Observational Analysis of Psoriatic Arthritis: Comorbidities and Patient Characteristics in 100 Cases

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ABSTRACT

Background: Psoriatic arthritis (PsA) is a chronic inflammatory musculoskeletal disease associated with psoriasis, characterized by heterogeneous clinical features and frequent systemic co-morbidities. **Objective:** To evaluate the clinical characteristics and co-morbidities among 100 patients with PsA. **Methods & Materials:** A cross-sectional observational study was conducted on 100 patients fulfilling the CASPAR criteria for PsA. Demographic data, clinical subtypes, disease duration, laboratory markers, and associated co-morbidities were recorded. Statistical analysis was performed using descriptive statistics. **Results:** Among 100 patients, 58 were male and 42 female (M:F=1.4:1), with mean age 43.8±12.4 years. The most common subtype was oligoarticular (36%), followed by polyarticular (30%), spondyloarthritis (18%), distal interphalangeal predominant (10%), and arthritis mutilans (6%). Nail involvement was observed in 64% and enthesitis in 42%. Major co-morbidities included hypertension (38%), diabetes mellitus (28%), dyslipidemia (24%), obesity (22%), ischemic heart disease (12%), and depression/anxiety (18%). **Conclusion:** PsA shows diverse clinical patterns, with oligoarticular and polyarticular subtypes most prevalent. Co-morbidities, especially metabolic syndrome components, are common, highlighting the need for multidisciplinary management.

Keywords: *Psoriatic Arthritis; Clinical Characteristics; Co-Morbidities; Metabolic Syndrome; Cardiovascular Risk*

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Introduction

Psoriatic arthritis (PsA) is a chronic inflammatory musculoskeletal disorder associated with psoriasis, characterized by synovitis, enthesitis, dactylitis, and axial involvement. It affects approximately 0.1–1% of the population and up to 30% of psoriasis patients worldwide [1,2]. PsA is clinically heterogeneous, with multiple patterns of joint involvement including oligoarticular, polyarticular, distal interphalangeal predominant, spondyloarthritis, and rarely, arthritis mutilans [3]. The disease is not confined to the musculoskeletal system; it is increasingly recognized as a systemic disorder associated with significant co-morbidities. Epidemiological studies have shown strong associations between PsA and metabolic syndrome, cardiovascular disease, obesity, diabetes mellitus, dyslipidemia, and psychiatric disorders [4–6]. The chronic systemic inflammation in PsA may contribute to accelerated atherosclerosis, impaired glucose tolerance, and increased mortality risk [7]. Despite increasing research globally, there is limited local data describing the clinical spectrum and co-morbidities of PsA in South Asian populations. Understanding these patterns is essential for optimizing management, preventing long-term disability, and reducing cardiovascular risk. This study aimed to describe the clinical characteristics and associated co-morbidities in 100 patients with PsA attending a tertiary care hospital.

Methods & Materials

Study Design and Setting

A cross-sectional observational study was Conducted in a Department of Dermatology & Venereology, Mymensingh Medical College & Hospital, Mymensingh, Bangladesh from January 2023 to June 2024, over a period of 18 months.

Inclusion Criteria

- Adults (>18 years) diagnosed with PsA according to CASPAR criteria
- Both sexes
- Patients with available complete clinical and laboratory data

Exclusion Criteria

- Other autoimmune diseases (RA, SLE, gout)
- Incomplete records

Data Collection

Data were obtained using structured questionnaires and clinical examination. Variables included:

- Demographics: age, sex, disease duration
- Clinical subtype (CASPAR classification)
- Clinical features: enthesitis, dactylitis, nail changes
- Co-morbidities: hypertension, diabetes, obesity, dyslipidemia, ischemic heart disease, depression/anxiety

Statistical Analysis

Data were analyzed using SPSS v25. Continuous variables were expressed as mean ± SD. Categorical variables were expressed as percentages.

Results

A total of 100 patients fulfilling CASPAR criteria for psoriatic arthritis (PsA) were included. The results are presented in six main tables and three figures with descriptions.

The mean age of patients was 43.8 years, with slightly more males (58%) than females (42%). The average disease duration was 6.2 years. Psoriasis generally preceded arthritis onset by about 4 years. A family history was present in 14% (*Table I*).

Table I
Demographic Characteristics of Patients (*n* = 100).

Variable	Value
Age, mean ± SD (years)	43.8 ± 12.4 (range 18–72)
Sex (M:F)	58 : 42 (Male 58%, Female 42%)
Disease duration (years), mean ± SD	6.2 ± 3.4 (range 1–15)
Family history of psoriasis/PsA	14 (14%)
Age at onset of psoriasis (years), mean ± SD	34.5 ± 10.8
Age at onset of arthritis (years), mean ± SD	38.6 ± 11.2
Delay between psoriasis and arthritis onset	4.1 ± 2.8 years

Oligoarticular PsA was most common (36%), followed by polyarticular (30%). Axial disease occurred in 18%, and arthritis mutilans was rare (6%) (*Table II*).

