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PSORIATIC ARTHRITIS IN 300 PSORIATIC PATIENTS IN IMAM REZA HOSPITAL, MASHHAD UNIVERSITY OF MEDICAL SCIENCES

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ABSTRACT

In order to study the prevalence of psoriatic arthritis in Imam Reza Hospital and determine the effects of factors like age, sex, familial history, type of skin involvement, nail involvement and duration of disease on psoriatic arthritis, 300 psoriatic patients over a period of 4 years were admitted and examined in the Department of Dermatology and Rheumatology in Imam Reza Teaching Hospital, (MUMS). A special form was designed for collecting needed data (data collection sheet). Statistical analysis was done on these data.

In the studied population, the prevalence of psoritaic arthritis was 16.6%. The most common involved joints were the wrist and fingers (52%). Asymmetrical peripheral oligoarthritis was the most prevalent type of joint involvement. Most of the patients were between the 3rd and 4th decades of life. Familial history was positive in 20% of psoriatic patients and 18% of psoriatic arthritis. From a clinical point of view 78% of psoriatic arthritis patients had psoriasis vulgaris. Nail involvement in this group was seen in 72%. Nail pitting was present in 68%. In general, the vulgaris type was seen in 89.2% and nail involvement in only 42.8%.

In conclusion, psoriatic arthritis was present in 16.6% of 300 patients with psoriasis. It is recommended that joint and spine exams be performed in all cases of psoriasis, especially those with nail involvement.

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Keywords: Psoriasis, Psoriatic Arthritis. Mashhad, Iran.

INTRODUCTION

Psoriasis is a chronic inflammatory scaling disorder of the skin. Its prevalence varies according to race, ethnicity and geography. It is estimated that 0.5% to 1.5% of the U.S. population is affected. There is an equal prevalence in both sexes.[1,2] It has many clinical presentations including: chronic plaque psoriasis, guttate psoriasis, pustular psoriasis, erythrodermic psoriasis and psoriatic arthritis.

Psoriatic arthritis is characterized by the association of psoriasis of the skin and/or nails with peripheral and/or spinal arthropathy.[1,3]

It has been classified into five clinical groups: asymmetrical peripheral monoarthritis or oligoarthritis, distal interphalangeal arthritis, symmetrical rheumatoid factor- negative polyarthritis, mutilant arthritis and spondyloarthropathy with or without peripheral arthropathy.[3,4,5,6] These manifestations can cause permanent or transient disability of patients.

We carried out this study in northeast of Iran to de-

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termine the effects of factors like age, sex, familial history, type or skin and nail involvement, and duration of the disease.

MATERIAL AND METHODS

Imam Reza hospital is one of the main teaching and referral hospitals which is located in Mashhad, the center of Khorasan province, Iran.

The prevalence of psoriasis is 0.5-1.5% and psoriatic arthritis is 5-34%.[2,4] A sample of 300 patients was considered for this study by using sample size calculation formula. This is a prospective study over a period of 4 years between 1997-2000 on 300 psoriatic patients referred to Dermatology and Rheumatology Clinics in Imam Reza Teaching Hospital.

A form was designed for collecting needed data. Patients with skin involvement who were clinically diagnosed and/or had biopsies of psoriasis in Dermatology clinics were referred to the Rheumatology Department to be examined for having arthralgia and/or arthritis by a rheumatologist or vice versa. The results were statistically analyzed by chi- square and exact Fisher test methods.

After completion of the study, patients were divided into two groups:

1) Psoriatic patients without articular symptoms,

2) Psoriatic patients with articular symptoms (psoriatic arthritis).

RESULTS

Fifty patients from a total of 300 psoriatic patients had psoriatic arthritis. Twenty-seven patients had arthritis (9%) and 23 had arthralgia (7.6%).

Therefore, in the studied sample, the prevalence of psoriatic arthritis was 16.6%. The most common involved joints were as follows: wrist and fingers in 26 patients (52%), knee in 18 patients (36%), ankle and small foot joints in 14 cases (28%), spinal column in 9 patients (18%) , sacroiliac joint in 5 cases (10%), and shoulder joint in 4 patients (8%) (Fig.1).

