

Clinical patterns of psoriatic arthritis & association with age & gender among patients presenting to a tertiary care hospital

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Abstract

Background Psoriasis is a common skin condition, which is known to affect about 1-2% of the world population. PsA is a known extra-cutaneous complication of psoriasis, which has variably been reported to affect 5-40%.¹

Objective To determine the clinical patterns of psoriatic arthritis & association with age & gender among patients of patients presenting to a tertiary care setting.

Materials and Methods A cross sectional study conducted at OPD, Unit-I, KEMU Mayo Hospital, Lahore, conducted for six months from 20th August, 2013 to 20th February, 2014. Total sixty five patients of psoriatic arthritis diagnosed according to Moll & Wright criteria were enrolled & evaluated for the pattern of arthritis & its association with age & gender. Data entry and analysis was done by using SPSS 16.

Results Among 65 cases of PsA, 44 (67.69%) M & 21 (32.31%) F, mean age 42.92±13.70 y, asymmetrical oligo-arthritis was most common pattern in 22 (33.85%). Most PsA cases were in their 2nd to 5th decade.

Conclusion Most common pattern was asymmetric oligo-arthritis. Males of late young and middle age were affected the most.

Key words

Psoriasis, psoriatic arthritis, clinical patterns, moll and wright criteria.

Introduction

PsA is a seronegative inflammatory disease of joints, entheses and periarticular connective tissue in association with any clinical type of psoriasis.² PsA frequently occurs with pustular

& erythrodermic variety of psoriasis.³ The original diagnostic criteria of Moll & Wright are the simplest and the most frequently used in current studies. The criteria are⁴:

- An inflammatory arthritis (peripheral arthritis and/or sacroiliitis or spondylitis).
- The presence of psoriasis.
- The (usual) absence of serological tests for rheumatoid factor.

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This classifies PsA as, peripheral mono-arthritis or asymmetrical oligoarthritis, distal interphalangeal arthropathy, symmetrical polyarthritis, arthritis mutilans, and axial arthritis (spine, sacroiliac joints or both). Patients may present with joint pains, morning stiffness, enthesitis, dactylitis and sausage-shaped digits.^{5,6} The most frequent presentation is polyarthritis followed by oligoarthritis.⁷ Arthropathy can occur at any age and either sex, but the incidence peaks around 40-50 years, and males are more likely to have the spondylitic form.⁸ The male-to-female ratio for PsA is 1:1, with the exception of some subsets of patients. Females are more commonly affected with the symmetrical polyarthritis that resembles rheumatoid arthritis & the juvenile form.⁵ A preponderance of males has been noted in the spondylitic form of PsA, which affects the axial spine, with the male-to-female ratio being 3:1.⁹ Males however show a greater tendency towards spondyloarthritis and more of the peripheral joint involvement than the females.¹⁰ The reason behind it is considered to be the difference between the physical activities among males and females¹¹. In nearly 80% of patients, the skin disease precedes arthritis, while arthritis may precede psoriasis in about 15%. Radiological signs include local demineralization, narrowing of joint spaces, articular erosion and soft tissue swelling. In arthritis mutilans, osteolysis of heads of metacarpals & metatarsals gives pencil in cup appearance and opera-glass hand deformity. Indicators of poor prognosis are younger age at onset, extensive skin involvement, polyarticular synovitis, HIV, high ESR at presentation, large effusions and association with HLA B27, B39, and DLW3. In a study done on 104 psoriatic patients, 50 had seronegative arthritis. Out of these, 43% had symmetrical rheumatoid-like arthritis, 21% distal interphalangeal arthritis, 13% asymmetrical oligoarthritis, 13% sacroiliac

arthritis, 8% peripheral mono-arthritis and 2% arthritis mutilans.¹² In another study, the frequency of symmetric arthritis was 14 (30.4%), oligoarthritis 16 (34.7%), axial disease 13 (28.2%) and classical (DIP) 3 (6.5%).³ One study conducted on 472 psoriatic patient detected arthritis in 40. Asymmetric oligoarthritis was the most commonly observed pattern in 42.5%.¹³

It is usually perceived that PsA is a benign disease but it has many serious sequelae like mutilating digital disease and severe spondylitis. Early diagnosis of arthritis is very important in order to prevent and limit the deformities that come later in the disease. It is the job of a dermatologist to screen for joint involvement as part of the routine follow up of psoriatic patients, so that timely referral and intervention can be done which gravely affects the patient's quality of life.