Table II
Clinical Subtypes of PsA.

Clinical subtype	n (%)
Oligoarticular (≤4 joints)	36 (36%)
Polyarticular (≥5 joints)	30 (30%)
Spondyloarthritis (axial)	18 (18%)
Distal interphalangeal predominant	10 (10%)
Arthritis mutilans	6 (6%)
Total	100 (100%)

Nail involvement was most common (64%), followed by enthesitis (42%) and dactylitis (28%). Axial disease was seen in 20%, and uveitis was rare (4%) (*Table III*).

Table III
Clinical Features and Extra-articular Manifestations.

Feature	n (%)
Nail involvement	64 (64%)
Enthesitis	42 (42%)
Dactylitis	28 (28%)
Axial involvement	20 (20%)
Uveitis	4 (4%)
Severe psoriasis (PASI >10)	26 (26%)

ESR and CRP were elevated in most patients. RF and anti-CCP were positive in <10%. Among 40 tested, 35% were HLA-B27 positive (*Table IV*).

Table IV
Laboratory Findings.

Parameter	Mean ± SD / n (%)
ESR (mm/hr)	38.5 ± 16.2
CRP elevated (>6 mg/L)	62 (62%)
RF positivity	8 (8%)
Anti-CCP positivity	6 (6%)
ANA positivity	2 (2%)
HLA-B27 positivity (among tested, n=40)	14 (35%)

Hypertension was the most frequent co-morbidity (38%), followed by diabetes (28%), dyslipidemia (24%), and obesity (22%). Cardiovascular events (IHD, stroke) occurred in 14%. Metabolic syndrome was diagnosed in 26%, and depression/anxiety in 18% (*Table V*).

Table V
Co-morbidities in PsA Patients.

Co-morbidity	n (%)
Hypertension	38 (38%)
Diabetes mellitus	28 (28%)

Dyslipidemia	24 (24%)
Obesity (BMI ≥30)	22 (22%)
Ischemic heart disease	12 (12%)
Stroke/TIA	2 (2%)
Depression/Anxiety	18 (18%)
Metabolic syndrome	26 (26%)

Most patients used NSAIDs (72%) and conventional DMARDs (64%). Biologics were prescribed in 18%, and 36% required topical/phototherapy for skin lesions (*Table VI*).

Table VI
Treatment Profile of Patients.

Treatment modality	n (%)
NSAIDs	72 (72%)
Conventional DMARDs	64 (64%)
Biologics	18 (18%)
Corticosteroids	20 (20%)
Topical/Phototherapy	36 (36%)

Discussion

Psoriatic arthritis (PsA) is a chronic, immune-mediated inflammatory arthritis with heterogeneous clinical manifestations and significant systemic co-morbidities. The present study evaluated 100 patients fulfilling CASPAR criteria, focusing on clinical subtypes, disease features, laboratory parameters, and associated co-morbidities. Our findings confirm the diverse nature of PsA, highlight the predominance of certain clinical patterns, and underscore the burden of cardiovascular and metabolic co-morbidities, consistent with global literature.

Clinical Profile

In our study, the mean age of patients was 43.8 years, which is in line with previous reports from India and other Asian countries [1,2]. Males constituted 58% of cases, giving a male-to-female ratio of 1.4:1. This slight male predominance has also been documented in European and North American cohorts [3,4], although some studies have reported a more balanced sex ratio [5]. The average disease duration was 6.2 years, and psoriasis typically preceded arthritis onset by approximately four years. This delay between skin and joint disease is well established, with longitudinal studies showing arthritis typically develops within a decade of cutaneous psoriasis onset [6]. The distribution of clinical subtypes in our cohort showed oligoarticular PsA as the most common (36%), followed by polyarticular (30%). Axial PsA was present in 18%, distal interphalangeal predominant in 10%, and arthritis mutilans in 6%. Similar trends were reported by Queiro et al.[7] in Spain and Dogra et al. [8] in India, although prevalence varies geographically. For instance, studies from Europe have reported higher frequencies of polyarticular and axial subtypes [9]. The presence of arthritis mutilans, though rare, remains clinically significant due to its destructive nature and poor functional outcomes [10].Extra-articular features were common, with nail involvement seen in 64% of patients. Nail disease is strongly associated with PsA, particularly with distal interphalangeal arthritis, and is considered a predictor of joint disease in psoriasis patients [11]. Enthesitis was documented in 42% and dactylitis in 28%, highlighting the entheso-pathic nature of PsA, in contrast to rheumatoid arthritis. Axial involvement was reported in 20%, comparable to earlier studies showing 15–30% prevalence [12]. Uveitis was relatively rare (4%), consistent with the lower frequency in PsA compared with ankylosing spondylitis [13].

