

## **Research Article**

### **Study of Psoriatic Arthritis in Shadan Institute of Medical Science Teaching Hospital and Research Centre, Himayath Sagar Road Hyderabad (Telangana State)**

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**Abstract:** The aim of the study is to assess the prevalence of arthritis in psoriatic patients. 20 psoriatic arthropathy patients with negative rheumatoid factor attending department of dermatology, Shadan institute of medical science were taken for the study. Commonest type of joint involvement was asymmetrical oligoarthropathy seen in 65% patients followed by rheumatoid arthritis type in 20% patients, distal interphalangeal joint in 5% cases and sacroiliac joint involvement in 5% cases. Nail involvement was seen in 55% cases. In most cases (70%) it was skin involvement followed by arthritis. Asymmetric oligoarthropathy and rheumatoid arthritis type are most common types of psoriatic arthropathy. Nail involvement is frequent observed. Skin disease usually precedes arthropathy.

**Keywords:** Arthritis, psoriasis, prevalence, joint, nail.

#### **INTRODUCTION**

Psoriatic arthropathy (PA) is defined as an inflammatory disease of joints in patients of psoriasis with negative rheumatoid serology. Moll and Wright classified PA into 5 broad categories [1]. Asymmetrical oligoarthritis of fingers or toes (70%). Associated tenosynovitis produces a classical "sausage" digit. Symmetrical polyarthritis simulating rheumatoid arthritis except for absence of RA factor in the blood (15%). Classical distal interphalangeal PA (5%). Arthritis mutilans (AM)-a severely deforming arthritis with osteolysis, destruction of bones and widespread ankylosis (5%). Ankylosing spondylitis with or without peripheral arthropathy (5%). The prevalence of uncomplicated psoriasis is between 1-3% in the general population. Arthritis is found in increased frequency in psoriatic patients and its incidence is estimated to be 5-7%. In severe psoriasis, arthritis can occur in up to 30-40% of the patients [2]. As there are very few Indian studies on Psoriatic arthropathy [3, 4] we undertook this clinical study to assess the prevalence of Psoriatic arthropathy in psoriatic patients.

#### **MATERIALS AND METHODS**

The study included all psoriatic patients having skin and / or nail lesions with joint complaints and

negative serology attending department of dermatology, Shadan institute of medical science were taken for the study during one year period from October 2014 to October 2015. A detailed history and examination of skin, nail, mucosa and joints were done. The number of joints involved as well as symptoms and signs like pain, tenderness, swelling, redness, warmth and limitation of motion were noted and categorized into the 5 groups. Investigations on urine and blood including serum calcium, phosphorus, uric acid, total proteins and albumin, latex fixation test for rheumatoid factor and blood VDRL were done. Biopsy of skin and other relevant investigations were done. Wherever necessary and radiological studies of all affected joints were also done.

#### **RESULTS**

Total number of patients attending the dermatology OPD in the year October 2014 to October 2015 were 18000 out of these 300 patients presented with psoriasis. Out of 300 patients of psoriasis psoriatic arthropathy was found 20 patients. In Out of 20 patients, 12 (60%) were males, while 8 (40%) were females. Male to female ratio was 1.5:1. (Table 1). The demographic data of study population. The maximum number of cases (45%) was in the age group of 41-50

years, followed by 35% in the age group of 51-60 years (Table 2). Duration wise distribution of patients with psoriatic arthritis is shown in table 3. Nail involvement was seen in 11 cases out of 20 (55%) patients of psoriatic arthropathy. It includes nail dystrophy in 4 patients, pitting in 11 patients, subungual hyperkeratosis in 7 patients, longitudinal ridging in 9 patients, onycholysis in 3 patients, and discoloration and dystrophy of nails in 4 patients. (Table 4). Commonest

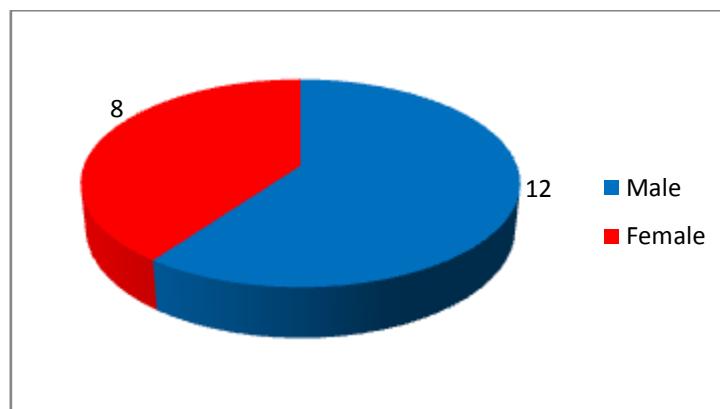
type of joint involvement was asymmetrical oligoarthropathy seen in 65% patients followed by rheumatoid arthritis type in 20% patients, distal interphalangeal joint in 5% cases and sacroiliac joint involvement in 5% cases. Radiological changes in psoriatic arthritis are soft tissue changes, erosion of cartilage, joint space reduction, osteophyte formation and ankylosis (table 4).

