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Bilateral Sacroiliitis in Patients with Early Rheumatoid Arthritis

Erken Dönem Romatoid Artritli Hastada Bilateral Sakroiliit

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Introduction

Rheumatoid arthritis (RA) is a chronic, systemic, and inflammatory disease with unknown etiology, involving peripheral synovial joints in addition to its effect on other tissues and organs (1). Although all peripheral joints may be involved in the disease, the metacarpo-phalangeal (MCF) joints, proximal interphalangeal (PIF) joints, wrists, and metatarsophalangeal (MTF) joints are the most frequently involved. In the axial skeleton, C1-C2 involvement is predominant in general, whereas sacroiliac joint involvement (SIJ) is rare (2). In this article, we present a differential diagnosis of bilateral sacroiliitis observed in a patient followed up and treated in our outpatient clinic for 2 years with a diagnosis of early RA.

The Case

The patient was informed about the case report before enrollment and gave written informed consent.

A 38-year-old female patient applied to our outpatient clinic with a complaint of pain, edema, morning stiffness lasting 1-2 hours in both wrists and hand joints, and pain in both elbows and ankles. The history of the patient revealed that analgesics resulted in no satisfactory relief of her complaints. The complaints of the patient had begun in her hand joints with mild pain and stiffness 6 months ago, which were more evident in the morning, and thereafter her complaints worsened. A medical and family history of the patient did not reveal any related problem.

Vital signs of the patient were stable, and systemic examination results were normal. The examination of the musculoskeletal system revealed swelling and increased temperature and sensitivity to pressure in the bilateral wrists, in all MCF, and in 2 to 5 PIF joints. In addition, only sensitivity to pressure was detected in the bilateral elbows and MTF joints.

Laboratory analysis of the patient resulted in C-reactive protein (CRP)=6 mg/L (N: 0-0.5 mg/L); erythrocyte sedimentation rate (ESR)=52 mm/h; rheumatoid factor (RF): 60 IU/mL (N: 0-14 IU/mL); positive anti-cyclic citrulline peptide (anti-CCP); and negative anti-nuclear antibody (ANA), HLA-B27, brucella agglutination, and HBsAg. Hemogram, fasting blood glucose, hepatic and renal function tests, ferritin, parathyroid hormone (PTH), calcium, phosphate, alkaline phosphatase (ALP), and complete urinalysis were normal, and urine and throat cultures were negative. Bidirectional hand-wrist direct radiographies of the patient revealed edema in the soft tissues. The patient was diagnosed with RA according to 1987 ACR criteria (2).

The patient was called for routine checks after prescribing methotrexate tablets (15 mg/week) + sulfasalazine tablets (2 g/day) + prednisolone (8 mg/day) + lansoprozole and calcium/vitamin D effervescent tablets. The evaluation of the patient 2 years after our first examination revealed that she had morning stiffness less than 5 minutes in the affected joints and that she had no articular pain, sensitivity, or swelling. However, her right wrist had a slight hypertrophic appearance and an extension

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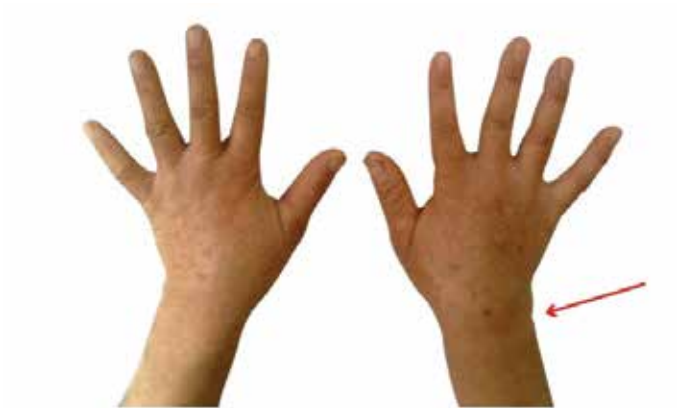

