

THE FREQUENCY OF PSORIATIC ARTHRITIS IN PSORIATIC PATIENTS IN SULAIMANIA CITY

Raof R. Mirza¹, Huda E. Khairulla²

ABSTRACT

Objectives: To find out the frequency of psoriatic arthritis (PsA) in psoriatic patients in Sulaimania city, and to determine the clinical varieties of psoriatic arthritis in psoriatic patients.

Patients and Methods: A sample of 132 patients with psoriasis attending the dermatology consultation clinic of Sulaimania city from January to July 2008 was included in the study. Patients were evaluated for evidence of arthropathy. All patients were interviewed by using a questionnaire form which was constructed according to CASPAR classification criteria. Arthritic patients were investigated by relevant laboratory tests and radiology (X-ray).

Results: Out of 132 psoriatic patients, 34 cases fulfilled the CASPAR classification criteria for diagnosis of psoriatic arthritis which represents 25.8% of the sample. There was a female predominance (67.6%). Oligoarthritis was the commonest type of psoriatic arthritis, occurred in 29.4%, while isolated involvements of distal interphalangeal joints (DIP) and axial skeletal were the least common. Enthesopathy was diagnosed in 58.8%, psoriatic nail lesions were observed in 32.4%, and 73.5% of psoriatic arthritis had extensive skin lesion which express the important relation of joint disease with the extent of skin lesion. Most of the polyarthritis and arthritis mutilans occurred in the age group 50-59, this relation between the severity of joint disease and advancing age was statistically significant.

Conclusion: Nearly one-quarter of psoriatic patients had psoriatic arthritis, females were more affected, and the commonest type of arthritis recorded was oligoarticular type.

INTRODUCTION

Psoriatic arthritis is a chronic inflammatory arthritis associated with psoriasis.^[1] Psoriasis is a common, chronic, and recurrent inflammatory disease of the skin characterized by circumscribed, erythematous, dry, scaling plaques of various sizes, the lesions are usually covered by silvery white lamellar scales.^[2] It occurs often on the extensor surfaces, but may also affect the scalp and flexural areas as well as palms and soles.^[1] It commonly affects nails with either pits and onycholysis.^[1] It is widely varied throughout the world. This variation may be related to the fact that there are no valid criteria for the disease and various studies have used different case definitions.^[1] According to the recent reports it has varied from 6% to 30% in some studies,^[1] and has varied from 6 to 42% in other studies.^[3] Both psoriasis and psoriatic arthritis affect men and women equally. A small minority of patients have synchronous onset of skin and joint features or have arthritis but never develop skin lesions.^[4] In Caucasian population psoriasis is estimated to have a prevalence of 1 to 3%. Psoriasis and psoriatic arthritis are less common in other races in the absence of HIV infection.^[5] Several sets of

classification criteria for psoriatic arthritis has been proposed. The CASPAR (classification of psoriatic arthritis) group, an international group gathered to develop classification criteria for psoriatic arthritis. It proposed a new set of criteria for classification of psoriatic arthritis which was 99% specific and 92% sensitive for psoriatic arthritis.^[1] (Table-1). Wright and Moll described the clinical patterns of psoriatic arthritis. These include: predominantly DIP joint disease, identified in 5%, arthritis mutilans, a very destructive form of arthritis, identified in about 5% of patients, oligoarthritis, affecting 4 or fewer joints often in an asymmetric distribution observed in 70% of the patients, polyarthritis, indistinguishable from rheumatoid arthritis, detected in 15% of patients and spondylarthritis which occur alone in about 5% of the patients.^[1] These patterns may be helpful at the disease onset but they don't stay stable overtime, changing from one pattern to another is not uncommon.^[1,6] Recently, other rheumatic manifestations of psoriasis, such as enthesopathy, osteoperiostitis, and other periarticular conditions, were recognized.^[7] Patients with PsA demonstrate disease

¹DMR (London), M. Phil (England), ²DM.

