PREVALENCE OF SACROILIITIS IN PSORIATIC PATIENTS

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ABSTRACT

Purpose: 1) To assess the prevalence of sacroiliitis in patients with psoriatic skin disease or psoriatic arthritis 2) To study whether this finding precedes the symptom or radiographic change of the peripheral joint which is the hallmark of psoriatic arthritis.

Materials and Methods: Retrospective study was performed in patients diagnosed as psoriasis or psoriatic arthritis between January 1993 and May 1999 who had anteroposterior (AP) film of lumbar spine and/or pelvis and lateral film of lumbar spine available, to evaluate psoriatic bone change. The findings of the sacroiliac (SI) joint were classified into grades 0-4.

Results: Sixty one patients (21 females [mean age 45.3 years] and 32 males [mean age 48.5 years]) were included. Male: female ratio was 1.5:1. Eight patients were excluded from this study due to lack of AP film of pelvis. Prevalence of radiographic sacroiliitis (grade 2 or higher) was 23 of 53 patients (43.4%); among these, 20 had sacroiliitis alone without spinal bone change. The incidence of bilateral symmetrical and asymmetrical sacroiliitis was 46.2% and 53.8%, respectively. In patients with SI abnormalities; such abnormalities preceded the symptom or radiographic change of the peripheral joint in all cases.

Conclusions: The prevalence of radiographic sacroiliitis in this study is 43.4% (23 of 53). Among these 23 patients, SI abnormalities preceded the symptom or radiographic change of the peripheral joint (which is the hallmark of psoriatic arthritis) in all cases. Early detection and diagnosis of psoriatic skeletal involvement may be from the SI joint or the symptom of back pain, which means proper treatment and may help to decrease subsequent complication.

INDEX TERM : Sacroiliac joint ; sacroiliitis Psoriasis

INTRODUCTION

Psoriatic arthritis produces distinctive abnormalities of synovial and cartilaginous joint as well as sites of tendon and ligament attachment to the bone.[1,2] Although the classic presentation is that of a polyarticular disorder with predilection for the distal interphalangeal joint, a variety

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of additional clinical patterns may be observed, including a symmetric seronegative polyarthritis identical in distribution to rheumatoid arthritis, arthritis multilan, oligoarthritis or monoarthritis, and sacroiliitis and spondylitis[1]

Prevalence of sacroiliitis on radiographic examination is approximately 10-25% in patients with moderate or severe psoriatic skin disease, and 14-84% (according to many authors) in patients with psoriatic arthritis. Bilateral symmetric abnormalities predominate.[1] Recent study in 1996 [3] stated that the prevalence of sacroiliitis in patients with psoriatic arthritis was 77%. A study in Thai population[4] reported that among the 28 admitted psoriatic patients in a given period, 21% had low back pain and 57% were found to have sacroiliitis by physical examination.

From the wide range of data mentioned above, the aims of our study were [1] assessing the prevalence of sacroiliitis in patients with psoriatic skin disease or psoriatic arthritis, and [2] studying whether this finding precedes the symptom or radiographic change of the peripheral joint which is the hallmark of psoriatic arthritis.

SUBJECTS AND METHODS:

Retrospective study was performed in subjects who were diagnosed as psoriatic skin disease (psoriasis) and/or psoriatic arthritis from January 1993 to May 1999. The radiographs included an anteroposterior (AP) view of lumbar spine and/or pelvis and lateral view of lumbar spine. The patient-film distance was 6 feet (72 inches). The radiographs were reviewed by one radiology resident and one radiologist who came to consensus agreement. The chart records were reviewed as well. The severity of sacroiliitis was graded according to the New York criteria [5] as (0) normal; (1) suspicious changes; (2) minimal abnormality - small localized areas with erosion or sclerosis, without alteration in joint space width; (3) unequivocal abnormalities - moderate or advanced sacroiliitis with one or more of : erosion, evidence of sclerosis, widening of joint space, narrowing of joint space or partial ankylosis; (4) severe abnormalities - total ankylosis. In cases of asymmetric involvement, we counted the more advanced grade of the two sides.

RESULTS

Sixty-one patients were collected. Every patient had radiographs. Eight patients were excluded from this study due to lack of AP film of pelvis. For the remaining 53 cases, there was a slight male predominance (M:F = 1.5:1[32:21]). The mean age of the female is 45.3 years (range 26-73) and of male is 48.5 years (range 12-83). The duration of the disease averages 8 years (range 4 weeks- 40 years). The radiographs were available to evaluate sacroiliitis in all 53 cases. (Table 1). All 53 patients were sent for radiographs due to back pain.

