Chronic Recurrent Multifocal Osteomyelitis

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A 32-year-old Caucasian woman was referred to our medical center to "rule out ankylosing spondylitis." She had a history of psoriasis and lower back pain for the past 15 years. Her symptoms were partially controlled with nonsteroidal antiinflammatory drugs (NSAID) and calcitonin. Laboratory studies revealed negative HLA-B27 antigen and normal acute-phase reactants. Prior sacral biopsies were consistent with osteomyelitis, although all cultures had been negative. She had previously been treated with prolonged courses of antibiotics without effect. We felt her clinical presentation was consistent with a diagnosis of chronic recurrent multifocal osteomyelitis (CRMO), given her characteristic computerized tomography (CT) findings (Figure 1), bone histopathology, and negative biopsy cultures. She started taking risedronate 35 mg per week, with resolution of symptoms, and followup imaging 2 years later showed no disease progression.

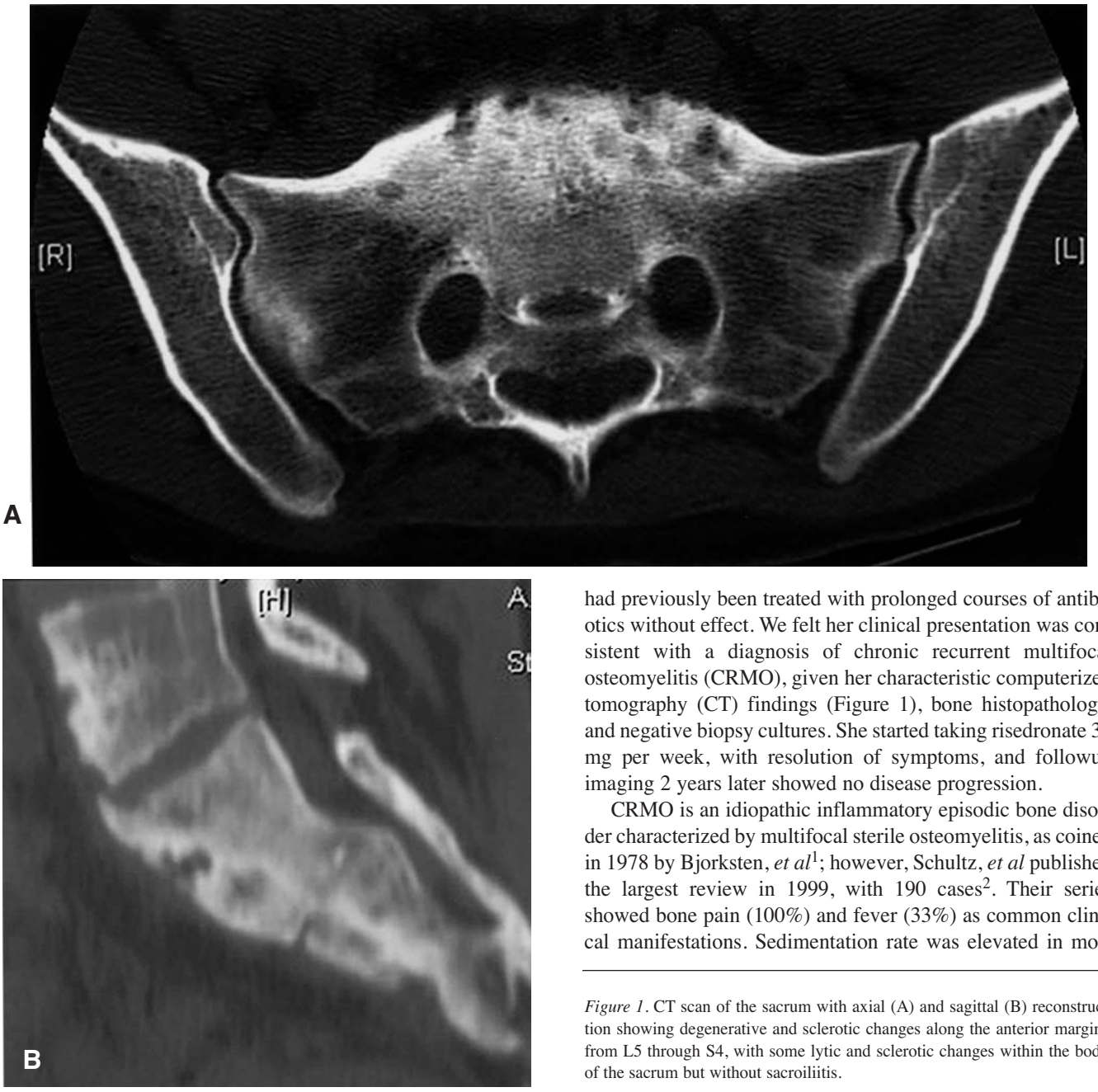

Figure 1. CT scan of the sacrum with axial (A) and sagittal (B) reconstruction showing degenerative and sclerotic changes along the anterior margins from L5 through S4, with some lytic and sclerotic changes within the body of the sacrum but without sacroiliitis.

CRMO is an idiopathic inflammatory episodic bone disorder characterized by multifocal sterile osteomyelitis, as coined in 1978 by Bjorksten, *et al*[1]; however, Schultz, *et al* published the largest review in 1999, with 190 cases[2]. Their series showed bone pain (100%) and fever (33%) as common clinical manifestations. Sedimentation rate was elevated in most

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patients but rheumatoid factor, antinuclear antibody, and HLA-B27 were usually negative. They observed a slight female predominance (1.7:1), with children or adolescents most commonly affected. Bone involvement was usually multifocal (93%), with the metaphysis of long bones, vertebrae, pelvis, and clavicle most often affected. Imaging with CT, magnetic resonance imaging, and bone scintigraphy is usually consistent with osteomyelitis without a sinus tract or abscess[3]. Skin manifestations are noted in about 30%, with palmoplantar pustulosis and psoriasis most common. Patients typically do not respond to antibiotics but NSAID, corticosteroids, bisphosphonates, colchicine, sulfasalazine, and methotrexate have been used with varying success. Some patients with CRMO progress into an undifferentiated spondyloarthropathy[4].

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