progression over time, with more patients developing polyarthritis and increase in joint damage both clinically and radiologically.^[1] Indicators of poor prognosis include younger age at onset, extensive skin involvement, polyarticular synovitis, HIV infection, high ESR at presentation, and association with HLA- B27, B39 and DLW3.^[8]

PATIENTS AND METHODS

This study is cross sectional study involving 132 patients with psoriasis. The patients were attending the dermatology clinic in Shaheed Saifaldeen polyclinic in Sulaimania city, over 6 months period from January to July 2008. The cases were diagnosed by a consultant dermatologist. All psoriatic patients were interviewed using a special questionnaire form, which was constructed according to the classification criteria (*The CASPAR*). The main part of the questionnaire form concerned with rheumatic complain of the patients, including the site, duration, the onset of complain whether started before, after, or with skin lesion, concomitantly examination was done. For each patient with rheumatic complain, laboratory tests (*ESR, CRP, RF*) and conventional radiography, were conducted. Patients with rheumatic complain were also sent for x-ray of back (spine and sacroiliac joints), hands (DIPJ) and sites of enthesi s (e.g. insertion of plantar fascia to calcaneum) especially those who were complaining for a long time. However, this was not done or all patients because of the limited facilities. The severity and extent of psoriatic skin lesion was determined by using (*the role of nine*) with the help of a dermatologist. A skin lesion less than 7% of body surface area was regarded as mild, between 7 to 20% was classified as moderate, and a lesion more than 20% of the body surface area was regarded as extensive.^[9] The patients were also checked for evidence of psoriatic nail lesions. Extraarticular manifestations of PsA were not included in the study.

RESULTS

The study enrolled 132 cases of psoriasis patients, 63 males and 69 females. The ages ranged from 1 to 86 years and the mean age was 43.29 years. All the patients were receiving treatment for psoriasis. Seventy eight patients (59.1%) had rheumatic complaints. Psoriatic arthritis was diagnosed in 34 patients, represented 25.8% of the studied sample (Table-1). The arthropathic patients were 11 males and 23 females, with a female to male ratio 2.1:1. The association between psoriatic arthritis and patient's gender was statistically significant, P-value (<0.05). The mean age for both males and females with PsA was 43±11, their ages ranged from 22 to 63 years. The peak frequency of PsA was in the 5th decade followed by the 6th and 4th decades. (Table-2).

Table 1. Prevalence of psoriatic arthritis according to sex.

PSA	Male		Female		Total	
	No.	%	No.	%	No.	%
Yes	11	17.5	23	33.3	34	25.8
No	52	82.5	46	66.7	98	74.2
Total	63	100	69	100	132	100.0

Table 2. The age Distribution of psoriatic arthritis patients .

Age in decade	Frequency of PSA	Percent of PSA
20-29	5	14.7
30-39	8	23.5
40-49	9	26.5
50-59	10	29.4
60-69	2	5.9
Total	34	100.0

The commonest types of PsA among young patients were monoarthritis and oligoarthritis, while the commonest type of PsA among older patients was Polyarthritis (38.1%) followed by oligoarthritis (23.8%). These results indicate that polyarticular disease, which reflects the severity of PsA, increased with advancing age. The relation between type of PsA and thus the "severity" of PsA and the age of patients with

psoriasis was highly significant, (P-value<0.01). (Table-3). Half of PsA patients (50%) had long standing psoriasis for more than 10 years. (Table-4) shows that, 73.5% of PsA patients suffered from extensive skin involvement. The extent of skin lesion and its relation with joint disease was statistically highly significant (P-value <0.01).

Table 3. Types of PsA in different age groups.

Types of PSA	Age (years)				Total	
	< 40		≥ 40			
	No.	%	No.	%	No.	%
Dip	0	0	1	4.8	1	2.9
Axial disease alone	0	0	1	4.8	1	2.9
Enthesopathy alone	1	7.7	3	14.3	4	11.8
Monoarthritis	5	38.4	1	4.8	6	17.6
arthritis mutilans	1	7.7	2	9.5	3	8.8
Oligoarthritis	5	38.4	5	23.8	10	29.4
Polyarthritis	1	7.7	8	38.1	9	26.5
Total	13	100	21	100	34	100

Table 4. The relation of psoriatic arthritis with the extent of skin lesion.

