturbances in psoriasis patients.

Dyslipidemia was another prominent finding, with elevated LDL levels in 40.2% of participants and reduced HDL levels in 34.2%. Similar abnormalities have been reported by Oliveira *et al.* [14] and Bu *et al.* [16], emphasizing the close association between psoriasis and cardiovascular risk factors. Chandravathi *et al.* [18] also demonstrated significantly higher serum homocysteine levels in patients with psoriasis, further reinforcing the link between chronic inflammation, endothelial dysfunction, and increased cardiovascular disease risk.

A crucial clinical observation in the present study was the significant association between scalp involvement and comorbidities (p=0.03). This suggests that scalp psoriasis may act as a marker of more extensive systemic involvement. Similar associations have been described by Rasool *et al.* [15] and Bin Rakan *et al.* [13]. Nail changes were observed in 33.3% of participants with comorbidities; however, this association did not reach statistical significance (p=0.21). Collectively, these findings highlight the importance of comprehensive clinical evaluation in psoriasis patients to identify phenotypic patterns associated with increased systemic risk.

doi: 10.21276/SSR-IIJLS.2025.11.6.39

CONCLUSIONS

This study offers valuable insights into the demographic and clinical profiles of patients with psoriasis, underscoring its chronic and systemic nature. Most participants were middle-aged males with a disease duration of 1–5 years. Comorbidities such as diabetes mellitus and hypertension were common, and a significant association between scalp involvement and comorbid conditions suggests a distinct clinical phenotype requiring targeted management. Laboratory abnormalities, including anemia, dyslipidemia with raised LDL and reduced HDL levels, and altered liver and renal function tests, further emphasize the systemic involvement of psoriasis. These findings underscore the need for early diagnosis, regular screening for metabolic and cardiovascular risk factors, and comprehensive, individualized management strategies. Longitudinal studies are warranted to clarify the progression of comorbidities and evaluate the long-term benefits of early intervention in psoriasis care.

CONTRIBUTION OF AUTHORS

Research concept– Bhushan J Telhure
Research design– Bhushan J Telhure, Vijay V Manekar
Supervision– Vijay V Manekar, Vivek V Nikam
Materials– Vijay V Manekar, Vivek V Nikam
Data collection– Vivek V Nikam, Marwa Deshmukh
Data analysis and interpretation– Bhushan J Telhure, Vijay V Manekar
Literature search– Bhushan J Telhure, Marwa Deshmukh
Writing article– Bhushan J Telhure
Critical review– Vijay V Manekar, Vivek V Nikam
Article editing– Bhushan J Telhure
Final approval– Vijay V Manekar, Vivek V Nikam, Bhushan J Telhure, Marwa Deshmukh

REFERENCES

[1] Parisi R, Symmons DP, Griffiths CE, Ashcroft DM, et al. Global epidemiology of psoriasis: a systematic review of incidence and prevalence. J Invest Dermatol., 2013; 133: 377-85. doi: 10.1038/jid.2012.339.

[2] Michalek IM, Loring B, John SM. A systematic review of worldwide epidemiology of psoriasis. J Eur Acad Dermatol Venereol., 2017; 31: 205-12. doi: 10.1111/jdv.13854.

[3] Caputo V, Strafella C, Termine A, Dattola A, Mazzilli S, et al. Overview of the molecular determinants contributing to the expression of psoriasis and psoriatic arthritis phenotypes. J Cell Mol Med., 2020; 24: 13554-63.

[4] Vangipuram R, Alikhan A. Apremilast for the management of moderate to severe plaque psoriasis. Expert Rev Clin Pharmacol., 2017; 10: 349-60.

[5] Vujic I, Herman R, Sanlorenzo M, Posch C, Monshi B, et al. Apremilast in psoriasis: a prospective real-world study. J Eur Acad Dermatol Venereol., 2018; 32: 254-59.

[6] Carrascosa JM, Bonanad C, Dauden E, Botella R, Olveira-Martín A, et al. Psoriasis and nonalcoholic fatty liver disease. Actas Dermosifiliogr., 2017; 108: 506-14.

[7] Masson W, Lobo M, Molinero G. Psoriasis and cardiovascular risk: a comprehensive review. Adv Ther., 2020; 37: 2017-33. doi: 10.1007/s12325-020-01346-6.

[8] Sendrasoa FA, Razanakoto NH, Ratovonjanahary V, Raharolahy O, Ranaivo IM, et al. Quality of life in patients with psoriasis seen in a dermatology department in Madagascar. Biomed Res Int., 2020; 2020: 9292163.

[9] Poikolainen K, Reunala T, Karvonen J, Lauharanta J, Kärkkäinen P. Alcohol intake as a risk factor for psoriasis in young and middle-aged men. BMJ, 1990; 300: 780-83.

[10] Naldi L, Chatenoud L, Linder D, Belloni Fortina A, Peserico A, et al. Cigarette smoking, body mass index and stressful life events as risk factors for psoriasis: an Italian case-control study. J Invest Dermatol., 2005; 125: 61-67.

[11] Flisiak I, Chodynicka B, Porebski P, Flisiak R. Association between psoriasis severity and transforming growth factor beta(1) and beta (2) in plasma and scales from psoriatic lesions. Cytokine. 2002; 19(3): 121-25. doi: 10.1006/cyto.2002.1953.

[12] Chate A, Swami A, Rane MS, Gosavi R. Cutaneous manifestations in diabetic patients and correlation with glycaemic control. VIMS Health Sci J., 2021; 8(3): 104-08.

[13] Bin Rakan M, Rakan M, Bin Rakan I. Mask-Induced Dermatitis Progressing to Chronic Seborrheic

doi: 10.21276/SSR-IIJLS.2025.11.6.39

Inflammation: A Case Report. Cureus. 2025; 17(11): e97095. doi: 10.7759/cureus.97095.

[14]Oliveira AN, Simões MM, Simões R, Malachias MV, Rezende BA. Cardiovascular risk in psoriasis patients: clinical, functional and morphological parameters. Arq Bras Cardiol., 2019; 113(2): 242-49. doi: 10.5935/abc.20190123.

[15]Rasool A, Priyanka MD, Kilaru KR, Paladugu R. Study of psoriasis and related comorbid conditions. Int J Res., 2022; 8(2): 212. doi: 10.18203/issn.2455-4529.IntJResDermatol20220366.

[16]Bu J, Ding R, Zhou L, Chen X, Shen E. Epidemiology of psoriasis and comorbid diseases: a narrative review. Front Immunol., 2022; 13: 880201. doi: 10.3389/fimmu.2022.880201.

[17]Yamazaki F, Takehana K, Tanaka A, Son Y, Ozaki Y, et al. Relationship between psoriasis and prevalence of cardiovascular disease in Japanese patients. J Clin Med., 2021; 10(16): 3640.

[18]Chandravathi PL, Dewang S, Sharma A, Awake P. Psoriasis and its comorbidities. J Pak Assoc Dermatol., 2017; 27: 340-45.