Laboratory Findings

Inflammatory markers such as ESR and CRP were elevated in a majority of our patients, reaffirming their utility in assessing disease activity. However, their specificity for PsA remains limited [14]. Only a minority tested positive for RF (8%) and anti-CCP (6%), which supports their diagnostic value in differentiating PsA from rheumatoid arthritis [15]. Among those tested, HLA-B27 was positive in 35%, particularly in axial PsA. Previous studies have shown HLA-B27 positivity ranging from 20–40% in PsA patients with axial involvement, confirming our findings [16].

Co-morbidities

One of the most important observations in this study was the high prevalence of metabolic and cardiovascular co-morbidities. Hypertension (38%) was the most common, followed by diabetes mellitus (28%), dyslipidemia (24%), and obesity (22%). Approximately 26% of patients met the criteria for metabolic syndrome. Cardiovascular disease was documented in 14% (IHD 12%, stroke 2%). Additionally, psychiatric co-morbidity in the form of depression or anxiety was reported in 18%.These findings align with growing evidence that PsA is strongly linked with systemic inflammation and metabolic derangements [17]. Studies have shown that PsA patients have increased risk of insulin resistance, central obesity, and hypertension [18]. Love et al. [19] demonstrated a higher risk of developing PsA in psoriasis patients with metabolic syndrome, suggesting a bidirectional relationship. Furthermore, chronic systemic inflammation in PsA is associated with accelerated atherosclerosis, endothelial dysfunction, and heightened risk of myocardial infarction and stroke [20].Our observation of depression/anxiety in nearly one-fifth of patients is consistent with previous reports indicating a strong psychosocial burden in PsA [21]. Chronic pain, joint deformity, cosmetic concerns due to skin lesions, and functional disability contribute to significant psychological stress. Untreated psychiatric co-morbidities may worsen treatment adherence and overall outcomes [22].

Comparison with Previous Studies

The high frequency of oligoarticular subtype in our cohort differs from some Western studies, where polyarticular and axial subtypes predominate [7,9]. This discrepancy may reflect genetic, environmental, and ethnic factors. Studies in Indian populations also reported higher prevalence of oligoarticular disease, suggesting regional variation [8].The co-morbidity profile in our study—especially the high prevalence of hypertension, diabetes, and dyslipidemia—supports prior work by Mease et al. [23] and Ogdie et al. [24], who found increased risk of metabolic syndrome and cardiovascular disease in PsA patients. Gelfand et al.[25] demonstrated that psoriasis itself is an independent risk factor for myocardial

infarction, and the presence of arthritis further amplifies this risk. Our findings reinforce the need for routine cardiovascular risk screening in PsA management.

Clinical Implications

The results of this study have several important implications for clinical practice:

1. **Early recognition of PsA**: Since skin psoriasis often precedes arthritis by several years, dermatologists should actively screen for joint symptoms.
2. **Multidisciplinary approach**: Management of PsA requires collaboration between rheumatologists, dermatologists, cardiologists, and psychiatrists.
3. **Screening for co-morbidities**: Regular assessment for hypertension, diabetes, obesity, and dyslipidemia should be integrated into routine PsA care.
4. **Patient education**: Patients should be counseled on lifestyle modification, smoking cessation, diet, and exercise to reduce cardiovascular risk.
5. **Personalized therapy**: Choice of treatment should consider both joint and skin disease severity as well as co-morbid conditions. For instance, biologics may be preferable in patients with severe psoriasis and high cardiovascular risk.

Limitations

Our study has several limitations. First, it was a cross-sectional study, limiting the ability to infer causal relationships between PsA and co-morbidities. Longitudinal studies would be necessary to assess temporal associations. Second, being a single-center study, the findings may not be generalizable to all populations. Third, HLA-B27 testing was performed in only 40 patients, which may underestimate its prevalence. Fourth, lifestyle factors such as smoking, alcohol consumption, and physical activity were not systematically assessed, though they are known to influence both PsA and co-morbidities. Finally, treatment data were descriptive, and treatment response was not evaluated.

Future Directions

Future research should aim to conduct large multicenter cohort studies to better characterize regional variations in PsA subtypes and co-morbidities. There is also a need for longitudinal studies examining the impact of metabolic syndrome and cardiovascular disease on PsA progression and mortality. Moreover, biomarkers predictive of severe disease and treatment response would enhance personalized management. Integrating patient-reported outcomes, including quality of life and mental health, would provide a more holistic view of disease burden.