PSA	Extent of skin involvement					
	Mild		Moderate		Severe	
	No.	%	No.	%	No.	%
Yes	2	5.9	7	20.6	25	73.5
No	27	27.6	32	32.7	39	39.8
Total	29	22.0	39	29.5	64	48.5

All patients with psoriasis and psoriatic arthropathy were receiving treatment for psoriasis, but most of these patients were not on cytotoxic or disease modifying drugs for psoriasis and joint disease (including 58.8% of PsA patients). In this study, 29 patients (85%) got PsA after the onset of psoriasis, while in 4 cases (12%), both skin and joint manifestations were simultaneous at onset, and only in one case (3%) the joint disease started before skin

disease. Psoriatic nail lesion was identified in 11 out of 34 cases of PsA, it represented 32%) of arthropathic patients. The most common psoriatic nail lesions detected among patients were pitting and subungual hyperkeratosis. Six patients with psoriatic nail lesion had distal interphalangeal joint disease, and two of them suffered from destructive arthritis in their DIP, whereas, three cases with psoriatic nail lesion had oligoarticular arthritis affecting large and

lower limb joints. One case with psoriatic nail lesion presented with enthesopathy without peripheral arthritis. One third of arthritic patients had one or more affected family members with psoriasis.

DISCUSSION

On reviewing researches from neighboring states, western countries, and other parts of the world, there is a great variation in the prevalence of PsA. In this study, the frequency of psoriatic arthritis was 25.8%, which is close to many reports.^[1,3,10] A study has been done in Iran and recorded a prevalence of PsA among patients with psoriasis of 9.1%.^[11] Sadek, et al. reported a prevalence of PsA as high as 73% among psoriatic patients in Egypt.^[7] The western resources have also widely varied, the prevalence ranged between 7.7%-36%.^[3,12-14] In an Indian research the prevalence was 8.47%.^[15] The difference in the prevalence of PsA is mainly due to the difference in the classification criteria used to diagnose PsA. Because of the high prevalence of PsA among older patients, a sample that includes large number of young patients with psoriasis may have less frequency of arthritis, a sample enrolled many psoriatic patients with extensive skin lesion and patients with severe form of psoriasis (generalized pustular psoriasis) may record high frequency of PsA.^[10,11,16] Past and recent researches revealed equal distribution of PsA between male and female patients with psoriasis^[1,4,5,7,10,17-19] although the frequency of disease patterns differs somewhat in the two sexes.^[3,5]

In this study there was a female preponderance regarding psoriatic arthropathy. McHugh, et al. & Gunal, et al., reported high prevalence of PsA among their female psoriatic patients too.^[20,21] But some studies recorded higher prevalence of PsA among male patients.^[11,13,14] Men show less severe disease progression than women, so PsA in women needs to be treated earlier to prevent articular damage.^[7,13] Spondylitic psoriatic

arthropathy and DIPJ disease are more common in males while symmetrical polyarticular rheumatoid like pattern is more among females.^[3,22] This result couldn't be ascertained in the present study.^[7] Jamshidi, et al, found out that there was no significant difference between male and female psoriatic patients regarding the pattern of joint involvement.^[11] The highest frequency of PsA in this study, was reported in the 6th decade, although the frequencies of PsA in 4th, 5th, and 6th decades were almost equal, Prasad, et al. recorded the peak frequency of PsA in the age group 41-60 and 40% of them were in the age group 51-60.^[15] The tendency of most of the psoriatic patients to develop rheumatic manifestations at an older age has been previously noted.^[22] The relationship between severity of PsA and advancing age was significantly noticed in this study. It is clear that there is a significant increase in the number of joints affected by the disease, and the severity of joint disease with increasing in age. This may be due to the fact that, PsA starts in a single joint and it may progress to affect more joints with advancing age and longer duration of arthropathy specially when left untreated. Other studies found a relation between severity and pattern of joint involvement and the duration of psoriasis. It has been reported by Sadek, et al. that specific pattern of joint involvement (like spondylitis) was associated with longer psoriasis duration.^[7] Prasad, et al, had suggested that the longer the duration of psoriasis, the more severe is the PsA.^[15] The tendency of most psoriatic patients to develop rheumatic manifestations after years of the disease has been previously noted.^[22] Half of our arthritic patients had long standing psoriasis for more than 10 years, but Prasad, et al. found that PsA was relatively rare after 10 years of the onset of skin lesions.^[16] The relationship between severity of skin lesions and joint disease in PsA is a matter of controversy.^[11] Susceptibility to the development and severity of arthritis generally increases with the severity of cutaneous involvement.^[23,24] It has been suggested that

