

## Lumbar Spine Chondrocalcinosis

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Crystal arthropathy of the lumbar facet joint is a rare but benign differential diagnosis of spondylodiscitis.

A 70-year-old woman with a recent sigmoid diverticulitis was examined for a suspicion of infectious spondylodiscitis. She had inflammatory low back pain for a month with low-grade fever and C-reactive protein (CRP) up to 3 mg/dl. Magnetic resonance imaging of the spine suggested a septic localization with T2 short-tau inversion recovery hypersignal on the left lumbar facet joints L3–L4 and L4–L5 (Figure 1).

A bone biopsy of lumbar facet joints was performed with computed tomography guidance and showed no micro-organism on bacteriological direct examination, and culture

was sterile at 48 h. CRP was 1.6 mg/dl. Pathological examination revealed that bone, cartilage, and synovial tissues contained basophilic material including numerous rhomboidal crystals birefringent in polarized light (calcium pyrophosphate crystal deposits; Figure 2). Symptoms disappeared with nonsteroidal antiinflammatory drugs.

Calcium pyrophosphate crystal deposition in the spine is well known in 2 cases: crown dens syndrome, which is a classic differential diagnosis of meningitis in older people<sup>1</sup>, and paralyzing sciatica due to a synovial facet joint cyst filled with crystal deposits<sup>2</sup>.

Septic arthritis of lumbar facet joints is rare, but is more

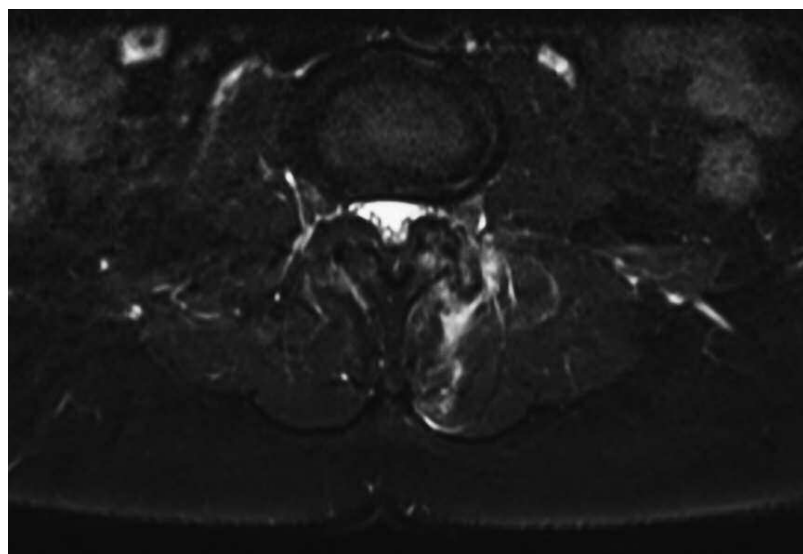


Figure 1. Magnetic resonance imaging on axial T2 short-tau inversion recovery sequences. Edema on L3–L4 left facet joints, suggesting septic arthritis.

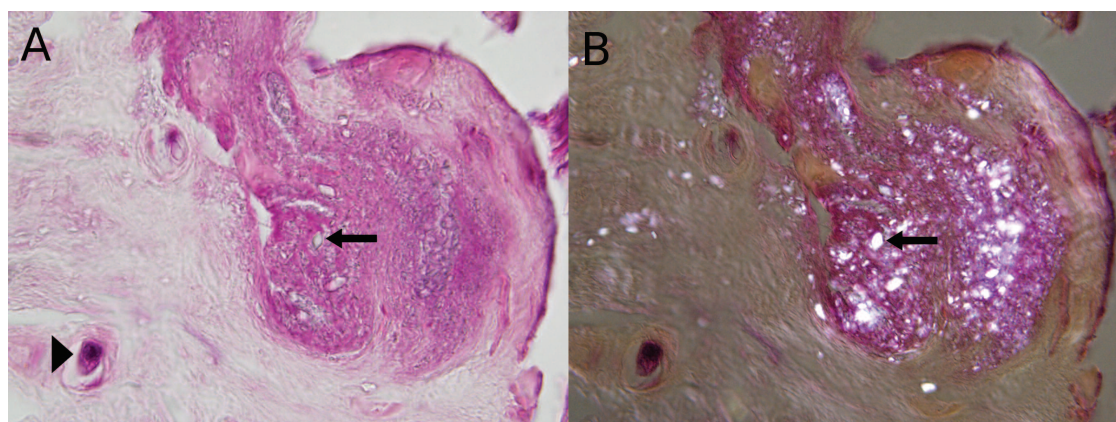


Figure 2. Calcium pyrophosphate (CPP) crystal deposition in bone, cartilage, and synovial tissue. H&E coloration. (A) Without polarized light. Arrow indicates CPP crystal and arrowhead a chondrocyte. (B) With polarized light. Arrow indicates CPP crystal.

frequently described than the microcrystalline etiology. A review counted 34 cases of septic arthritis of facet joints<sup>3</sup>, whereas a single case of crystal lumbago was reported by a Japanese team, with involvement in the L4–L5 facet joints<sup>4</sup>.

Arthritis of lumbar facet joints could be due to crystal lumbago, if no microorganism is found.

#### ACKNOWLEDGMENT

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