The patterns of joint involvement were asymmetrical peripheral oligoarthritis in 25 patients (50%), distal interphalangeal arthritis in 11 patients (22%), spondyloarthropathy in 10 patients (20%), and symmetrical polyarthritis in 4 patients (8%) (Fig. 2). No one with mutilant arthritis was seen. Among 250 patients with psoriasis but no articular manifestations, 148 (59%) were male and 102 (40.8%) were female. In patients with psoriatic arthritis, 23 (46%) were male and 27(54%) were female (Fig. 3).

Male to female ratio in psoriatic arthritis patients was 1 to 1.17, but in general the male to female ratio in psoriasis is 1 to 1.45. In our study the age range of patients was between 7-78 years. The mean age was 43 in psoriatic arthritis and 38 years in all psoriasis patients. Disease occurrence was in the third to fifth decades of life

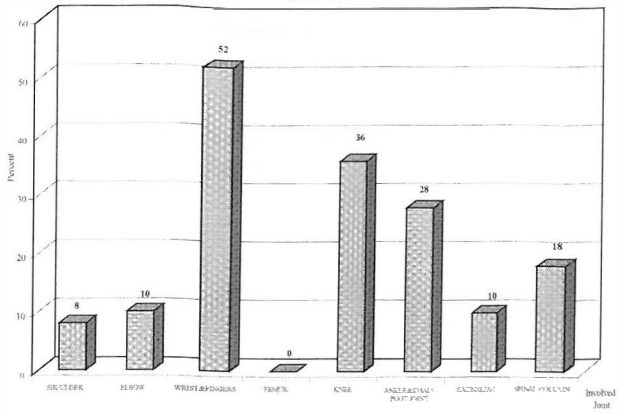

Fig. 1. Joint involvement in psoriatic arthritis patients.

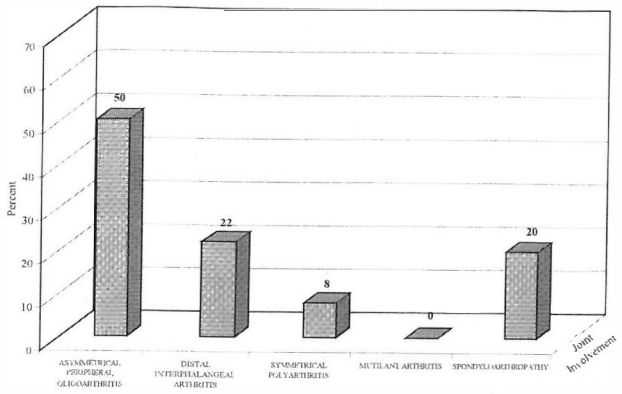

Fig. 2. Type of joint involvement in psoriasis patients.

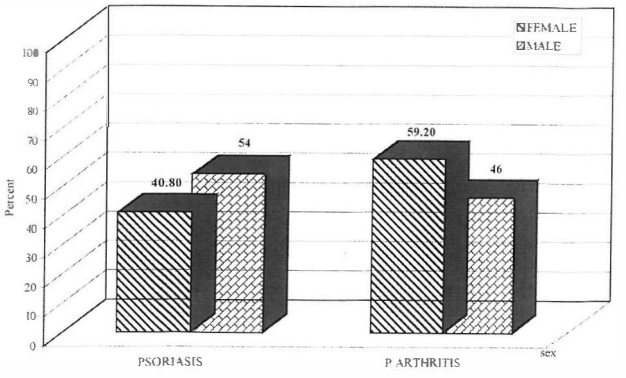

Fig. 3. Sex distribution in psoriasis and psoriatic arthritis patients referring to the Dermatology and Rheumatology Clinic of Imam Reza Hospital, 1998-2000.

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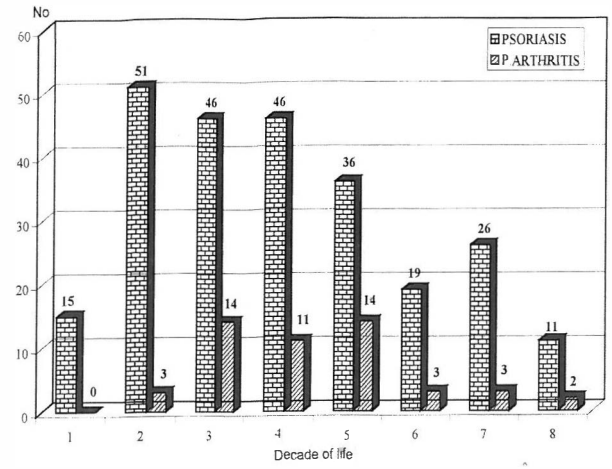

Fig. 4. Age distribution in psorasis and psoriatic arthritis referring to the Dermatology and Rheumatology Clinic of Imam Reza Hospital, 1998-2000.

