

SPORTS MEDICINE & ORTHOPEDICS

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FIGURE 1



FIGURE 2



A 59-year-old man presents with a 1-month history of painful swelling over his left knee. He denies any history of recent trauma or injury to the knee and states that in the past week he has not been feeling well. Examination reveals swelling, decreased range of motion, and pain on palpation of the left knee. Radiographs are completed, in addition to MRI (Figures 1 and 2).

How would you interpret these images?

Dr. Patterson is a sports medicine physician at the National Training Center Sports Medicine Institute. He is board certified in family medicine and spinal cord injury medicine and is fellowship trained in sports medicine. **Dr. Ray** is the medical director of the National Training Center Sports Medicine Institute and is a board-certified orthopedic surgeon specializing in sports medicine. The National Training Center Sports Medicine Institute in Clermont, Florida, specializes in the nonoperative and operative orthopedic treatment of patients of all ages, including elite performance athletes.

CONTINUED

FIGURE 1



The T₂-weighted coronal and sagittal MR images (Figures 1 and 2, respectively) reveal osteomyelitis with extensive involvement in the distal femur without joint involvement. Osteomyelitis is an infection of the bone with involvement of its medullary cavity.¹ Based on duration of infection, there are three categories of osteomyelitis: *acute* (lasting ≤ 2 weeks), *subacute* (lasting 2 weeks to 3 months), and *chronic* (lasting ≥ 3 months).² Management for this patient included incision and drainage with cultures; initiation of antibiotics; laboratory workup (complete blood count, comprehensive

FIGURE 2



metabolic panel, erythrocyte sedimentation rate, C-reactive protein level); and referral to an orthopedic surgeon. Initial antibiotic coverage for patients with osteomyelitis resulting from surgery or an implant should include coverage for methicillin-resistant *Staphylococcus aureus*.

REFERENCES

1. Greene WB. Osteomyelitis and septic arthritis. In: Greene WB, ed. *Netter's Orthopaedics*. Philadelphia, PA; Elsevier; 2006:chap 7.
2. Wilson SC, Skinner HB. Orthopedic infections: osteomyelitis. In: Skinner H. *Current Diagnosis & Treatment in Orthopaedics*. 4th ed. New York, NY: McGraw Hill; 2006:437-447.