

# Occurrence of crystal arthropathy in patients presenting with synovitis in Nairobi

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## Abstract

**Background:** Crystal arthropathies represent a heterogeneous group of skeletal (musculo-skeletal) diseases associated with the deposition of mineralized material within joints and periarticular soft tissues. Gout is the most common and pathogenetically best understood crystal arthropathy, followed by basic calcium phosphate and calcium pyrophosphate dihydrate deposition diseases, and, in very rare cases, calcium oxalate crystal arthropathy. In Kenya there are no studies to demonstrate the prevalence of these diseases. This study endeavored to describe the different types of crystals seen in patients with synovitis in Nairobi from 1st January 2012 to 31st January 2014.

**Objective:** To describe different types of crystals seen in patients with synovitis in Nairobi.

**Design:** Descriptive prospective cross sectional study.

**Results:** There were 260 samples received from patients with synovitis. Of them, 61 (23.5%) were from males while 199 (76.5%) were from females. The age range of the patients was from 14 – 110 years. The mean, median and mode were 59.6, 60 and 55 years respectively. Majority of the patients were in the 51-60 years age category. Most of the patients recruited had no crystals (n=211; 81.2%)

diagnosed, with 14.2% (n=37) having uric acid crystals and 4.6 % (n=12) having CPPD crystals. For the patients who had uric acid crystals (n=37), when gender was cross tabulated against microscopy, males (n=32; 86.5%) were noted to have more uric acid crystals than females (n=5;

13.5%). Among patients diagnosed with CPPD (n=12), there were more females (n=9; 75%) patients compared to males (n=3; 25%). From the total population recruited (n=260), when age range categories were cross tabulated against microscopy, the age ranges 41-50 (n=9; 3.5%) 51-60 (n=12; 4.6%), and 61-70 (n=6; 2.3%) were noted to have more uric acid crystals than any other age category recruited. Patients in the age category 61-70 (n=6; 50 %) had more CPPD crystal detections than any other age category from the patients recruited.

**Conclusion:** Crystal arthropathy is a major cause of synovitis in patients seen in Nairobi.