Figure 1. Minimal hypertrophic appearance in right wrist

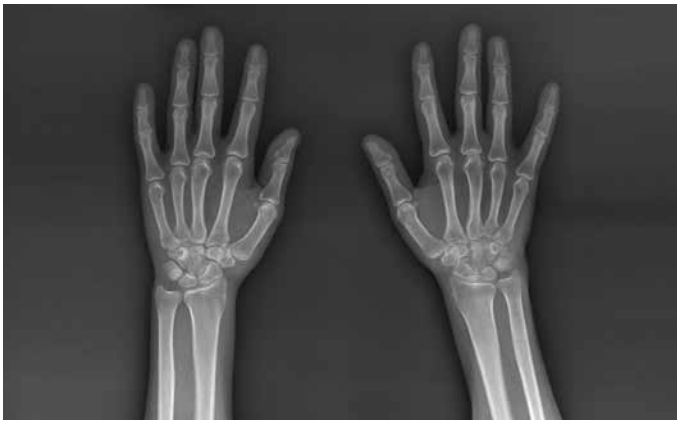

Figure 2. Hand radiographies showing periarticular osteopenia in bilateral MCP and PIP joints

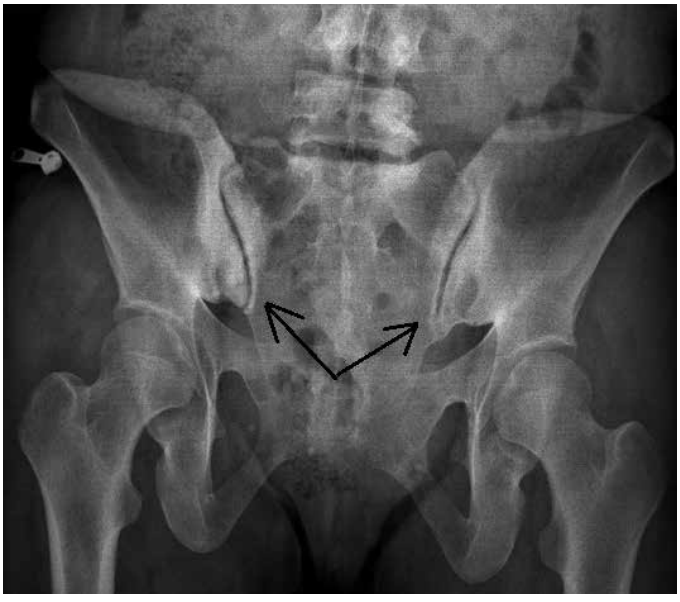

Figure 3. Anteroposterior SIJ radiography displays bilateral grade 2 sacroiliitis; diffuse sclerosis in osteal surfaces viewing the bilateral sacroiliac joint and constriction in articular gaps in the inferior SIJ on the left

loss of 5 degrees (Figure 1). The patient, with normal CRP and ESR values, did not describe any fatigue. Periarticular osteoporosis was noticed in the bilateral MCP and PIP joints on the hand radiographies (Figure 2).

We considered that the patient had RA in remission. She had a complaint of low back pain and stiffness, which had a mild onset approximately 1 year ago, progressed recently, and was felt more evidently in the morning. The examination of the patient to define the etiology of the waist pain revealed that her posture and gait were normal and that cervical and lumbar vertebral movements were free in all directions. Laseque and FABER tests were bilateral negative, and the examination of both hips and knees was normal. Modified Schober was measured to be 23 cm, and occiput to wall and chin to chest distances were found to be 0 cm. Chest expansion was 6 cm, Mennel and Gaenslen test was bilateral positive, and hand-ground distance was 10 cm. The patient had no enthesopathy, aft, or dermal lesion, and her family history had no spondyloarthropathy (SpA).

Bidirectional cervical, thoracal, and lumbar radiographies of the patient revealed no pathological finding, except minimal degenerative changes in the cervical and lumbar region. Coxafemoral articular radiography was normal. Diffuse sclerosis on bilateral SIJ surfaces and constriction in articular gaps at the inferior SIJ on the left were observed on an antero-posterior SIJ radiography (Figure 3). Diffuse sclerosis consistent with grade 2 sacroiliitis was observed in the bilateral SIJ on SIJ T2 oil-suppressed magnetic resonance imaging (MRI) sequences (Figure 4).

A differential diagnosis was made for the sacroiliitis existing in our patient. No etiological factor that may cause sacroiliitis other than RA was found. The sacroiliitis in our case was considered to be an atypical joint involvement, developing due to RA. In addition to the existing treatment of the patient, a treatment protocol was added, consisting of indomethacin 25 mg 3x1, a hot pack for the waist (20 minutes twice daily for 14 days), stretching, and isometric exercise programs. The patient experienced relief in her complaints of waist pain and stiffness after the second day and had called for routine checks. Quarterly evaluation of the patient did not reveal any complaint and physical examination finding.

