WHAT'S THE TAKE HOME?

A 76-Year-Old Man With Acute Onset Knee Pain

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Introduction. A 76-year-old man presents to the emergency department due to the acute onset of left knee pain.

History. The patient had a vague sense of fullness and discomfort in his knee at dinner time and hoped a shower would offer some relief. But by the time he tried to go to sleep, the pain had quickly escalated. The patient noted that his knee had become warm and swollen with a degree of pain so intense that he was unable to walk. There was no trauma involved in the acute setting or in the several days prior, and he had never experienced any other issues regarding arthritis or joint symptoms. He essentially has no known major medical diagnoses other than mildly elevated cholesterol that is well managed with small doses of atorvastatin. He is a long-term heavy smoker who denies any pulmonary symptoms but may be sedentary enough to mask them. He is a retired certified public accountant with little past athletic history.

Physical examination. The patient's physical examination revealed a 76-year-old man with obvious knee discomfort. To avoid additional pain, the patient kept his knee in a slightly flexed position. The patient's vital signs were within normal range except for an elevated pulse of 100 beats per minute. The left knee was hot, exquisitely tender to any range of motion or palpation. There was an obvious joint effusion present. The patient's pain was too severe for an orthopedic consultant to perform structural maneuvers for a tendon injury evaluation.

The patient's laboratory studies were largely unremarkable, including metabolic testing with calcium, glucose, and uric acid levels, which were all within normal ranges. The complete blood count (CBC) was notable only for an elevated white blood cell count (WBC) of 12,100 with 92% polymorphonuclear leukocytes (PMNs). Plain x-ray films of the knee were negative for fracture but showed linear calcifications along the articular cartilage.

Which of the following is the most accurate statement regarding the present patient?

A. Uric acid crystals will most likely be found on arthrocentesis.

B. Gram-negative diplococci will most likely be found on arthrocentesis.

C. After septic arthritis has been reasonably excluded, prednisone 30 mg orally for 2 days is an effective and convenient initial therapy for this patient.

D. Blood testing for rheumatoid factor will likely be positive.

E. The patient's heavy smoking history is a prominent risk factor.