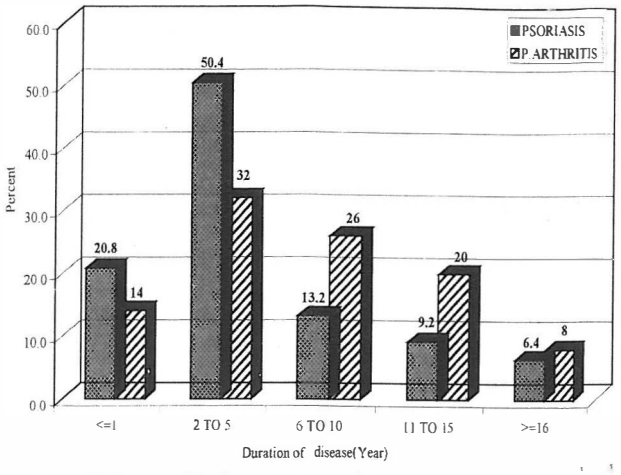

Fig. 6. Relationship between duration of disease and arthritis in psoriasis cases referring to the Dermatology and Rheumatology Clinic of Imam Reza Hospital, 1998-2000.

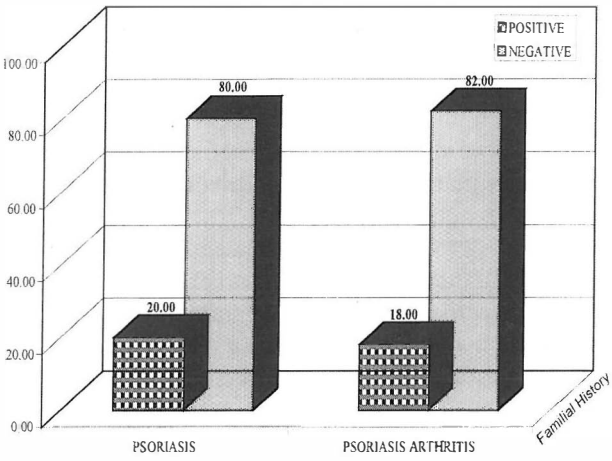

Fig. 5. Relationship between familial history and arthritis in psoriasis cases referring to the Dermatology and Rheumatology Clinic of Imam Reza Hospital, 1998-2000.

(Fig. 4). A positive familial history of psoriasis was present in 50 patients (20%) with no articular involvement and 9 (18%) with psoriatic arthritis (Fig.5). In psoriatic arthritis patients the most common presentation was plaque psoriasis in 39 (78%), 4 patients (8%) had erythrodermic psoriasis, 4 patients (8%) had pustular psoriasis and 2 (4%) had guttate psoriasis. There was no skin involvement in 1 (2%) in this group of patients and only nail manifestations were seen.

In the psoriatic group without articular manifestations we found 223 patients (89.2%) with psoriasis vulgaris, 4 patients (1.6%) with pustular psoriasis, 11 patients (4.4%) with erythrodermic, and 7 patients (2.8%) with guttate psoriasis.

Nail involvement was seen in 86 patients (72%) with psoriatic arthritis. The types of nail involvement were as follows: pitting in 34 patients (68%), onycholysis in 18 patients (36%), subungual hyperkeratosis in 16 patients (32%) and longitudinal lines in 6 patients (12%).

However in psoriatic patients, nail involvement was seen in 107 patients (42.8%), including pitting in 94 patients (37.6%), onycholysis in 13 patients (5.2%), subungual hyperkeratosis in 9 (36%), and longitudinal lines in 3 (1.2%) patients. Duration of disease in both groups was from 2-5 years (Fig.6). The mean of disease duration was 4.5 years in psoriatic arthritis and 4 years in all cases.

DISCUSSION

According to this study, 50 patients of 300 psoriasis patients had arthropathy. Therefore the calculated prevalence of psoriatic arthritis in this group of psoriatic patients was 16.6%.