The rationale of this study was to observe the frequency of PsA in our population and identify its common presentations here, as different patterns have been observed in different studies conducted at various areas. This will help us in identifying the common presentations of psoriatic arthritis among our patients and we will be able to diagnose the disease at an early stage and refer it to the concerned speciality.

Materials and Methods

Cross sectional study at the outpatient Department of Dermatology Unit-I, KEMU/ Mayo Hospital, Lahore for Six months starting from 20th August, 2013 till 20th February, 2014. 65 patients of PsA diagnosed according to Moll and Wright criteria, aged 15 years and above, off or on treatment of psoriasis, were enrolled and evaluated for the pattern of arthritis. Patients with other seropositive arthritides were excluded

Table 1 Age distribution of patients

	n=140			PsA(+)		
	Male	Female	Total	Male	Female	Total
N	87	53	140	44	21	65
Mean (Years)	41.09	40.79	40.97	41.34	46.23	42.92
SD	14.14	15.81	14.74	12.30	16.07	13.70
Minimum	16	17	16	16	20	16
Maximum	90	80	90	70	80	80

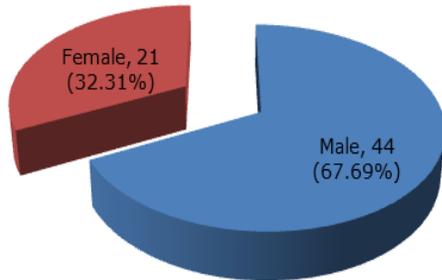


Figure 1 Gender distribution of total patients table 3

Table 2 Patterns of joints involved

		Frequency	Percent
Asymmetrical oligo-arthritis	Yes	22	33.85%
	No	43	66.15%
	Total	65	100%
Symmetrical polyarthritis	Yes	19	29.23%
	No	46	70.77%
	Total	65	100%
Peripheral Mono-arthritis	Yes	16	24.62%
	No	49	75.38%
	Total	65	100%
Distal interphalangeal	Yes	4	6.15%
	No	61	93.85%
	Total	65	100%
Axial arthritis	Yes	4	6.15%
	No	61	93.85%
	Total	65	100%
Arthritis Mutilans	Yes	0	0%
	No	65	100%
	Total	65	100%

from study. Sampling technique was non probability purposive sampling. After taking informed consent, data was entered into the proforma & analyzed through SPSS 16.

Results

Total sixty five diagnosed patients of PsA were enrolled in the study. Mean age was, 41.34±12.30 for males, and 46.23±16.07 for females respectively (**Table 1**). 44 (67.69%)

were male and 21 (32.31%) were female (**Figure 1**). Various joints were affected either as a single joint, or in combination, with two or more joints affected in one patient. Observed clinical patterns are tabulated in **Table 2**, gender distribution in **Table 3** and age stratification in **Table 4** respectively. Asymmetrical oligo-arthritis was observed in 22 (33.85%) patients out of which, 13 (59.09%) were male & 9 (40.91%) female with maximum 7 (36.85%) in the age group of 36-45 years. Symmetric polyarthritis observed among 19 (29.23%) patients, 14 (73.68%) male & 5 (26.32%) female with most 7 (36.85%) in the age group of 36-45 years. Peripheral mono-arthritis diagnosed among 16 (24.62%) patients, 10 (62.5%) male & 6 (37.5%) female & most 5 (31.25%) were between 36-45 years.

Distal interphalangeal arthritis in 4 (6.15%) patients, 3 (75%) male & 1 (25%) female, out of them 2 (50%) were in the age group of 57-65 years. Axial arthritis noted in 4 (6.15%) patients & all 4 (100%) were male. Maximum 2 (50%) in the age group of 26-35 years. None of the patients was diagnosed with arthritis mutilans. No involvement of cervical, temporomandibular or sternomanubrial joints was seen.

