Remission in Psoriatic Arthritis

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ABSTRACT. ***Objective.*** To determine the frequency of remission in psoriatic arthritis (PsA), to describe the characteristics of remission in PsA, and to identify features associated with remission in PsA.

Methods. Patients with PsA are followed prospectively according to a standard protocol. Only patients with ≥ 3 visits and those with peripheral arthritis were included in this study. Patients who sustained remission, defined as no actively inflamed joints on at least 3 consecutive visits, were compared to patients with persistent inflammation throughout the followup period (nonremission).

Results. Among 391 patients with peripheral arthritis and ≥ 3 visits, 69 patients sustained remission and 178 had persistent inflammatory activity. The frequency of remission was thus 17.6%. The average duration of remission was 2.6 years. However, 52% of the patients experienced flare after a mean of 1.8 years. Univariate analyses revealed that male sex, fewer actively inflamed and damaged joints, and better functional class at presentation to clinic were associated with remission.

Conclusion. Remission does occur in PsA and may be prolonged. There are clinical characteristics of patients at their first clinic visit that are associated with future remission. (J Rheumatol 2001;28:1045–8)

Key Indexing Terms:
PSORIATIC ARTHRITIS PROGNOSIS REMISSION

Psoriatic arthritis (PsA) is an inflammatory arthritis associated that may affect up to 1% of the population[1]. We have shown that joint deformity, joint destruction, and disability are frequent among patients with PsA[2]. Others have supported the notion that PsA is not a mild form of arthritis[3,4]. Disease progression has been documented among patients with PsA, and the clinical predictors of disease progression in PsA are 5 or more effusions and a high medication level[5]. We have suggested that PsA is as severe as rheumatoid arthritis (RA), the prototype inflammatory form of arthritis[2]. Others have suggested that PsA was not as severe a disease[6].

In the course of a prospective longterm followup of patients with PsA in the Psoriatic Arthritis Clinic we noted a number of patients who demonstrated no evidence of actively inflamed joints on several occasions during their followup. Some of these patients were withdrawn from all medications. The purpose of this investigation was therefore to determine the frequency of remission in PsA, to describe the characteristics of the remission, and to identify features associated with remission in patients with PsA.

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MATERIALS AND METHODS

PsA clinic. The University of Toronto PsA clinic was established in 1978. Patients are followed prospectively every 6 to 12 months using a standard protocol. Patients are admitted to the clinic if they have an inflammatory arthritis associated with psoriasis, and other rheumatologic conditions such as classical RA, systemic lupus erythematosus, gout, osteoarthritis, and inflammatory bowel disease are ruled out. A complete history, examination, and laboratory evaluations are carried out at each visit. The number of actively inflamed joints is determined according to the American College of Rheumatology (ACR) joint count. Joints that show stress pain, joint line tenderness, and/or effusion are considered actively inflamed. The total number of actively inflamed joints and the number of joints with effusions are recorded in the database. The number of damaged joints is calculated based on the number of joints with reduced range of motion of greater than 20% of the range that cannot be explained by inflammation, joints showing deformity, and loose or ankylosed joints. We have shown that the assessment of both actively inflamed and deformed joints in our clinic is reliable[7]. Radiographs are performed at 24 mo intervals, and joints of the hands and feet are read according to a modification of the Steinbrocker classification. According to this method each joint is graded as either 0 (normal), 1 (soft tissue swelling or osteopenia), 2 (erosion), 3 (erosion and joint space narrowing), or 4 (total joint destruction). This method has been proven reliable in our clinic[8]. All information is entered into a computer database. Only PsA clinic patients with at least 3 clinic visits were included in this study. Patients with isolated spondyloarthropathy for the entire period of followup were excluded.

Definition of clinical remission. Remission was defined as a period of at least 3 consecutive visits with an actively inflamed joint count of 0 (no stress pain, joint line tenderness, or effusion). Since patients are followed at 6–12 mo intervals, this means the minimum time to remission would be 12 months.

Nonremission. The presence of ≥ 1 actively inflamed joints throughout the period of followup.

Statistical analysis. Descriptive statistical analyses were performed; patients in remission were compared to the group with active joints for the entire period of followup (nonremission), on demographic, clinical, laboratory, and treatment variables, at first visit to clinic, and disease features and therapy during followup using t tests and chi-square test.

