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Original Research Article

Clinical Spectrum of Psoriatic Arthritis in Cases of Psoriasis

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Abstract:
Introduction: Psoriatic arthritis is a seronegative inflammatory arthritis, which occurs in 5-10% of patients with moderate to severe psoriasis.
Aim: To assess the clinical pattern of psoriatic arthritis in patients with moderate to severe psoriasis in a period of 1 year.
Materials & Method: We report a series of 6 clinically diagnosed cases of psoriatic arthritis out of total 126 cases of psoriasis of various types, as per CASPAR criteria. Three females and three males from age 15 to 45 years. They were classified as per Moll & Wright's diagnostic criteria into- 3 cases of asymmetric oligoarticular type, 1 of symmetric polyarticular with spondylitis & HLA-B27 positive, 1 of symmetric polyarticular type, 1 of distal interphalangeal arthritis.
Result: Out of 126 cases of psoriasis of various types in 1 year duration, we reported 6 cases (4.7%) who came in the OPD and had concomitant plaque, nail and scalp psoriasis & were diagnosed as psoriatic arthritis based on clinical, radiological and laboratory findings.
Conclusion: Psoriatic arthritis prevalence in psoriasis patients may be higher than previously thought, especially in those with moderate to severe psoriasis, with concomitant nail and scalp involvement. If appropriate treatment is initiated right away, joint injury and functional disability can be avoided.
Keywords: India, Psoriasis, Psoriatic arthritis.

Introduction

Psoriatic arthritis (PsA) is a seronegative inflammatory arthritis, which occurs in up to 5-10% of patients with moderate to severe psoriasis [1-3]. Recentre studies revealed a percentage of exceeding 20%. [4] It can be destructive to joints and adds considerably to the impairment of quality of life and symptoms such as fatigue and joint pain. Psoriatic arthritis can be differentiated from other forms of arthritis according to CASPAR (Classification Criteria for Psoriatic Arthritis) criteria, with 99% sensitivity and 91% specificity [5], a patient must have inflammatory

articular disease with score of at least 3 as per-current psoriasis (assigned a score of 2; all other features score 1); personal history of psoriasis; family history of psoriasis in a first- or second-degree relative; nail psoriasis; dactylitis (inflammation of an entire finger or toe) and plain radiographic evidence of juxta-articular new bone formation on the hands or feet. [6] Moll and Wright′s classification criteria as follows: Distal interphalangeal arthritis (DIP), asymmetric oligoarthritis (≤4 joints), symmetric polyarthritis (≥5 joints), arthritis mutilans, and arthritis of spine (spondylitis). [7] The main treatments have been NSAIDs, methotrexate, oral corticosteroids, sulphasalazine, leflunomide and TNF-α inhibitors. Ustekinumab, secukinumab & apremilast have been licensed recently for the treatment of psoriatic arthritis [8]. It is preferable to use a single treatment that is effective for both skin disease and arthritis. Numerous studies have been published about characteristics of skin involvement in psoriasis, but comprehensive data about prevalence and morbidity of PsA are still lacking in the central India. It's possible that it's underdiagnosed in India, or that it's confused or misdiagnosed with other rheumatic disorders like rheumatoid arthritis and osteoarthritis. It is critical to understand the prevalence, clinical trends, illness burden, and economic concerns in a given geographical population in order to provide effective therapy to all PsA patients and to make policy decisions. We investigated the prevalence and clinical trends of PsA in our psoriasis patient cohort in this study.

Aim- To assess the clinical pattern of psoriatic arthritis in patients with moderate to severe psoriasis in a period of 1 year.

Materials and Methods-

- **Study Design:**

  We prospectively reviewed all diagnosed cases of psoriatic arthritis among patients of psoriasis who were clinically diagnosed and followed up in our Out Patient Department (OPD) clinic at tertiary care hospital for 1 year. Approval was sought from the Institutional Ethics Committee. All patients' data were collected after informed consent.

- Inclusion criteria: All psoriatic arthritis patients diagnosed on clinical basis & confirmed with histopathology & radiologically.

- Exclusion criteria: Patients who refused to give consent for the study.

