

When the Obvious Is Not So Obvious

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This month's issue of *The American Journal of Orthopedics* presents 2 cases involving primary bone sarcomas. It is estimated that there are only 2500 new cases of primary bone sarcomas per year in the United States.¹ One may wonder then why case reports dealing with such an uncommon clinical entity are published in this journal, most of whose readers are general orthopedic surgeons. This is an especially relevant question when both cases involve unusual presentations of an already rare condition. In response, I would note that both articles remind us of the importance of following a logical, systematic approach in evaluating patients, in order to ensure that we don't miss conditions that are not obvious.

In "Talar Osteosarcoma in an Elderly Woman" by Ellison and colleagues, the patient's diagnosis was delayed before presentation to the authors, in part, because the initial radiographs were interpreted as representing avascular necrosis. Given the patient's age and the location of the tumor in the talus, it is likely that the diagnosis of osteosarcoma was not even considered.

In "A Rare Case of Osteosarcoma and Rhabdomyosarcoma at the Same Site 7 Years Apart," Park and colleagues present a case of a patient treated for an osteosarcoma involving the left anterior thigh. Seven years later the patient developed a mass in the left anterior thigh. Given the history of prior osteosarcoma in the same location, one may have been inclined to assume that the mass represented a late local recurrence. Fortunately, the diagnosis was established by biopsy before any additional treatment was rendered.



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These 2 cases remind us that even when the findings seem to point to an obvious diagnosis, we must consider conditions that are not so readily apparent, such as unusual presentation of malignant disease. This happens in general orthopedic practice more often than one would guess. All too often, patients with a remote history of breast cancer and persistent back or skeletal pain are treated with physical therapy or other modalities before the diagnosis of late skeletal metastases is considered. Similarly, when a patient over 40 years of age has an aggressive, destructive lesion in the femur with an impending fracture, the temptation to assume the most likely diagnosis of metastatic disease and perform prophylactic fixation must be avoided. The consequences of performing intramedullary fixation of a primary sarcoma are devastating. Another example occurs when a soft-tissue mass is excised and found to be a soft-tissue sarcoma. In such cases, the possibility of a sarcoma may not have been considered by either the surgeon or an inexperienced radiologist.

The physician evaluating a patient with a bone or soft-tissue mass must remember that, despite the overwhelming statistical probability that the lesion is benign, he or she must take into account the possibility of a malignancy. Given the consequences of failing to establish the correct diagnosis or performing the wrong surgery, the value of how to proceed in evaluating patients with these conditions cannot be overemphasized.

The diagnosis of any bone or soft-tissue mass is based on clinical, radiographic, and histologic diagnosis. The clinical clues to a lesion being benign or malignant depend on a variety of factors and can be specific for some tumor types but not for others. Malignant soft-tissue tumors tend to be asymptomatic, while malignant

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bone tumors tend to be symptomatic. All too often, asymptomatic soft-tissue masses are thought to be benign solely on the basis of the lack of symptoms. Unfortunately, while it may seem counterintuitive, soft-tissue sarcomas are generally asymptomatic. Since they share this clinical presentation with benign soft-tissue masses, clinical symptoms may not be helpful. Symptomatic soft-tissue masses may suggest a diagnosis of angioliipoma, hemangioma,

schwannoma, or abscess. Similarly, soft-tissue sarcomas are generally well defined on magnetic resonance imaging (MRI). Again, this is contrary to the impressions of many orthopedic surgeons and radiologists. Frequently, an MRI scan is read as a benign soft-tissue mass because the lesion is well defined. The orthopedic surgeon relying on the reading of a radiologist in such cases can become an unsuspecting accomplice to delays in treatment or misdiagnosis.

If one has a concern about potential malignancy, referral to an orthopedic oncologist may be warranted. The cases that are not easy to diagnose or that foil expectations should remind us of the importance of being thoughtful and humble. The obvious diagnosis is not always the correct one. ■

Reference

1. Parker SL, Tong T, Bolden S, Wingo PA. Cancer statistics, 1996. *CA Cancer J Clin.* 1996;46(1): 5-27.