Discussion

We diagnosed the patient as having early RA because of early onset of existing findings and complaints. The phase involving the first 3 years following the onset of RA is defined as early RA. It is known that failure in early diagnosis and treatment leads to progression of the disease and permanent articular damage (3). In our case, because of the early diagnosis and treatment, no peripheral joint damage or deformity (ulnar deviation, goose neck, button loop, peak-trough deformity, and subluxation) occurred at the end of 2 years.

Rheumatoid arthritis is a chronic and systemic inflammatory disease that affects other tissues and organs in addition to peripheral synovial joints. The probability of onset of RA between the ages of 35 and 50 is 80%, and the frequency is one-third higher in females compared to males (1). RA can involve all joints but primarily involves the wrist, MCF, PIF, and MTF joints. In the vertebrae, the C1-C2 joint is the one with the highest

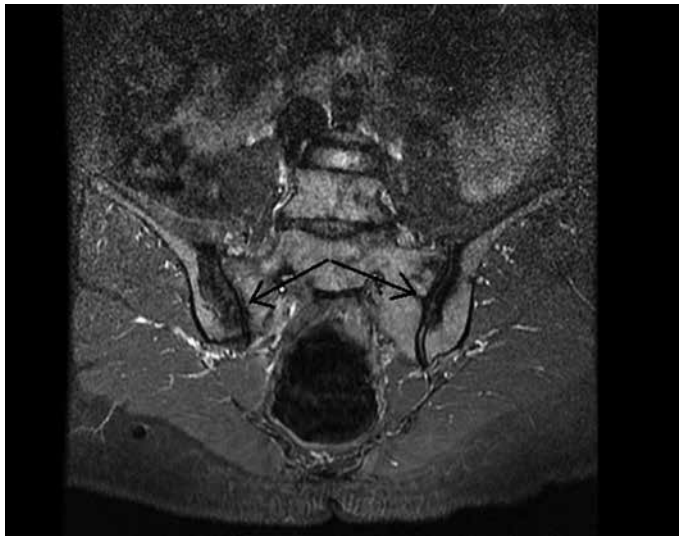

Figure 4. Magnetic resonance imaging displays diffuse sclerosis consistent with grade 2 sacroiliitis in bilateral sacroiliac junctions in T2 fat-suppressed sequences

involvement (4). SIJ involvement is rare (3). In our case, the existence of polyarthritis, where peripheral joint involvement dominates clinically; the age and gender of the patient; and RF and anti-CCP positivity support our diagnosis.

Sacroiliitis is the most important sign of SpAs. In the differential diagnosis of sacroiliitis, seronegative SpAs (ankylosing spondylitis, psoriatic arthritis, Reiter syndrome, Behçet's disease, and inflammatory intestinal disease), pyogenic infection of the sacroiliac joint, familial Mediterranean fever (FMF), and metabolic diseases (gout, pseudogout, and hyperparathyroidism) must be considered primarily (5). In our case, absence of family history; absence of dermal, mucosal, and ophthalmic lesions; RF-positive and HLA-BR27-negative results; and absence of vertebral and hip involvement moved us away from an SpA diagnosis. Peripheral joint involvement in SpAs is mainly in an asymmetrical oligoarticular style, particularly in the lower extremities. Absence of oral aft, genital ulceration, or any ophthalmologic finding recurring at least 3 times annually eliminated Behçet arthritis (6); absence of urethritis or conjunctivitis eliminated Reiter syndrome (7). Absence of clinical and systemic examination findings of FMF, which is a hereditary, polysystemic disease characterized by recurrent and self-limiting fever and thoracic, abdominal, and articular pain, eliminated an FMF diagnosis (8). Because the levels of PTH, calcium, phosphate, and ALP were normal, we moved away from the diagnosis of hyperparathyroidism. The fact that cultures obtained from the patient were brucella-negative eliminated brucella arthritis (9). The articular involvement, being in the form of symmetrical polyarticular involvement in our case, which is more evident in the upper extremities, supports our RA diagnosis.

Existence of both sacroiliitis and RA in the patient primarily suggests the association of RA with SpAs. In a series of cases consisting of 10 cases where Alexander et al. (10) reported the association of AS and RA, the development of RA in association with the underlying AS was detected in most of the cases. We believe in light of the clinical and laboratory findings that are contrary to the association of AS and RA, sacroiliitis is an atypical joint involvement of RA. Bilateral sacroiliitis cases accompanying late RA have been reported in the literature, although rarely (11). The accompanied bilateral sacroiliitis found in our case to early-grade RA makes our case more interesting.

Conclusion

In conclusion, despite its rare presentation, sacroiliac joint involvement should be kept in mind in patients diagnosed with RA.

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