  All patients examined according to various parameters like age, gender, type and morphology of the lesions, involvement of joints, mucous membranes, scalp, nails and if necessary Grattage test was performed to elicit Auspitz sign. All of them had undergone skin biopsy procedures to confirm the diagnosis, and baseline investigations including Complete blood picture, Blood sugar levels, Liver Function Test, Renal Function Test, Urine routine & microscopy, serum fasting Lipid profile were done along with C-Reactive Protein, RA Factor, Anti-CCP- antibody, to rule out Rheumatoid arthritis. Cases were monitored on bimonthly basis with routine investigations. Radiological investigations like X-Rays and MRIs of the joint involved were also done. All patients were followed up initially at bi monthly basis, followed by repeat visits at the end of the third month and ninth month. Statistical Analysis was done EPI INFO. A p-value < 0.05 was considered statistically significant.

- **The following target parameters were recorded:**

1. Patient history, sociodemographic data, previous and current treatment.
2. Severity of skin involvement will be assessed by Psoriasis Area and Severity Index as per Rule of Tens

(BSA involvement of >10%, PASI score of >10 or DLQI >10).[9]

3. Investigations -

- Baseline (CBC, BS, LFT, KFT, Urine R/E, S. Lipid profile, Pus (C/S), CRP, RA Factor, Anti-CCP- antibody.
- Monitoring – Bimonthly routine investigations.
- Histopathology (lesional) - all cases & found positive.
- Radiological investigations- X-Rays and MRIs.

Observation and Results:

The present study was a cross sectional, non-interventional study to assess clinical pattern of psoriatic arthritis in patients with moderate to severe psoriasis. We report a series of 6 cases of psoriatic arthritis (as per CASPAR criteria) out of 123 psoriasis patients, diagnosed clinically. The mean age was 34 years (Range 14-50 years). There was no sex predilection (1:1). [Fig.1

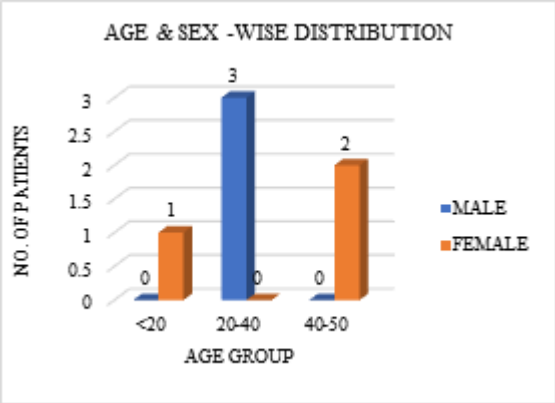

Figure1: Age & sex wise distribution (n=6).

Three females and three males from age 15 to 45 years were diagnosed with psoriatic arthritis. According to PASI, 48% of patients of psoriatic arthritis had psoriasis of moderate severity (PASI <10) whereas 52% had severe type (PASI >10). Concomitant nail, scalp and cutaneous involvement was seen in 66% cases, while rest had only nail (16%) & only scalp (16%) involvement. [Fig.2]

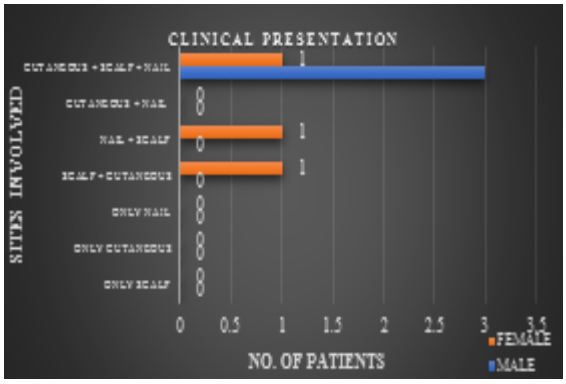

Figure 2 : Clinical presentation (Initial) (n=6).

All PsA patients were classified, as per Moll and Wright's classification [Table1,Fig.3] into Asymmetric oligoarthritis (n=3) [Fig.4] > symmetric polyarticular (n=2) [Fig.5] > Distal interphalangeal (n=1) [Fig.6] > Axial arthritis (n=1) [Fig.7] > Arthritis Mutilans (n=0) in decreasing frequency.

