

CASE REPORT

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Large schwannoma of the femur – a common tumor at an unusual site: a case report and review of the literature

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Abstract

Background: Schwannomas are benign nerve sheath tumors and are most frequently encountered as soft tissue tumors of peripheral nerves of the head and neck or the extensor extremities. Osseous involvement is very uncommon with fewer than 200 cases described in the world literature, the majority of which arise in the skull (including mandible), vertebrae, and sacrum. Long bone involvement is highly unusual and of the approximately 20 cases described thus far, only five have been documented to arise in the femur. We describe an unusually large schwannoma of the femur which was discovered incidentally and was diagnosed only after biopsy, given the rarity of this tumor at that particular site. Following prophylactic internal fixation and bone grafting, our patient remains well and disease-free, 2.5 years later.

Case presentation: A 56-year-old Sri Lankan woman was discovered to have a large lytic lesion in her lower femur on routine X-ray following a fall. A history and physical examination, along with selective imaging and tissue sampling, were necessary to arrive at the diagnosis of schwannoma of the femur. The clinical presentation, radiology, pathology, and surgical management are discussed and contrasted with the other five cases documented in the literature. The tumor was successfully treated with evacuation through a lateral surgical approach and internal fixation. She remains well and disease-free 2.5 years later.

Conclusions: We present the case of an unusually large lytic lesion found incidentally in the femur of a 56-year-old woman, which was subsequently diagnosed to be a schwannoma on biopsy. Its exceptional rarity in long bones makes it less likely to be considered in an initial differential diagnosis, and we stress the importance of tissue biopsy for diagnosis.

Keywords: Case reports, Schwannoma, Femur, Neurilemmoma

Background

Schwannomas are benign nerve sheath tumors originating from Schwann cells and are most frequently encountered as soft tissue tumors of peripheral nerves of the head and neck or the extensor extremities [1]. Osseous involvement, however, is very uncommon, accounting for <0.2% of primary bone tumors, and when it does occur, is usually found in the mandible, spine, or sacrum [2, 3]. Schwannomas occurring in long bones are exceptionally rare and we identified only five published cases that described schwannoma

in the femur [4–7] in the world literature. We present a case of an unusually large schwannoma of the lower femur, discovered incidentally on an X-ray taken in a 56-year-old Sri Lankan woman, following a fall. The clinical presentation, radiology, and pathology of the current tumor is discussed. The clinicoradiologic features of the five reported cases are compared with the current tumor. Following prophylactic internal fixation and bone grafting, the patient remains well and disease-free, 2.5 years later.

Case presentation

A 56-year-old Sri Lankan woman presented with pain in her left knee and difficulty in weight bearing following a fall 6 weeks prior. Clinical examination of her knee and lower

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