

## Original Article

# Evaluation of joint involvement in patients of psoriasis: an observational study

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**Abstract** *Background* Psoriasis is a common, genetically-determined inflammatory disease characterized by well-demarcated, erythematous scaly papules and plaques. Usually 20-30% of patients with psoriasis develop seronegative, peripheral and/or spinal arthropathies. Various patterns of arthritis have been reported in patients of psoriasis in different studies from different parts of world.

*Objective* We carried out this clinical survey to find out different patterns of joint involvement in patients of psoriasis in this part of the world.

*Patients and methods* All psoriatic patients of either sex and any age were enrolled from the inpatient and outpatient Dermatology departments of Allama Iqbal Medical College/Jinnah Hospital, Lahore from 1<sup>st</sup> April to 30<sup>th</sup> November 2006. They were thoroughly examined, investigated and recorded on the predesigned pro forma.

*Results* Of 104 patients enrolled, 37 showed joint involvement and all were rheumatoid factor-negative. Symmetrical rheumatoid-like seronegative polyarthritis was the commonest pattern noted (43%) while cervical, temporomandibular and sternomanubrial joints involvement was not seen.

*Conclusion* All forms of psoriatic arthropathy as mentioned by Moll and Wright were found in the present study, symmetrical rheumatoid-like seronegative polyarthritis being the most common.

### *Key words*

Psoriasis, arthritis, rheumatoid-like arthritis.

## Introduction

Psoriatic arthritis is an inflammatory arthritis associated with psoriasis of the skin and/or nails, with usually a negative serological test for rheumatoid factor. Prevalence of arthritis among psoriasis

patients ranges from 2.6-7 %.<sup>1</sup> Peak age of onset is the fourth decade and there is a well recognized juvenile form also, with age of onset between 9-12 years. Familial clustering has been reported in psoriatic arthritis. HLA-B27, -B37, -B17 and -A3 are more frequent in psoriatic arthritis.<sup>2</sup>

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Moll and Wright classified psoriatic arthritis into 5 subgroups, which often overlap. Peripheral asymmetrical mono/oligoarthritis

is the most common form. Distal interphalangeal arthritis, symmetrical rheumatoid-like seronegative polyarthritis, arthritis mutilans, and axial arthritis are other forms seen. Occasionally sternomanubrial and temporomandibular joints involvement may occur.<sup>3</sup>

### Patients and methods

It was a non-invasive, cross-sectional, hospital-based study. All the patients of psoriasis of either sex and any age presenting to the Department of Dermatology, Jinnah Hospital, Lahore from 1<sup>st</sup> April to 30<sup>th</sup> November, 2006 were enrolled. A comprehensive pro forma was completed for every case that included complete history and examination. A joint was considered involved if there was history of swelling or pain, or on examination joint swelling, tenderness or deformity was seen. Investigations were carried out in the relevant cases, including complete blood picture, ESR, serum rheumatoid factor, serum uric acid and radiological examination of involved joints.

### Results

A total of 104 patients of psoriasis, including 58 male and 46 females with age ranging from 12-60 years (average age 34 years) were enrolled. 37 (35%) patients had arthritis. Of these, 20 were male and 17 female patients, with age ranging from 23-60 years (average age of 44 years). In all patients skin lesions preceded arthritis. Mean duration of onset of arthritis after skin lesions was 4.5 years (0.5 to 20 years). Most common pattern of arthritis seen was symmetrical rheumatoid-like seronegative

**Table 1** Pattern of joint involvement (n=37)

Pattern of joint involvement	n (%)
Symmetrical rheumatoid-like seronegative arthritis	16 (43.2%)
Distal interphalangeal arthritis	7 (18.9%)
Asymmetrical oligoarthritis	5 (13.5%)
Sacroiliac arthritis	5 (13.5%)
Peripheral monoarthritis	3 (8.2%)
Arthritis mutilans	1 (2.7%)

**Table 2** Type of psoriasis (n=37)

Type of psoriasis	n (%)
Plaque psoriasis	34 (91.9%)
Erythroderma	2 (5.4%)
Pustular psoriasis	1 (2.7%)

polyarthritis (43%). Distal interphalangeal joint involvement was seen in 18%, asymmetrical oligoarthritis and sacroiliac joints involvement in 13% each, 8% had peripheral monoarthritis and only 1 (2%) of the patient showed arthritis mutilans who had radiological evidence of pencil in cup deformity (**Table 1**). Among the types of psoriasis, plaque type was the most common seen in 91% patients, 8% patients presented in erythroderma and only 1 (2%) patient had pustular psoriasis (**Table 2**). Nail changes were observed in all the patients with arthritis.

### Discussion

Psoriatic arthritis is an inflammatory disease, mostly occurring during the fourth decade of life.<sup>4</sup> In current study, out of 37 patients of psoriasis, there were 20 male and 17 females (M:F, 1:1.7) showing arthritis, with age ranging from 23 to 60 years (average age 44 years). Almost equal sex distribution was seen in our study unlike that reported by Scarpa *et al.*<sup>5</sup> that showed female preponderance.

Usually 20 to 30% of patients with psoriasis develop seronegative, peripheral and/or

spinal arthropathies.<sup>6</sup> In the present study 37 (35%) patients had arthritis. Skin lesions usually antedate arthritis with variable duration. As observed in study done by Leonard *et al.*<sup>7</sup> our patients also showed skin lesions preceding arthritis by average duration of 0.5 to 20 years.

Moll and Wright<sup>3</sup> classified psoriatic arthritis into five major subgroups as asymmetrical mono/oligoarthritis, distal interphalangeal arthritis, symmetrical rheumatoid-like seronegative polyarthritis, arthritis mutilans and axial arthritis are other forms seen. All these forms of psoriatic arthropathy were seen in our study. Like Ray *et al.*<sup>8</sup> our study also revealed symmetrical rheumatoid-like seronegative polyarthritis being most common (43%). None of our patients showed manubriosternal and temporomandibular joints involvement as observed in the previous studies by Becker *et al.*<sup>9</sup> and Ahmad *et al.*<sup>10</sup> In the present study all the patients with arthritis showed nail changes suggestive of psoriasis.

### Conclusion

Pattern of joint involvement in patients of psoriasis varies widely. Symmetrical rheumatoid like seronegative polyarthritis is the most common type seen. Multicentre studies involving both dermatologists and rheumatologists are needed to further observe and define psoriatic arthropathies.

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