**Table-1: Gender distribution of psoriatic arthritis**

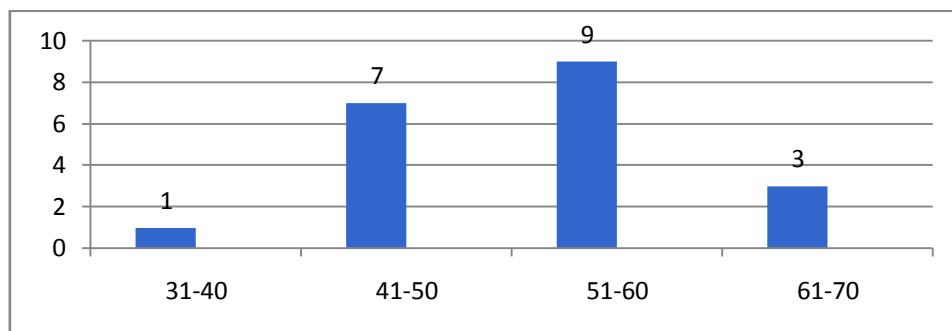
Sex	No. of cases	Percentage (%)
Male	12	60
Female	08	40
Total	20	100

**Table-2: Age-wise distribution of Psoriatic arthritis.**

Age (years)	Number of cases	Percentage (%)
31-40	1	5
41-50	7	45
51-60	9	35
61-70	3	15
Total	20	100



**Fig 1: Gender-wise distribution of Psoriatic arthritis patients.**



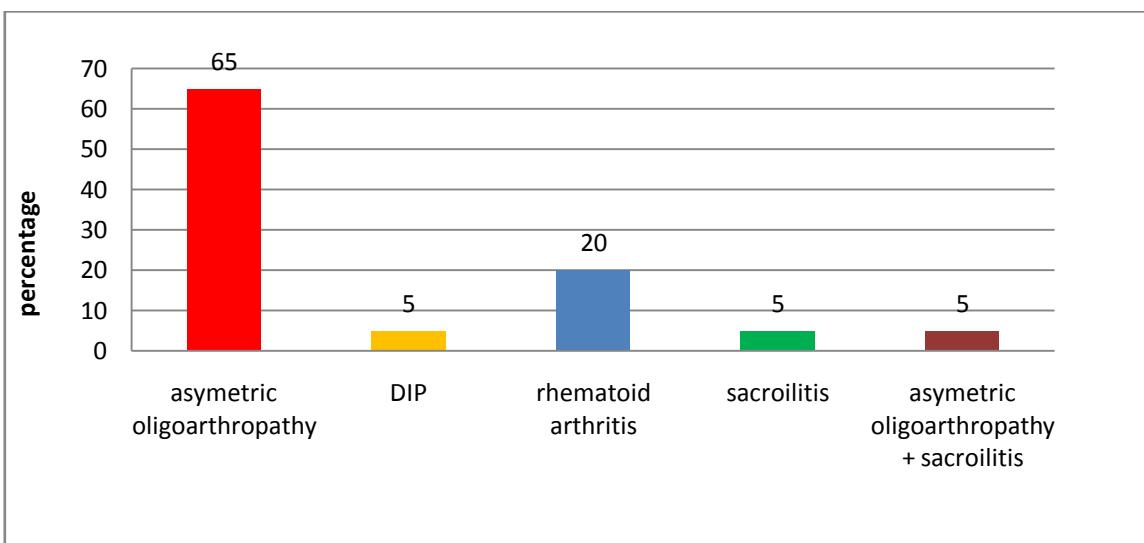
**Fig 2: Age-wise distribution of Psoriatic arthritis patients.**

**Table-3: duration wise distribution of Psoriatic arthropathy.**

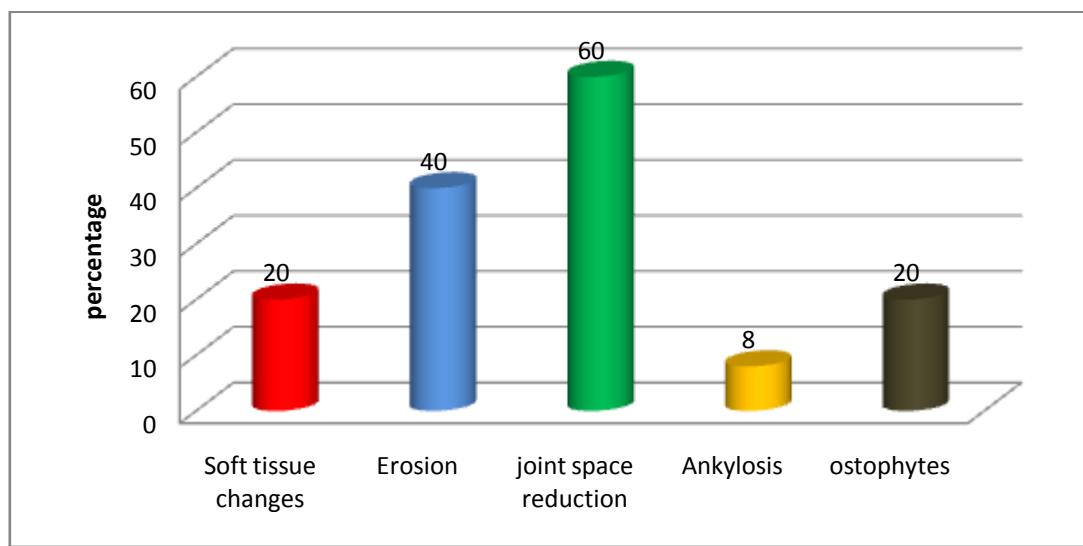
Duration	No. of cases	Percentage (%)
< 6 months	7	35
6 months - 1 year	3	15
1 – 2 year	5	25
2-3 year	1	5
>3 year	4	20

