Intraosseous glomus tumor of the fibula

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Abstract Glomus tumor is a rare, benign vascular tumor and intraosseous glomus tumor, which arises primarily within bone, is even rarer. Fewer than 20 cases have been reported in the literature. We present the case of a 34-year-old woman with glomus tumor primarily in the midshaft of the fibula that radiologically mimicked chondromyxoid fibroma, aneurysmal bone cyst or adamantinoma, together with a review of other reported cases.

Keywords Intraosseous glomus tumor · Fibula · Radiograph

Introduction

The normal glomus body is a specialized form of arteriovenous anastomosis that serves in thermal regulation and is located in the stratum reticularis of the dermis. It is most commonly found in the subungual region, the lateral areas of the digits, and the palm. The most common sites of glomus tumors reflect the normal glomus body distribution. They arise most frequently in the subungual region of the fingers followed by the forearm. Jaffe [1] described that a normal glomus body occasionally exists in the medullary cavity of the terminal phalanx, and supported the idea that a primary glomus tumor presents in the bone. Glomus tumors arising primarily within bone have been very rarely reported and most of them involve the distal phalanx of fingers or thumb. The present case occurred in the diaphysis of the fibula, a site that has, to our knowledge, not previously been reported.

Case report

A 34-year-old woman complained of pain in her right calf for 1 month since suddenly twisting her ankle and feeling a pop in the mid-calf. The pain was quite severe for several days, and then improved slightly. She gave a past history of irritable bowel disease and tonsillectomy. She denied ever having a problem with her right calf prior to this event. On physical examination, she had tenderness over the mid-shaft area of the fibula. There was no significant swelling, soft tissue mass, or inflammation.

Radiographs of the right leg revealed an ovoid, expansive lytic lesion with an outer complete, thin shell of bone measuring 2.6 cm long by 2.2 cm wide (Fig. 1). The radiologic differential diagnosis at that time included aneurysmal bone cyst, chondromyxoid fibroma, and perhaps an adamantinoma, less likely a solitary myeloma.