Forty-four of 53 patients (83.0%) had psoriatic bone change in the SI joint and/ or spine. Other 3 of 53 (5.7%) had degenerative disease of the spine, and the other 6 of 53 (11.3%) had back pain from other causes i.e., renal stone, avascular necrosis of bilateral hip joints, and metastatic prostatic carcinoma. We will report the spinal bone change in psoriatic patients in another article separately.

Prevalence of sacroiliitis (grade 2 or higher) was 23 in 53 patients (43.4%); and 69.6% of these had grade 3 disease (Fig. 1 and 2). The incidence of bilateral symmetrical and asymmetrical sacroiliitis was 46.2% and 53.8%, respectively. Among these 23 patients, 20 had sacroiliitis alone, which could be the cause of low back pain, without radiographic spinal bone change. Duration of the disease did not correlate to the severity (grading) of sacroiliitis. Three patients had SI,

spinal and hand abnormalities, whose pelvic films were taken before the hands were filmed. Fifty patients did not have film of the peripheral joint and did not have record of peripheral joint symptom. Therefore, in patients with SI abnormalities; such abnormalities preceded the symptom or radiographic change of the peripheral joint in all cases.

Table 1. The distribution of radiographic grading of sacroiliitis in 53 patients*

SI joint abnormality			Number of patients (%)
Normal			29 (54.7)
Unilateral	Grade 2		6 (11.3)
	Grade 3		5 (9.4)
Bilateral	Symmetry	Grade 1	1 (1.9)
		Grade 2	1 (1.9)
		Grade 3	4 (7.5)
	Asymmetry	Grade 3	7 (13.2)

* No grade 4 was classified in this study

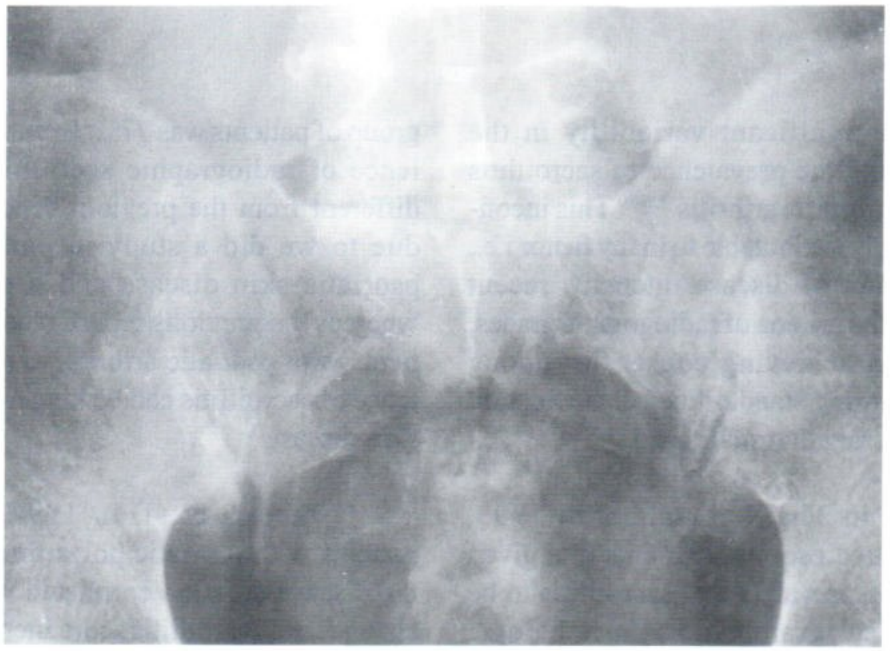

Fig. 1 AP view of pelvis reveals bilateral grade 2 changes : localized areas of erosion and sclerosis without alteration in joint space width