All patients were serologically negative for RA factor. The radiological changes of the joints were also noted in these patients in collaboration with the orthopaedic department. Out of total 65 positive cases of PsA, 41 (63.08) had local demineralization of peri-articular bone with osteopenia. 16 (24.62) patients had articular erosions of varying degree. In 4 (6.15) cases, the

Table 3 Stratification of Gender in relation to Types of Psoriatic Arthritis

Gender	Asymmetrical oligoarthritis	Symmetrical polyarthritis	Peripheral monoarthritis	Distal interphalangeal arthritis	Axial arthritis
Male	13(59.09%)	14(73.68%)	10(62.5%)	3(75%)	4(100%)
Female	9(40.91%)	5(26.32%)	6(37.5%)	1(25%)	0(0%)
Total	22(100%)	19(100%)	16(100%)	4(100%)	4(100%)

Table 4 Stratification of Age in relation to Types of Psoriatic Arthritis

Age	Asymmetrical oligoarthritis	Symmetrical polyarthritis	Peripheral monoarthritis	Distal interphalangeal arthritis	Axial arthritis
16-25	0(0%)	2(10.52%)	2(12.5%)	0(0%)	0(0%)
26-35	4(18.18%)	6(31.57%)	2(12.5%)	0(0%)	2(50%)
36-45	7(31.82%)	7(36.85%)	5(31.25%)	1(25%)	1(25%)
46-56	9(40.90%)	2(10.53%)	3(18.75%)	1(25%)	1(25%)
57-65	0(0%)	2(10.53%)	2(12.5%)	2(50%)	0(0%)
66-75	1(4.55%)	0(0%)	1(6.25%)	0(0%)	0(0%)
76-80	1(4.55%)	0(0%)	1(6.25%)	0(0%)	0(0%)
Total	22(100%)	19(100%)	16(100%)	4(100%)	4(100%)

changes were soft tissue swelling in the peri-articular area. There were 4 cases (6.15%) which showed narrowing of the joint space.

Discussion

The Moll and Wright criteria for diagnosis of PsA is the simplest and most frequently used for research. In the current study, asymmetrical oligo-arthritis was diagnosed in 22 (33.85%) patients, symmetric polyarthritis in 19 (29.23%) patients, peripheral mono-arthritis in 16 (24.62%) patients, distal interphalangeal arthritis in 4 (6.15%) patients and axial arthritis was diagnosed in 4 (6.15%) patients. According to the results of another local study out of 100 psoriatic patients enrolled, 46 had joint involvement. The frequency of oligoarthritis was 16 (34.7%), symmetric arthritis 14 (30.4%), axial arthritis 13 (28.2%) and classical (DIP) 3 (6.5%). These results are comparable with the results of present study, where the most common pattern was seen to be asymmetric oligo-arthritis, followed by symmetric polyarthritis. An international study conducted by Nossent in Norway also reports oligoarthritis as the most frequent subtype (48%), followed by

polyarthritis (32%).

In another study conducted in Pakistan, asymmetric oligo/mono arthritis was the commonest pattern noted (in 50%), manubriosternal joint involvement rare and cervical spondylosis and temporomandibular joint involvement unseen.¹⁵ These studies are again comparable to the current study where most commonly observed pattern is oligo-arthritis. Also the involvement of cervical & temporomandibular joints has not been seen.

A recent study from India analyzed the clinical characteristics of PsA patients attending a tertiary care center in South India. Clinical pattern of PsA patients showed that Polyarthritis (n=51, 36.2%) was the most common form noted during the study, followed by oligoarthritis (n=48, 34%). The difference in the results reported in this study compared to the current one can be attributed to the fact that the Indian study was a retrospective study, whereas, our study is cross-sectional.

Conclusion

The frequency of arthritis in Psoriasis as per this

study is 46.42%. The most common type in this study was asymmetrical oligo-arthritis. Majority cases of psoriatic arthritis were males, with their age lying in the 3rd & 4th decade & most of them developed joint involvement during the initial ten years of psoriasis onset. Among all the five patterns of arthritis in this study, maximum number of patients were males & joint disease appeared during the initial ten years of psoriasis. Therefore, according to the results of current study, it can be concluded that psoriatic arthritis mostly affects the males in their late young to middle age, & develops during the early years of psoriasis. Further studies are advised under joint supervision of dermatologists and rheumatologists for elaborate and comprehensive results on these patterns and involvement of other body joints. It is highly desired to standardize. One single diagnostic criteria & then research be done on that, so that one consensus can be made on the prevalence & the most common pattern of PsA presenting worldwide.

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