**Table 4: Nail changes in patients with Psoriatic arthropathy.**

Nail changes	No. of cases
Pitting	11
Subungual hyperkeratosis	07
Ridging	09
Discoloration and dystrophy	04
Onycholysis	03



**Fig 3: Percentage of patients according to types of Psoriatic arthropathy in patients.**



**Fig 4: Radiological changes in psoriatic arthritis.**

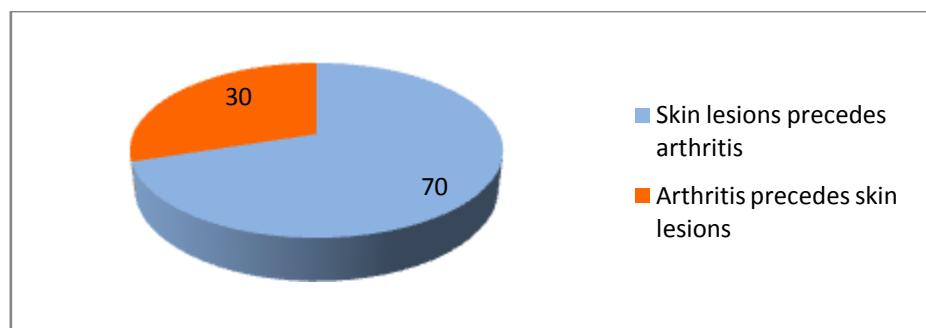


Fig 5: Distribution of patients with respect to order of presentation.



Fig-6: X ray Knee joint antero posterior and lateral view showing arthritic changes in knee with psoriasis.

## DISCUSSION

The occurrence of arthropathy among psoriatic patients noted in this study is slightly higher than the previous reports from India [5]. Wide variation in prevalence is due to hidden, minimal or temporary remissions in skin lesions as diagnosis of Psoriatic arthritis can be. This calls for a thorough clinical and laboratory examination of all suspected cases. Nail lesions are more associated with Psoriatic arthritis and all the corresponding nails in patients with DIP involvement were affected, possibly due to increased trauma at these areas [6, 7]. Thus, nail involvement may indicate a risk for developing PA[8]. In our study, nail involvement was seen in 55% patients of psoriatic arthropathy. Also It was seen in our study that nail involvement was more common in DIP joint arthropathy. There is no definite diagnostic investigation for PA. Rheumatoid factor should be negative. Radiological evidence maybe lacking in most patients and should not be taken a sex collusion criteria [9]. Asymmetrical oligo arthropathy was most commonly seen in our series, which was found in 65% cases. The longer the duration of psoriasis, them or severe is the PsA [10,11].The initial lesions of PsA are usually soft tissue changes, marginal erosions and the narrowing of joint spaces while an kylosis and osteophyte formation are seen in the more advanced stages of the disease[12]. We also correlated the type and severity of radiologic changes and consequent damage to the joints affected

with the duration of arthropathy. The most common radiologic changes observed in the study group were of joint space narrowing in 60% and erosions in 40% of the patients with many patients showing more than one type of change. Long standing cases showed more damaging radiologic changes like ankylosis (8%) had psoriasis of >2years duration. Although PsA has traditionally been viewed as a disease with a benign prognosis, radiographic evidence, as described previously, indicates that the disease is more progressive and destructive than what was previously thought. Although the highest rate of peripheral joint involvement in PsA seems to be within the first 12 months of disease onset, the disease has been shown to be progressive in terms of number of joints affected and damage to those joints. It has been suggested that possible indicators of poor prognosis include younger a great onset, extensive skin involvement and certain HL Antigens [13]. From our study, we saw a statistically significant correlation between severity of PsA and age of onset of the disease.

## CONCLUSION

Psoriatic arthritis is a serious and potentially disabling condition. We are still handicapped by the absence of a precise definition of the disease,. Thus, we conclude that in the entire population of patients with psoriasis (300), the total prevalence of psoriatic arthritis was 6.67% (n/N = 20/300). However, this may be an underestimate of the burden of psoriatic arthritis

because of underreporting by patients in early/asymptomatic disease. Thus, dermatologists should ask about the joint symptoms in all psoriasis patients and screening for psoriatic arthritis must be done in all suspected cases of psoriatic arthritis for early diagnosis and intervention. Further larger epidemiological and genetic linkage studies are warranted to explain the wide variation in prevalence and patterns of disease in different populations.

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