

Frequency and clinical patterns of psoriatic arthritis in patients of psoriasis

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Abstract

Objective To determine the frequency of psoriatic arthritis (PsA) and its different clinical patterns in patients of Psoriasis.

Methods In this cross-sectional descriptive study, conducted at Dermatology Unit, Civil Hospital, Karachi from January, 2015 to August, 2015, 200 patients of 18-60 year age and of either gender, having psoriasis with joint pain for at least 3 months were analyzed.

Results Mean age of study population was 47.5 ± 13.4 years. Out of 200 patients, 94 (47%) were male and 106 (53%) were female. 79 (39.5%) patients had PsA: oligoarthritis 26 (37%), symmetric 24 (34%), axial joint involvement 18 (25%), classical distal interphalangeal (DIP) 6 (8%) and arthritis mutilans 5 (7%).

Conclusion About one-third of psoriatic patients had PsA. Significant clinical presentations of PsA included oligoarthritis, symmetric, axial joint involvement, classical DIP and arthritis mutilans. Certain clinical features may be highly associated with the development of PsA in psoriatic patients.

Key words

Psoriasis, psoriatic arthritis, types of psoriasis.

Introduction

Psoriasis is a chronic condition of the skin, which has multifactorial etiology and genetics, environment and drugs all play major role. The most characteristic lesions are salmon pink coloured well-demarcated plaques, present particularly over extensor surfaces and scalp, however, it may affect any part of the body when it is extensive.¹ The disease affects 2-4% of the general population.² Psoriatic arthritis (PsA) is one of the complications of psoriasis.³ Psoriatic arthritis (PSA) is a chronic inflammatory arthritis which often presents with involvement of skin and nails. It comes in the

differential diagnosis of seronegative rheumatoid arthritis (RA), Reiter's disease, ankylosing spondylitis with enthesitis and inflammatory bowel disease associated arthritis. It also mimics rheumatoid arthritis. The latter clinical presentation explains the frequent classification of PSA in the group of rheumatic diseases known as the seronegative spondyloarthropathies. Psoriatic arthritis has a highly variable clinical presentation.⁴ Clinical patterns of arthritis according to the Moll and Wright classification include five clinical groups, which often overlap:^{1,5} 1) Predominantly peripheral mono- or asymmetrical oligoarthritis is the most common form, as well as sausage-like swelling of one or more digits (dactylitis) and enthesitis—inflammation at the site of tendon insertion into the bone is common; 2) Predominantly distal interphalangeal arthritis,

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the well-recognized classical form, but less common; 3) Predominantly symmetrical, rheumatoid-like, rheumatoid factor-negative polyarthritis, usually less severe than rheumatoid arthritis; 4) Arthritis mutilans, a relatively uncommon, severely deforming arthritis involving fingers and toes predominantly; and 5) Predominantly axial arthritis: psoriatic spondylitis and/or sacroiliitis, with or without variable peripheral arthropathy.

Approximately 30% of individuals with psoriasis develop psoriatic arthritis.⁵ Psoriasis predated arthritis in 68% of cases, occurred at the same time in 11%, and followed it in 21%.¹ Among patients with psoriasis, 6%-42% of the Caucasians were reported to have PsA, but figures were lower from Asian countries (1-9%).^{6,7}

In one study, polyarthritis (58.7%) was the most common manifestation pattern, followed by oligoarthritis (31.6%) and arthritis mutilans (4.9%).⁸ Distal interphalangeal involvement was present in 41.0% and dactylitis in 23.7% of the patients.⁸ In another local study, 34.7% cases had oligoarthritis, 30.4% had symmetric involvement, 28.2% axial joint involvement and 6.5% had classical DIP.³

This study was undertaken to determine the frequency of Psoriatic arthritis and its different clinical patterns in patients of psoriasis.

Methods

This cross-sectional descriptive study was carried out in Dermatology Unit, Civil Hospital, Karachi (both Inpatient and outpatient) from January, 2015 to August 1st, 2015.

Using open-Epi with 95% confidence interval, 3% margin of error, 4.9% prevalence of psoriatic arthritis⁸ sample size calculated was 200. Non-

probability consecutive sampling was used to recruit patients.

Patients of either sex, aged 18-60 years, having psoriasis (both new and old registered patients) with joint pain for at least 3 months were included in the study. Exclusion criteria were: patients suffering from other dermatosis, pregnant women, patients with positive rheumatoid factor or diagnosed with other seronegative arthritis.