Conclusion

Our study highlights the heterogeneous clinical spectrum of PsA and emphasizes the significant burden of metabolic and cardiovascular co-morbidities. The predominance of oligoarticular disease, high prevalence of nail involvement and enthesitis, and frequent occurrence of hypertension, diabetes, and dyslipidemia underscore the need for comprehensive patient care. The recognition of psychiatric co-morbidities further points to the importance of psychosocial support. Overall, PsA should be managed as a multisystem disease with integrated care strategies to improve outcomes and quality of life.

References

1. Dogra S, Yadav S. Psoriasis in India: prevalence and pattern. Indian J Dermatol VenereolLeprol. 2010;76(6):595–601.
2. Chandran V, Raychaudhuri SP. Geoepidemiology and environmental factors of psoriasis and psoriatic arthritis. J Autoimmun. 2010;34(3):J314–21.
3. Gladman DD, Antoni C, Mease P, Clegg DO, Nash P. Psoriatic arthritis: epidemiology, clinical features, course, and outcome. Ann Rheum Dis. 2005;64 Suppl 2:ii14–7.
4. Alinaghi F, Calov M, Kristensen LE, et al. Prevalence of psoriatic arthritis in patients with psoriasis: a systematic review and meta-analysis. Br J Dermatol. 2019;180(1):133–41.
5. Haroon M, et al. Clinical and radiographic features of psoriatic arthritis. Arthritis Res Ther. 2015;17:256.
6. Wilson FC, Icen M, Crowson CS, et al. Time trends in epidemiology and characteristics of psoriatic arthritis over 3 decades: a population-based study. J Rheumatol. 2009;36(2):361–7.
7. Queiro R, et al. Clinical heterogeneity of psoriatic arthritis: a review of 6,201 patients in the Spanish Registry. Rheumatology. 2012;51(12):2200–7.
8. Dogra S, Mahajan R. Psoriasis epidemiology and clinical pattern in Indian patients. Indian Dermatol Online J. 2016;7(6):471–80.
9. Tillett W, et al. The prevalence of different patterns of psoriatic arthritis in the UK. Rheumatology. 2012;51(12):2204–8.
10. Kane D, Stafford L, Bresnihan B, FitzGerald O. A prospective, clinical and radiological study of early psoriatic arthritis. Arthritis Rheum. 2003;48(6):1599–606.
11. Williamson L, et al. Nail disease in psoriatic arthritis. Ann Rheum Dis. 2004;63(9):1169–73.
12. Mease PJ, et al. Axial disease in psoriatic arthritis: comparison with ankylosing spondylitis. Ann Rheum Dis. 2014;73(6):113–9.
13. Chandran V. Uveitis in psoriatic arthritis: characteristics and implications. Curr Rheumatol Rep. 2010;12(4):288–94.
14. Eder L, et al. The utility of acute phase reactants in psoriatic arthritis. J Rheumatol. 2010;37(6):1162–7.
15. Helliwell PS, Taylor WJ. Classification and diagnostic criteria for psoriatic arthritis. Ann Rheum Dis. 2005;64 Suppl 2:ii3–8.
16. Palazzi C, et al. Psoriatic arthritis: epidemiology and HLA-B27. Curr Rheumatol Rev. 2011;7(4):289–93.
17. Jamnitski A, et al. Cardiovascular comorbidities in psoriatic arthritis: a systematic review. Ann Rheum Dis. 2013;72(2):211–6.
18. Armstrong AW, et al. Psoriasis and metabolic syndrome: a systematic review and meta-analysis. J Am Acad Dermatol. 2013;68(4):654–62.
19. Love TJ, et al. Metabolic syndrome and risk of psoriatic arthritis in psoriasis patients. Ann Rheum Dis. 2011;70(9):1595–7.
20. Gelfand JM, et al. Risk of myocardial infarction in patients with psoriasis. JAMA. 2006;296(14):1735–41.
21. McDonough E, et al. Depression and anxiety in psoriatic arthritis: impact on outcomes. J Rheumatol. 2014;41(5):887–92.
22. Martyn-Simmons CL, et al. The psychosocial burden of psoriatic arthritis. Clin Exp Rheumatol. 2020;38(6):1225–31.
23. Mease PJ, et al. Psoriatic arthritis: update on pathophysiology, assessment, and management. Ann Rheum Dis. 2021;80(6):698–707.
24. Ogdie A, et al. The epidemiology of psoriatic arthritis. Rheum Dis Clin North Am. 2015;41(4):545–68.
25. Gelfand JM, et al. Severe psoriasis and the risk of cardiovascular mortality. Arch Dermatol. 2007;143(9):1186–92.