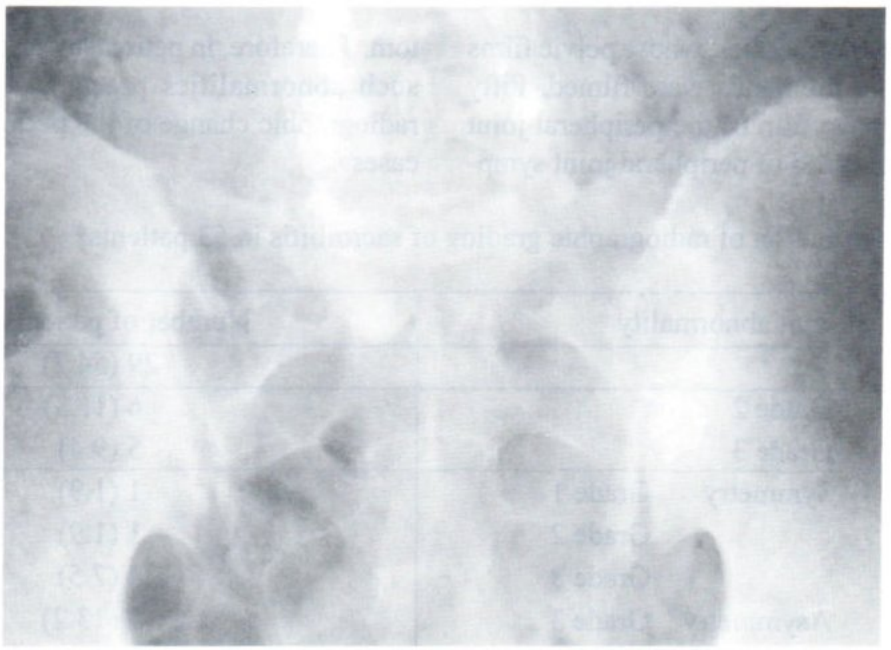

Fig. 2 AP view of pelvis reveals a definite abnormality (grade 3) of bilateral SI joints : advanced sacroiliitis with evidence of erosion & sclerosis

DISCUSSION

There is significant variability in the literature regarding the prevalence of sacroiliitis in patients with psoriatic arthritis.[3,6-10] This inconsistency is probably attributable to many factor i.e., the wide spectrum of disease intensity, recent modifications in the criteria of radiographic grades, and difficulty in achieving consensus among radiologists regarding standardized classification pattern of the sacral abnormalities.

A study in Thai population[4] in 1993, studied 28 admitted psoriatic patients in a given period, reported a prevalence of sacroiliitis to be 57.0% by physical examination. In radiologic literature, the prevalence of radiographic sacroiliitis in moderate to severe psoriatic skin disease was lower, 10-25%, compared to 14-84% in psoriatic arthritis.[1] Recently in 1996,[3] 202 patients with psoriatic arthritis were studied, and reported that the prevalence of sacroiliitis in this group of patients was 77%. In our study, the prevalence of radiographic sacroiliitis was 43.4%, different from the previous report. This may be due to we did a study in patients with both psoriatic skin disease and psoriatic arthritis, whereas the previous report[3] studied only in patients with psoriatic arthritis in whom the prevalence of sacroiliitis can be higher than in psoriatic skin disease.[1]

Taccari et al, in 1996,[7] studied 140 patients with psoriatic polyarthritis reported that the disease duration correlated with radiological change, and sacroiliitis score increased in patients with the longest disease duration. In addition, stage of sacroiliitis correlated with severity of peripheral joint changes and in all patients. In our study, the disease duration did not correlate with severity of radiographic sacroiliitis. And when the patients had SI abnormalities, such abnormalities

preceded the symptom or radiographic change of peripheral joint in all cases.

Bilateral symmetrical SI joint abnormalities were reported to be predominate.[1] In our study, the incidence of symmetrical and asymmetrical sacroiliitis was 46.2% and 53.8%, respectively. It seems that asymmetrical involvement was slightly predominates.

Limitations of this study are due mainly to the its retrospective type. The duration of the disease did not correlate with severity (grading) of sacroiliitis in this study. One reason could be inadequate data recorded; only 23 of 53 patients had record of duration of the disease. Second limitation is the rather small number of subjects.

In conclusion, the prevalence of sacroiliitis in psoriatic patients is 43.4% (23 of 53 patients studied). Among these 23 patients, SI abnormalities preceded the symptom or radiographic change of the peripheral joint which is the hallmark of psoriatic arthritis in all cases. Early detection and diagnosis of psoriatic skeletal involvement may be from the SI joint or the symptom of back pain, which means proper treatment and may help decrease subsequent complication.

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