patients with PsA have more severe psoriasis.^[11] However, some studies showed that there is no direct association between the extent and severity of psoriasis and joint manifestations.^[3,7,25] The present study found that the frequency of PsA significantly increased with the severity and extent of psoriasis. Similar results were reported by Prasad, et al. and Jamshidi, et al. they recorded high score of PASI among patients with PsA than patients without arthropathy.^[11,15] The prevalence of nail involvement in patients with PsA is not exactly known.^[12] In the present study, nearly one-third of patients with PsA had nail involvement. It is less than the results reported by several other studies.^[15,17,26] Furthermore, It has been suggested that the severity of nail disease correlates with indicators of severity of both skin and joint disease, this association was observed in this study. Oligoarthritis was the commonest pattern of arthropathy in this series, affected mainly the large joints of lower limbs, oligoarthritis was also the commonest pattern of PsA in Prasad, et al. and Gunal, et al, studies^[15, 21] but not in Jamshidi, et al, study.^[11] In the present study, axial disease was diagnosed in 52.9% of PsA patients, 5.6% of them existed alone without peripheral arthropathy and 94.4% associated with peripheral and/or periarticular disease. Sadek et al recorded the axial disease as high as 64% of the subsets with PsA, 26% of them had isolated axial disease, while the remaining 74% occurred in combination with peripheral arthritis or periarticular disease.^[7] In another study, axial disease represented in 23% of patients with PsA.^[27] Previous researches had found spondylitis in 23-50% of PsA patients.^[28,29] In all these studies, a minority of patients had isolated axial involvement, while the majority had it in combination with peripheral arthritis. These findings highlight the importance of radiological examination of the spines and sacroiliac joints in patients with psoriasis, even those without spinal symptoms or lack of buttock pain.^[7] Cervical spondylitis is the common site for spondylitis in psoriatic

patients, more than lumbar or thoracic spines.^[5, 16] Enthesopathy was one of the interesting finding in the present study which was found in more than half of the cases with PsA (58.8%). It has been suggested that, the presence of enthesopathy with psoriasis in a patient, is sufficient for diagnosis of PsA according to CASPAR classification criteria,^[1] also enthesitis may be the early manifestation of PsA.^[30] A study had been done by Gisoni, et al, revealed that, enthesitis was significantly higher in patients with psoriasis as compared with controls by ultrasonic evaluation of Achilles, quadriceps, and patellar entheses.^[31]

CONCLUSIONS & RECOMMENDATIONS

There is a high frequency of PsA in Sulaimania city was found with female predominance. Different patterns of joint involvement had been identified, even destructive and deforming arthritis. A large number of PsA patients had more than one type of PsA. Its frequency was significantly associated with the extent of skin disease. The polyarticular disease and arthritis mutilans were more in older age group. Enthesopathy was diagnosed in a significant number of PsA patients. Therefore, we recommend that these patients should be treated with disease modifying anti rheumatic drugs, with close follow up. Psoriatic patients with extensive skin lesion should be treated with systemic therapy to avoid it being complicated with arthropathy. It is also necessary to examine psoriatic patients for evidence of nail lesions, which may predict an underlying joint disease.

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