This study was started after taking approval from ethical review committee of the institute. Patients fulfilling inclusion criteria were enrolled in this study after taking written informed consent. The demographic profile of the patients was noted. Careful examination and X-rays joints were done to assess the psoriatic arthritis and its clinical patterns i.e. oligoarthritis, distal interphalangeal predominant, axial disease, symmetric and arthritis mutilans.

Data analysis was done using SPSS version 19. Frequency and percentage was computed for categorical variable like sex, psoriatic arthritis and clinical patterns. Mean and standard deviations was computed for continuous variables like age and duration of disease. Effect modifiers like age, sex and duration of disease were controlled through stratification by applying chi squared test and p-value <0.05 was considered significant.

Results

Age range in this study was from 18 to 60 years with mean age of 47.5 ± 13.4 years and mean duration of disease was 6.9 ± 1.4 years. Out of 200 patients, 94 (47%) were male and 106 (53%) were female. Out of 200 patients of psoriasis, 79 (38.5%) had psoriatic arthritis. A higher prevalence of oligoarthritis 26 (37%),

Table 1 Frequency of clinical patterns of psoriatic arthritis (n=79).

<i>Clinical patterns of psoriatic arthritis</i>	<i>N (%)</i>
Oligoarthritis	26 (37)
Symmetric arthritis	24 (34)
Axial joint involvement	18 (25)
Classical distal interphalangeal type	6 (8)
Arthritis mutilans	5 (6.9)

symmetric arthritis 24 (34%), axial joint involvement 18 (25%), classical DIP 6 (8%) and mutilans arthritis 5 (6.9%) were noticed as shown in **Table 1**. When PsA was stratified with respect to age and gender, no significant difference was noted. When it was stratified with respect to duration of disease significant difference was observed. Similarly, when clinical findings were stratified with respect to age, duration of disease and gender, no significant difference was observed.

Discussion

Psoriasis is a chronic relapsing and remitting skin disease, if complicated by psoriatic arthritis, it adds more pain and disability to the patient's life. It is perhaps underdiagnosed or may be confused with other rheumatological conditions like osteoarthritis or rheumatoid arthritis or clinically may go unnoticed if a good history and clinical examination is not carried out. A patient with psoriatic monoarthritis may progress to polyarthritis or mutilating arthritis if neglected and early immunosuppressant or biological therapy is not instituted. Data about the development of PsA and its clinical patterns are scanty in Pakistan.

The severity of arthritis at the time of presentation of PSA and the subsequent disease course may be correlated. Polyarthritis in the presence of elevated acute phase reactants, radiographic evidence of joint erosions, and inadequate response to initial pharmacotherapy

predict a more severe disease course. As seen in RA, PsA can significantly impact physical functioning and health-related quality of life. Without prompt therapeutic intervention, joint destruction may occur rapidly.⁹ Other factors that are associated with a worse prognosis include extensive cutaneous involvement, young age at disease onset, and a strong family history of psoriasis.¹⁰

PsA is diagnosed either clinically as most of the patients develop skin lesions typical of psoriasis earlier or later to arthritis. The results of this study showed 38.5% of the patients who developed psoriasis had a probable or confirmed PsA. In 7.7% of patients, the presence of PsA was uncertain. These data are not in favour of previous studies in which a lower proportion of psoriatic patients were reported to have PsA. However, in the study by Gelfand *et al.*⁶, patients of psoriasis were selected from the general population compared to the patients referred to the dermatologist in this study. In addition, a relatively large proportion of patients (n=346) in whom joint symptoms exist had not previously been diagnosed with PsA. These patients had suffered from repeated episodes of pain lasting for more than 6 weeks in the past 5 years. In the past 12 months, 37.1% had suffered frequently from morning stiffness of the joints and 29.2% reported recurrent swelling. Taken together, these symptoms are clear indications of the possible presence of PSA in patients already known to have psoriasis vulgaris, and these signs warrant the respective clinician to initiate an appropriate diagnostic investigation.

There were certain limitations of the present study. First, the diagnostic criteria for PsA were highly variable and that a firm clinical diagnosis is difficult in some individual cases.

Second, further diagnostic procedures needed for confirmation of diagnosis could not be done

due to financial constraints. Similarly, a multidisciplinary approach involving the rheumatologist might have increased the diagnostic yield, as diagnoses remained unclear in 7.7% patients.

Conclusion

38.5% of our psoriasis patients had psoriatic arthritis irrespective of age, gender and duration of psoriasis. Every patient of psoriasis should be evaluated for psoriatic arthropathy. Early diagnosis and management can prevent long-term disabilities in these patients.

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