My Pelvic Bones and My Legs Hurt. I Feel Weak.

An Uncommon Presentation of Chondrocalcinosis

Sonam Sherpa, DO; Abdul Waheed, MD; Muhammad Khan, MD

WellSpan Good Samaritan Family Medicine Residency Program, Lebanon PA

Background

Calcium pyrophosphate crystal deposition disease (CPPD) is a rheumatologic disorder consisting of deposition of calcium pyrophosphate crystals into a joint space, often resulting in warmth, erythema, and edema of the affected joint(s). This is a disease often found in older men with an age-related increase in prevalence.

Case Presentation

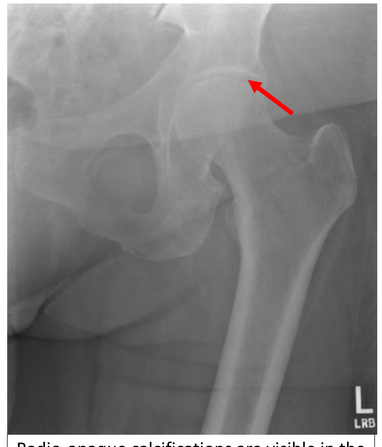
66-year-old woman with a history of bariatric surgery presented to an outpatient family medicine clinic with bilateral leg and pelvic girdle pain. Patient was suffering from debilitating pain and weakness of her bilateral legs with associated calf warmth and tenderness to palpation. A preliminary diagnosis of unspecified myositis was made, and the patient was instructed to hold her home statin therapy and begin prednisone.

Several laboratory studies were ordered. Radiographs of her bilateral hips, knees, and pelvis were obtained which showed results consistent with chondrocalcinosis in her bilateral medial and lateral menisci as well as her left hip.

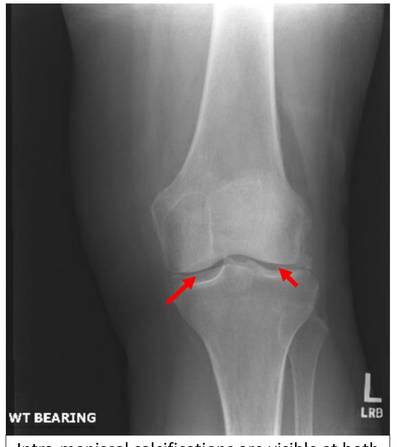
Laboratory Studies

- **Vitamin B12:** 482 (Reference: 180-914 pg/mL)
- **Vitamin D 25 Hydroxy:** 42 (Reference: 30-100 ng/mL)
- **Creatine Kinase:** 57 (Reference: 34-181 IU/L)
- **Erythrocyte Sedimentation Rate:** 21 (Reference: 0-30 mm/h)
- **C-Reactive Protein:** 0.1 (Reference: <=1.0 mg/dL)
- **Antinuclear Antibody:** Negative (Reference: Negative)
- **Lyme Antibody:** Negative (Reference: Negative)

Radiography



Radio-opaque calcifications are visible in the cartilage surrounding the left femoral head



Intra-meniscal calcifications are visible at both the medial and lateral menisci

Treatment

The patient had partial resolution of symptoms with oral prednisone; however, the symptoms returned within two weeks of completion. Rheumatology referral was placed. Several more lab studies including PTH, alkaline phosphatase, and urine calcium to creatinine ratio were ordered. The patient eventually transitioned to colchicine successfully.

Treatment for CPPD depends on the clinical presentation. In this patient's case, since she had more than 3 involved joints it is recommended to trial an oral NSAID, oral colchicine, or oral steroid. In a case with less than 2 involved joints, aspiration and intraarticular glucocorticoid injection would be appropriate first line therapy.

Discussion

It can often be difficult to diagnose CPPD due to the variable nature of the disease. The most commonly affected joint in CPPD is the knee, which made this an uncommon manifestation. The patient's initial nonspecific pain pattern suggested a systemic illness. The duration of symptoms being 2-3 weeks also helped support this diagnosis. Acute gouty arthritis will present with symptoms lasting for 2-7 days, but acute flares of CPPD can have symptoms that last for several weeks, or in certain circumstances, even several months.

Conclusion

CPPD has several prevalent phenotypes with some patients being mostly asymptomatic. The ability of CPPD to mimic other clinical entities like gout, osteoarthritis, and rheumatoid arthritis often make diagnosis difficult. The radiography acquired in conjunction with the patient's clinical presentation led to the correct diagnosis and treatment modalities. This case is a good example of how the proper radiographical studies in addition to a patient's clinical picture can help identify CPPD.

References

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