

Tuberculous sacroiliitis: A cause of bone marrow edema in magnetic resonance imaging

Servet Akar¹, İsmail Safa Satoğlu², Berna Dirim Mete³, Özgür Tosun³

A 43-year-old female presented with progressive left buttock pain for 6 months. Her pain was worse at night and was not relieved by activity. She had morning stiffness for 5–10 min. She had no constitutional symptoms, history of peripheral arthritis, dactylitis, enthesitis, psoriasis, and inflammatory bowel disease. She denied having a past or family history of tuberculosis (Tb). She was administered with sulfasalazine and non-steroidal anti-inflammatory drugs (NSAIDs), but her condition did not improve. Laboratory examination revealed an ESR of 21 mm/h and a CRP of 1.43 mg/dL (normal range, 0.0–0.8 mg/dL). Pelvic antero-posterior radiograph showed minimal sclerosis with joint space changes of the left sacroiliac joint (SIJ). Paracoronar T1-weighted (Figure 1a) and short tau inversion recovery (STIR) (Figure 1b) magnetic resonance (MR) images revealed joint space enlargement with increased joint fluid in the left SIJ as well as heterogeneous bone marrow edema and hyperintense lesion spreading to periarticular soft tissues. Gadolinium-enhanced axial fat suppressed T1-weighted MR image of SIJs (Figure 1c) showed a smooth thin-rimmed enhancement area extending anteriorly from the left SIJ to the iliacus muscle and extending laterally to gluteal muscles that was compatible with cold abscess. Extensive destruction of both iliac and sacral bones of the left SIJ was also visualized in the axial computed tomography (CT) images (Figure 1d) obtained during CT guided biopsy procedure. Culture of the biopsy material yielded *Mycobacterium tuberculosis*, and the patient was administered with a four-drug anti-tuberculous therapy. Musculoskeletal involvement is uncommon and accounts for 1%–3% of all Tb (1) cases, and SIJ Tb was reported in approximately 10% (2) of

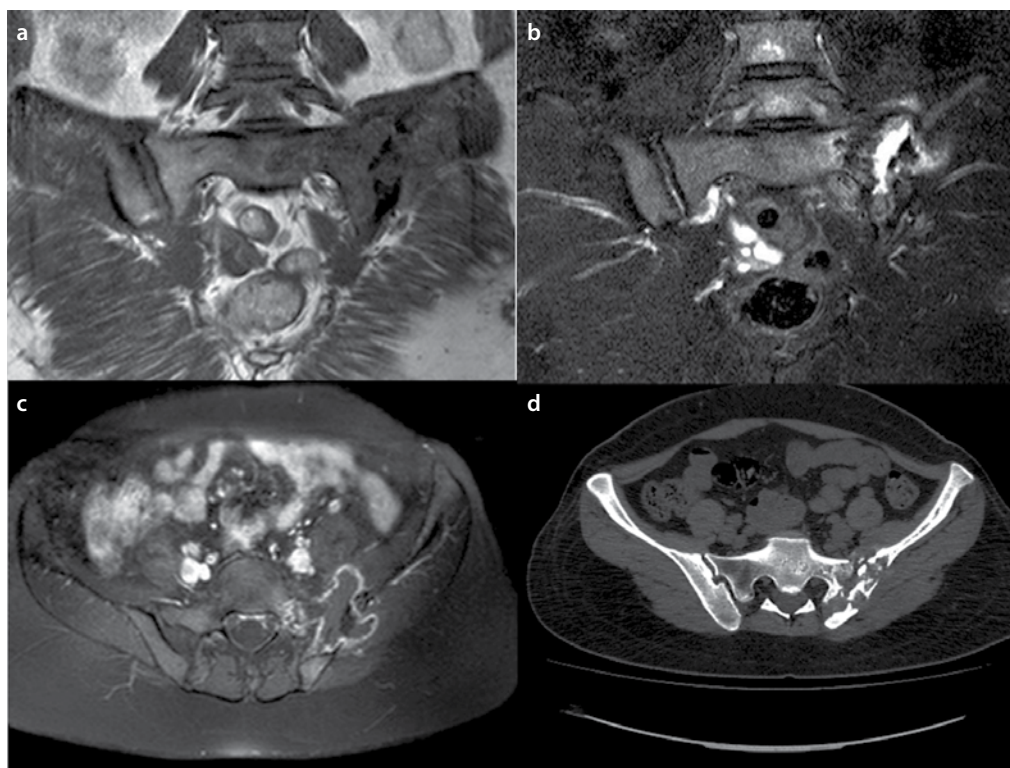


Figure 1. a-d. Para-coronal T1-weighted (a) and short tau inversion recovery (STIR) (b) magnetic resonance (MR) images of sacroiliac joint (SIJ) showed increased synovial fluid in the left SIJ and a hyperintense lesion spreading to periarticular soft tissues. Gadolinium-enhanced axial fat-suppressed T1-weighted MR image of SIJs (c) showed a rim enhancement area extending from the left SIJ to periarticular muscles compatible with cold abscess (d)



1 Department of Internal Medicine, Division of Rheumatology, İzmir Katip Çelebi University School of Medicine, İzmir, Turkey

2 Department of Orthopedics, İzmir Katip Çelebi University School of Medicine, İzmir, Turkey

3 Department of Radiodiagnosics, İzmir Katip Çelebi University School of Medicine, İzmir, Turkey

Address for Correspondence:
Servet Akar, İzmir Katip Çelebi Üniversitesi Tıp Fakültesi, İç Hastalıklar Anabilim Dalı, Romatoloji Bölümü, 35965 Karabağlar/İzmir, Türkiye

E-mail: servet.akar@gmail.com

Submitted: 31.03.2015

Accepted: 24.07.2015

Available Online Date: 29.01.2016

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the musculoskeletal Tb cases. Early diagnosis of SIJ Tb is extremely difficult mainly because of the non-specific nature of the symptoms. Although the culture is the gold standard for the diagnosis, CT and MR may be complementary for the diagnosis. The severe joint destruction and a cold abscess with a smooth thin-rimmed enhancement may be suggestive of Tb (3).

Informed Consent: N/A.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - S.A.; Design - S.A., I.S.S., B.D.M., O.T.; Supervision - S.A., I.S.S., B.D.M., O.T.; Materials - S.A., I.S.S., B.D.M., O.T.; Data Collection and/or Processing - S.A., I.S.S., B.D.M., O.T.; Analysis and/or Interpretation - S.A., I.S.S., B.D.M., O.T.; Literature Review - S.A.; Writer - S.A., I.S.S., B.D.M., O.T.; Critical Review - I.S.S., B.D.M., O.T.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The author declared that this study has received no financial support.

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