The prevalence of psoriatic arthritis is different in western countries. The prevalence varies from 5-8% in some references[4] to 20-34% in others.[2] This difference is because of the effects of race and epidemiological factors[7,8] and the type of study.

Joint involvement in decreasing order was as follows: 26 (52%) wrist and finger joint, 18 (36%) knee, 14 (28%) ankle, 9 (18%) spinal column, 5 (10%) sacroiliac joint, 5 (10%) elbow and 4 (8%) shoulder gridle joints.

Our study in northeast of Iran shows that the most common joints involved were the wrist, fingers, foot and knee, similar to western reports.[2,3]

It was also determined that asymmetrical peripheral

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oligoarthritis (50%) is more common than distal interphalangeal arthritis (22%), spondyloarthropathy (20%) and symmetrical polyarthritis (8%), similar to other references.[1,2,3]

In our study, distal interphalangeal arthritis (22%) was seen more than other references (5%). The exact cause of this difference is not clear for us but doing the study in two referral centers (Dermatology and Rheumatology) may be the case of this high percentage.

The prevalence of psoriasis and psoriatic arthritis is equal in both sexes.[1,2,9]

In our study the male to female ratio was 1 to 1.17. There was no significant difference between males and females for psoriatic arthritis.

Occurrence of psoriasis and psoriatic arthritis is between the 3rd and 5th decades of life.[1,2]

Age has no significant effect on the onset of arthritis.

Familial history was present in 9 patients (18%) of the psoriatic arthritis group and 50 patients (20%) with psoriasis without joint involvement. In western references more than 50% of psoriasis cases have a positive familial history,[1] and there is a familial tendency for psoriatic arthritis development.[3,10]

Evidence shows there are some environmental factors like streptococcal infections and nutritional agents which may play a role in disease occurrence.[1] Of course this theory needs further research and evaluation in the future.

There was no significant relationship between positive family history and arthritis (nonsignificant exact Fisher test) in our study.

In one study which was performed in Italy, cutaneous manifestations in psoriatic arthritis was as follows: 85% psoriasis vulgaris, 11% eruptive, 2.5% erythrodermic, 1.2% pustular.[12]

In our study, psoriasis vulgaris was seen in 39 (78%), erythrodermic psoriasis in 4 (8%), pustular psoriasis in 4 (8%) and guttate in 2 (4%). There was no cutaneous involvement in two patients and nail involvement was the only presentation. There was a mild relationship between type of cutaneous involvement and articular involvement in these two groups.

It seems that clinical psoriasis had no effect on the development of arthritis. This finding is similar to previous reports in references.[1,3,13]

According to the references, nail involvement is seen in 75% of psoriatic arthritis patients and 25% of psoriasis patients.[1] In our study, nail involvement was positive in 86 (72%) of psoriatic arthritis cases and 107 (42.8%) of psoriasis patients.

In the psoriatic arthritis group pitting was the most common nail manifestation, seen in 34 (68%), while onycholysis was present in18 patients (36%), dystrophy in 5 patients (10%), subungual hyperkeratosis in16 patients (32) and longitudinal lines in 6 patients (12%).

There was a significant relationship between nail involvement and onset of psoriatic arthritis ($p<0.05$).

Most of the patients had a history of psoriatic disease for 2-5 years. There was no significant relationship between the duration of psoriasis and arthritis development.

CONCLUSION

Our study shows the prevalence of psoriatic arthritis is not uncommon in psoriasis cases in the studied population. Psoriatic arthritis is seen in 16.6% of psoriasis patients.

Early diagnosis can prevent articular complications. It is recommended that all patients with psoriasis especially accompanied with nail involvement, must be examined for articular symptoms.

According to references and our study nail involvement is seen in at least 72-75% of psoriatic arthritis patients. So we should pay more attention to this problem as it appears to increase the chance of articular involvement in psoriatic patients.

There is no relationship between the severity of cutaneous lesions and joint involvement. We had some patients with minor skin involvement but with severe arthritis, so we should search for psoriatic arthritis even in patients with mild and localized skin or nail involvement.

According to the low prevalence of positive familial history in these patients we can conclude that environmental factors may play an important role in inducing disease in our society. Studying these factors needs further investigations in the future.

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