Table1: Clinical profile (n=6)

Type Of Psoriatic Arthritis	Male	Female
Asymmetric oligoarthritis (≤4 joints)	1	2
Distal interphalangeal arthritis	0	1
Symmetric polyarthritis (≥5 joints)	0	2
Arthritis mutilans	0	0
Arthritis of spine (spondylitis)	1	0

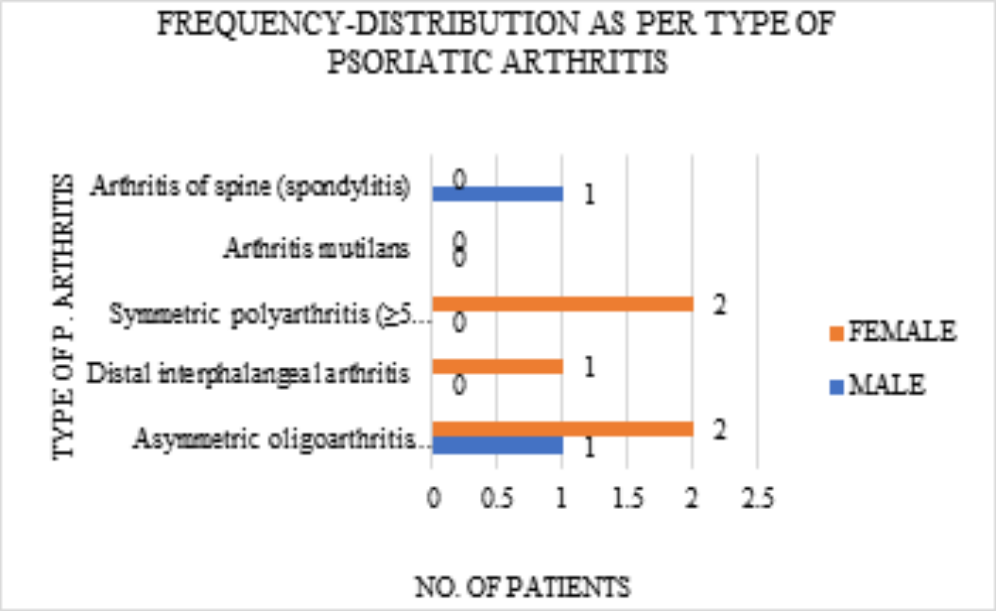

Figure 3 : Clinical profile (n=6)

Figure 4: Asymmetric oligoarticular type with right knee effusion.

Figure 5: Symmetric Polyarticular type.

Figure 6: Distal interphalangeal type involving bilateral hands.

Figure 7: MRI-LS spine - loss of lumbar lordosis, marrow edema & ankylosis in both Sacroiliac joints & hip joints with mild bilateral hip joint effusion. Axial Arthritis type.

Discussion:

Among patients of psoriasis the prevalence of inflammatory arthritis is 4.7 %, similar to literature (5-10%).[5,6] There was no sex predilection (1:1). The mean age was 34 years (Range 14-50 y).

The onset of psoriatic arthritis is before in 10-15%; concurrent with skin disease in 11% cases, or follows skin disease in 68% cases. In our case concurrent in n=1(16%) & following skin disease in n=5 (84%) similar to study conducted by MA Radtke et al. [10]

Concomitant nail, scalp and cutaneous involvement was seen in 66% cases, while rest had nail (16%) & scalp (16%) involvement (Fig. 2). Of the total cases, 66% had severe psoriasis (PASI >10).

Clinico-epidemiological profile was similar to other studies by Eder L et al. and Gladmann DD et al [11,12]- Asymmetric oligoarthritis (n=3) > symmetric polyarticular (n=2) > Distal interphalangeal (n=1) > Axial arthritis (n=1) > Arthritis Mutilans (n=0). But this data differed from study conducted by

Kumar R et al in which the most common pattern of PsA was symmetrical polyarthritis (58%) followed by spondyloarthropathy (49%), asymmetric oligoarthritis (21%), isolated spondyloarthropathy (5%), predominant DIP arthritis (3%), and arthritis mutilans (1%). [13]

The incidence appears to be equal between the sexes although men may have more axial disease and less peripheral arthritis. The prevalence of psoriatic arthritis is also increased in patients with nail and scalp psoriasis similar to other studies. [10-13] The limitations of our study were small sample size; short duration of study and many cases were lost to follow up. [14]

Conclusion:

Psoriatic arthritis is an uncommon form of seronegative arthritis reported to occur in only 5-10% patients with psoriasis. The incidence rate of Psoriatic Arthritis in patients with psoriasis is 1.87 per 100.[11] In 10-15% patients the symptoms of psoriatic arthritis appear before involvement of the skin. Out of 126 cases of psoriasis of various types in 1 year duration, we reported 6 cases (4.7%) who came in the OPD & had concomitant plaque, nail & scalp psoriasis & were diagnosed as psoriatic arthritis based on clinical, radiological & laboratory findings.

Clinico-epidemiological profile of age, sex, type of arthritis was similar to other studies.

Conflict of Interest: None.

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