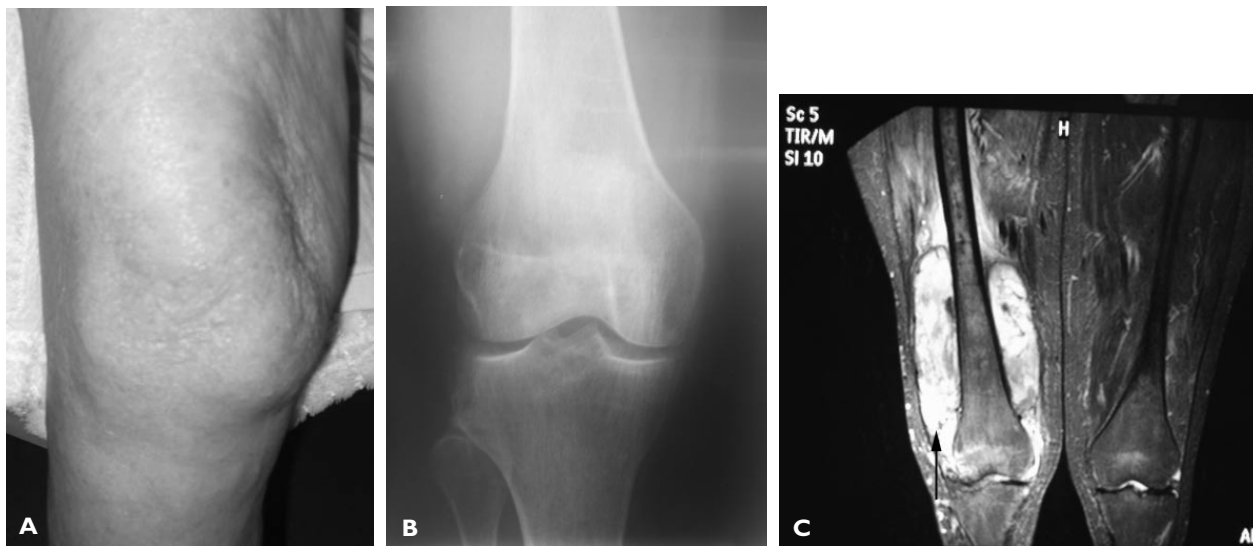


## Synovial Sarcoma

Ravi Kiran Vegasana, MRCP



An 85-year-old woman was admitted to the hospital for evaluation of persistent fever with a spiking high temperature of 103.1°F (39.5°C) of 2 months' duration. She had no other associated symptoms except lethargy. Laboratory testing revealed a persistently increased white blood cell count (25,400 cells/ $\mu$ L [normal, 4500–11,000 cells/ $\mu$ L]) and C-reactive protein level (259 mg/L [normal, < 10 mg/L]). The results of other laboratory tests were negative, including blood, urine, and stool cultures, bone marrow cytology, and serology tests for tumor markers and autoantibodies. Echocardiogram and computed tomography scan of the chest and abdomen were normal. During her hospital course, the patient had an incidental fall in the hospital and complained of knee pain. Examination of her right knee (**Image A**) revealed mild boggingness around the knee joint as compared with the left knee. A radiograph of the knee was normal (**Image B**), but magnetic resonance imaging revealed a soft tissue growth (**Image C**), which was confirmed as synovial sarcoma by biopsy. The patient had extensive infiltration of the muscle groups as well as some infiltration of the neurovascular structures around the knee. Given the risk of recurrence and the patient's poor functional status, the orthopaedic team recommended surgical treatment with amputation. Following amputation, the patient's fever resolved and inflammatory markers returned to within the normal range.

This case highlights the diagnostic challenge posed by fever of unknown origin (FUO). Infections and malignancies each account for 25% to 40% of cases of FUO,<sup>1</sup> autoimmune disorders account for 10% to 20% of cases,<sup>2</sup> and the remaining 10% to 15% go undiagnosed despite extensive evaluation.<sup>2</sup> Synovial sarcoma as a cause of FUO is rarely reported. Synovial sarcomas are slow-growing tumors mainly involving the knee joint; they account for 8% to 10% of all sarcomas.<sup>3</sup> The mass may be present for an extended period before medical evaluation is sought, with an average time lapse of approximately 2.5 years before presentation with vague symptoms. **HP**

### REFERENCES

1. Mansueto P, Di Lorenzo G, Rizzo M, et al. Fever of unknown origin in a Mediterranean survey from a division of internal medicine: report of 91 cases during a 12-year-period (1991–2002). *Intern Emerg Med* 2008 Feb 9 [Epub ahead of print].
2. Ergönül O, Willke A, Azap A, Tekeli E. Revised definition of "fever of unknown origin": limitations and opportunities. *J Infect* 2005;50:1–5.
3. Murphey MD, Gibson MS, Jennings BT, et al. From the archives of the AFIP: Imaging of synovial sarcoma with radiologic-pathologic correlation. *Radiographics* 2006;26:1543–65.

Dr Vegasana is a senior house officer, Royal Oldham Hospital, Oldham, Lancashire, UK.

Copyright 2008 by Turner White Communications Inc., Wayne, PA. All rights reserved.