Pseudogout and Calcium Pyrophosphate Disease

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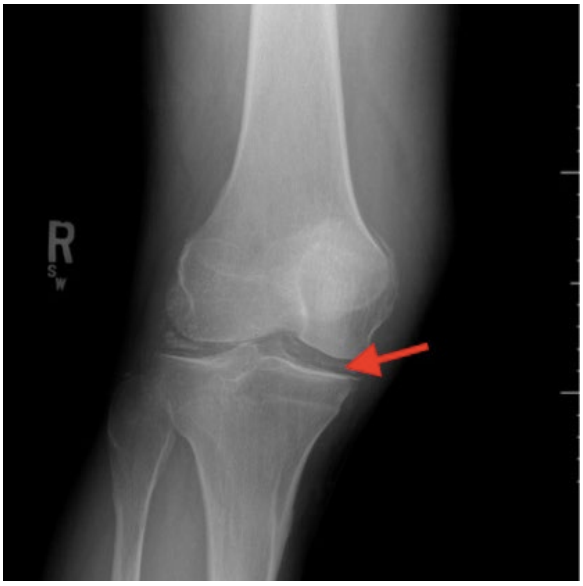

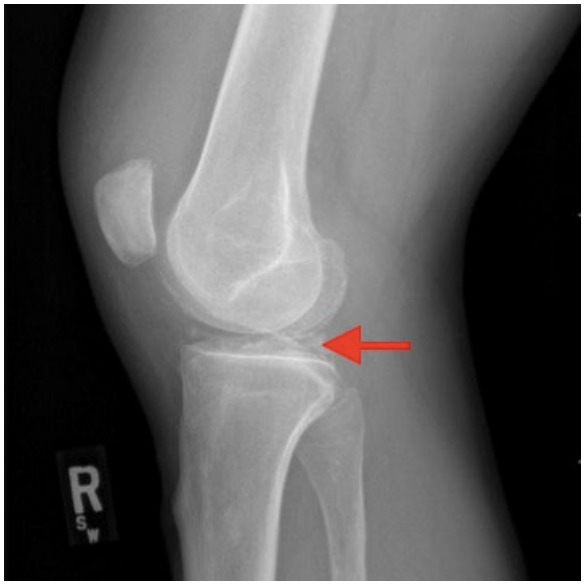

History of present illness: A 53-year-old male presented with worsening right knee pain and swelling over the past 48 hours. He denied recent trauma to the knee, history of IV drug use, and recent illness. He had no history of diabetes, immunodeficiency, chronic steroids, rheumatologic disease, or knee replacement. He described the pain as sharp, non-radiating, and worse with movement. He was unable to walk due to pain.

Significant findings: Radiographs of the knee showed multiple radio-dense lines paralleling the articular surface (see red arrows) consistent with calcium pyrophosphate crystal deposition within the joint often seen in calcium pyrophosphate disease (CPPD) also known as pseudogout.

Discussion: Patients commonly present to the emergency department with non-traumatic joint pain. Arthrocentesis is an important diagnostic tool to evaluate for septic arthritis, gout, or pseudogout. Arthrocentesis can demonstrate crystals or abnormal cell count, gram stain, and culture.[1] In the evaluation of joint pain, plain films are usually obtained to evaluate for fracture, dislocation, effusion, or secondary signs of infection. In this case the classic X-ray supported the diagnosis of CPPD.[2] The patient was found to have positively birefringent rhomboid shaped crystals consistent with pseudogout on arthrocentesis. Gram stain and culture were both negative. The patient was discharged with non-steroidal anti-inflammatory drugs (NSAIDs) and had significant improvement in symptoms upon follow up with primary care physician in three days.

Topics: Pseudogout, calcium pyrophosphate disease, non-traumatic joint pain, orthopedics, positively birefringent rhomboid crystals, arthrocentesis.

References:

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