Psoriatic Arthritis

A 28-year-old man presented to his primary care physician for hand and foot joint pain. Radiographs of the hands (Figures A, B) and feet (Figures C, D) were obtained. They demonstrate diffuse soft-tissue swelling of the digit (A) as well as marginal joint erosions (red arrow in A) and periostitis of the proximal and middle phalanges (white arrows in A). There is increased periosteal and endosteal bone formation in the middle and distal phalanges (red arrows in B). Other digits demonstrate late stage marginal erosions resulting in pencil in cup deformity (red arrow in C). There was a retrocalcaneal erosion (red arrow in D) with insertional Achilles enthesitis (white arrow in D).

Psoriatic arthritis is a seronegative spondyloarthropathy that manifests in up to 30% of patients with psoriasis. Occasionally, the only clue to the diagnosis of psoriasis may be the imaging features, as the characteristic skin rash does not have to be present.

Differentiating spondyloarthropathies can be challenging but knowledge of key differences can lead radiologists to the correct diagnosis. The radiographic features of psoriatic arthritis include dactylitis (“sausage digit”); marginal bone erosions (“pencil in cup”); bone proliferation including “ivory phalynx;” normal bone mineralization; enthesitis; and asymmetric bilateral distribution most commonly involving the hands, feet, and sacroiliac joints. In contrast to rheumatoid arthritis, psoriatic arthritis should have normal mineralization, bone proliferation, and more prominent findings in the interphalangeal joints.

References