RESULTS

From 1978 to 1996, 514 patients with PsA have been tracked in our PsA database. Of these, 391 have had at least 3 visits, and did not have isolated spondyloarthropathy. Sixty-nine patients fulfilled our definition of clinical remission. One hundred seventy-eight had persistent inflammatory arthritis, and 144 had no actively inflamed joints on < 3 consecutive visits. The latter group was excluded from further analysis.

The characteristics of the patients who sustained remission are summarized in Table 1. The majority of the patients in the remission group were men, with a mean age and disease duration at time of remission of 47 and 11 years, respectively. The mean duration of remission was 2.6 years (range 1–7.4, median 1.9 yrs). Of the 69 patients who achieved remission for 12 months, 52% went on to experience flare after a mean of 1.8 years (range 0.5–4.8 yrs). Less than 50% of patients who sustained remission did so without developing clinical deformities, and only 24% did so without demonstrating radiological damage. Of the 69 patients who sustained clinical remission, only 6 were able to discontinue medications with no clinical or radiological evidence of damage. Thus true remission occurred in only 8.7% of the patients who entered remission.

We then compared demographic, clinical, and therapeutic features at first presentation to the PsA clinic of patients who sustained clinical remission to those who never achieved clinical inactivity (Table 2). Univariate analyses revealed that male sex, fewer actively inflamed and damaged joints, and better functional class at presentation were associated with remission. The degree of psoriasis as measured by the Psoriatic Area Severity Index score was similar in the 2 groups. The number of patients with elevated erythrocyte sedimentation rate (ESR) was not different between the 2 groups. Patients in the remission group did not use as many disease modifying medications at presentation to clinic as those in the nonremission group.

At followup, defined as the first qualifying visit in the remission group and the last clinic visit in the nonremission group, patients who went into remission still revealed less inflammation and damage and fewer associated features than patients who were persistently active (Table 3). There were no differences in subsequent therapeutic interventions between patients who went on to remission and those who had persistent joint inflammation.

DISCUSSION

The ACR (previously American Rheumatism Association, ARA) has proposed preliminary criteria for remission in RA[9]. These include 5 or more of the following for a minimum of 2 months: (1) duration of morning stiffness not exceeding 15 min; (2) no fatigue; (3) no joint pain by history; (4) no joint tenderness or pain on motion; (5) no soft tissue swelling in joints or tendon sheaths; (6) ESR < 30 mm/h for women, < 20 mm/h for men. Others have suggested that remission be defined as "no arthritis at least at one followup visit"[10]. Wolfe and Hawley determined the frequency of remission in RA using the ACR criteria as well as through a chart review of 458 patients[11]. The 2 methods identified 18.1% and 18.9% of the patients, respectively, to have at least one episode of remission of at least 2 months' duration. The median duration of remission was 12 months according to ACR criteria and 10 months according to chart review.

Harrison, *et al*[12] defined remission as "no arthritis on examination and no treatment with second-line drugs or steroids within the previous 3 months," and studied its frequency in 358 patients with early inflammatory polyarthritis referred to the Norfolk Arthritis Register. They found that 25% of the patients sustained remission at 2 years based on this definition, of whom 32 had been in remission at 1 year. Thus 9% of the patients had remission for at least 1 year.

There are no criteria for remission in PsA. We defined remission in our study as lack of evidence of active inflammation documented on clinical examination for a period of at least 12 months. We did not include the ESR in our definition because in PsA the ESR may reflect skin inflammation rather than joint inflammation, and the ESR is elevated

Table 1. Characteristics of remission in 69 patients.

Male (%)	41 (71)
Mean age, yrs (SD)	47.6 (13.4)
Mean disease duration, yrs (SD)	11.2 (7.3)
Mean duration of remission, yrs (SD)	2.6 (1.7)
Absence of clinical damage (%)	33 (48)
Absence of radiological damage (%)	23 (34)
Drug-free (%)	20 (29)
True remission (no actively inflamed or damaged joints taking no medications) (%)	6 (8.7)
Subsequent flare (%) (SD)	36 (52)
Mean time to subsequent flare, yrs (SD)	1.8 (1.3)

Table 2. Comparison of remission and nonremission groups at presentation to clinic. Values in parentheses are percentages.

Characteristic	Remission, n = 69	Nonremission, n = 178	p
Mean age, yrs	42.6	42.0	NS
Males	49 (71)	90 (51)	< 0.01
Mean age at onset, yrs			
Psoriasis	29.2	28.6	NS
Arthritis	35.8	34.5	NS
Mean disease duration, yrs			
Psoriasis	12.7	13.4	NS
Arthritis	6.1	7.5	NS
Family history of			
Psoriasis	32 (46)	66 (37)	NS
Arthritis	31 (45)	49 (28)	< 0.01
Psoriatic arthritis	9 (13)	14 (8)	NS
Arthritis pattern			
Peripheral arthritis	45 (73)	111 (64)	NS
Spondyloarthropathy	17 (27)	63 (36)	
Activity (mean joint count)			
Active joints	6.0	12.8	< 0.01
Effusions	2.1	3.3	< 0.01
Severity (mean joint count)			
Clinical damage	2.8	3.3	< 0.05
Radiological damage	3.2	5.8	< 0.01
Associated features			
Grade 1 functional class	27 (39)	39 (22)	< 0.01
Neck pain	15 (22)	65 (37)	< 0.02
Neck stiffness	16 (23)	72 (41)	< 0.05
AM stiffness	46 (70)	137 (82)	< 0.01
Fatigue	18 (26)	74 (42)	< 0.02
Mean PASI score	8.3	5.4	NS
ESR			
Females > 20 mm/h	13 (72)	64 (83)	NS
Males > 13 mm/h	16 (36)	45 (51)	NS
Treatment			
No medications	40 (58)	76 (43)	< 0.03
Medication level 1–5	29 (42)	102 (57)	
Intraarticular corticosteroids	15 (22)	73 (41)	< 0.01

PASI: Psoriatic Area Severity Index.

Table 3. Comparison of remission and nonremission groups during followup. Values in parentheses are percentages.

Characteristic	Remission, n = 69	Nonremission, n = 178	p
Severity (mean joint count)			
Clinical damage	5.6	9.9	< 0.01
Radiological damage	6.3	9.9	< 0.02
Associated features			
Grade 1 functional class	46 (67)	32 (18)	< 0.01
Neck pain	16 (23)	50 (28)	NS
Neck stiffness	17 (25)	54 (30)	NS
AM stiffness	15 (22)	114 (66)	< 0.01
Fatigue	6 (9)	64 (36)	< 0.01
Mean PASI score	8.0	6.9	NS
Treatment			
No medications	20 (29)	41 (23)	NS
Medication level 1–5	49 (71)	137 (77)	
Intraarticular corticosteroids	33 (48)	134 (75)	< 0.01

PASI: Psoriatic Arthritis Severity Index.

in only 50% of the patients[2]. Indeed, ESR did not distinguish patients with and without remission. We did not collect information on physician or patient global assessment at each visit, so were not able to include those in our definition. Although we do collect information with the Health Assessment Questionnaire and SF-36 in our clinic, we only began doing so in a systematic fashion in 1993 and were not able to include these measures either in our definition or as variables associated with remission.

Based on our definition, our study of 514 patients revealed that remission occurred in 17.6% of patients with PsA. However, "true remission" (no clinical activity, no evidence of damage, no medications) was found in only 6 (8.7%) of the patients who sustained a remission. Moreover, 52% of patients who had a period of remission subsequently had a flare of their joint disease. The number of patients was too small for us to carry out further analyses to define differences between patients who sustained a prolonged remission and those who went on to flare.

The frequency of remission in PsA was similar to that reported for RA[11]. Wolfe and Hawley[11] documented remission by both the ACR definition and chart review to be 18%, compared to our 17.6% in a population of patients with PsA followed prospectively. The median length of remission seen among the patients with RA was 10–12 months. Among our PsA patients the median length of remission was 1.9 years, but by definition they had to be clinically inactive for at least 12 months.

Thus our PsA clinic provides evidence for a spectrum of disease in PsA. We have documented that about 20% of the patients have a severe, progressive, and destructive form of arthritis, which may be much more severe than RA. We have documented that progression of clinical damage in our patients with PsA is related to the degree of clinical activity at presentation to clinic[5]. On the other hand, we now present data showing that patients who go on to periods of prolonged disease inactivity are more likely to be male and to have less severe disease at presentation.

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