CASE REPORT

Recurrent Glomangiomas of the Ankle: A Case Report

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INTRODUCTION

A glomus tumor is known as a solid glomus tumor, glomangioma, nonchromaffin paraganglioma and paraganglioma. It typically present as a solitary, small and located in the subungual region. In rare cases, the tumor may present in other body area such as tympanic membrane, gastric antrum or glands penis. We describe a patient presented with a large recurrent glomangiomas. To our knowledge, this large recurrent glomangiomas of the ankle has not been reported previously.

CASE REPORT

A 22-year-old lady was apparently well until she sprained her left ankle and a swelling noted over the left ankle since one year ago. Examination revealed a small lump at the lateral aspect of the ankle. Total excision of the lump was performed. Histological diagnosis of glomangiomas was made.

She defaulted follow up and returned 5 months later for progressive increase in size of the left ankle swelling. The pain was initially mild but was progressing worse that she was unable to walk.

Examination of the left ankle showed that the mass measured 6.0 x 8.0 cm and very tender even on light palpation. The lump was reddish in color. Plain radiograph in frontal and lateral views (Figure 1) showed lobulated soft tissue swelling of the left ankle. She was underwent open biopsy of the left ankle and histology reported as recurrent glomangiomas.

Magnetic Resonance Imaging of the ankle revealed multiple lobulated masses with high signal intensities on STIR and T2-weighted images and was hypointense on T1-weighted images (Figure 2a). These masses enhanced on post contrast study (Figure 2b).

At a recent follow up, she was explained by the orthopedic surgeon that the tumors could not be cleared totally and the rate of recurrence is high. The alternative treatment was below knee amputation (BKA). She was readmitted for reexcision of the recurrent glomangiomas and below knee amputation was done because of multiple lesions and poor circumscription.

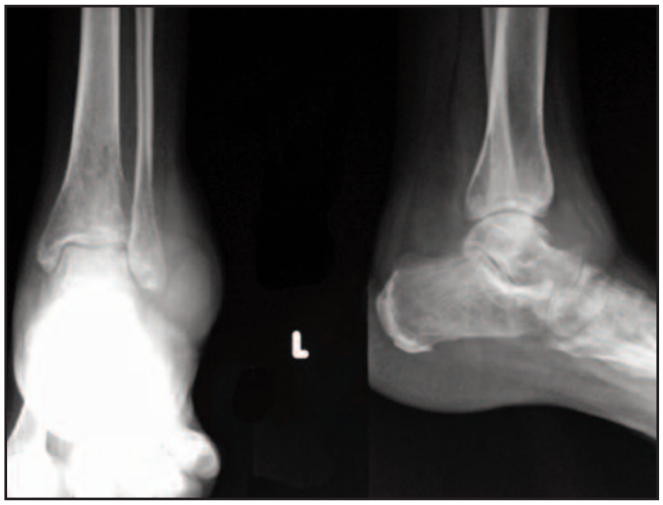

Fig. 1 : Left ankle X-Ray in frontal and lateral views showed lobulated soft tissue swelling around the ankle joint.

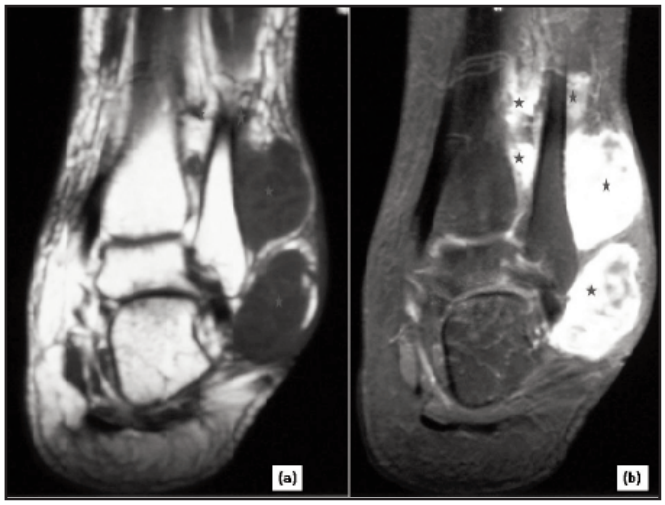

Fig. 2 : MRI in (a) T1 weighted image coronal plane showing multiple lobulated masses (stars) which are hypointense and b) post Gadolinium coronal plane showing these masses (stars) enhancing with contrast.

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DISCUSSION

Glomus tumors are neoplastic proliferations of modified smooth muscle cells originating from preexisting normal glomus cell populations. Glomus cell populations are specialized arteriovenous anastomoses characterized by Sucquet-Hoyer canals which responsible for thermoregulation [1].

Glomus bodies are present in the stratum reticularis of the dermis especially in the digits, palms and soles of the feet. Seventy-five percent of glomus tumors occur in the hand [2]. They can occur in a wide anatomic distribution, to include sites not known to contain glomus cells. One explanation for this finding is that these tumors may arise from perivascular cells that can differentiate into glomus cells [1]. Extracutaneous sites have been reported, including involvement of the gastrointestinal tract, trachea, nerve, bone, mediastinum, liver, pancreas, and ovary [3].

Glomus tumors are divided based upon histopathologic findings as either glomus tumor, glomangiomas or glomangiomyoma. Recently, glomangiomas or glomangiomyoma have been referred to collectively as glomuvenous malformations. Glomuvenous malformations may either be acquired or congenital, and heterogenous germline mutations in the glomulin gene (GLMN) [4]. Multiple glomus tumor of the ankle with presence of prominent intranuclear pseudoinclusion is very rare and has been reported [5].

Most glomus tumors are solitary and sporadic, but some cases of glomus tumor are multiple and can be segmental in distributions which are seen in children who have an autosomal dominant inheritance pattern. Solitary glomus tumors are smaller in size less than 2 cm with blue or red blanchable papules or nodules in deep dermis or subcutis. The multiple variant is subdivided into regional or localized, disseminated, and congenital plaquelike forms. Glomangiosarcomas are larger than 2 cm, rapid growth with regional extension [1].

In relation to the interval between the recurrence and the primary operation, recurrences are classified by Nicolas H. T et al as early (< I year) or delayed (>1 year). Early recurrences can be attributed to incomplete excision or to the presence of a second tumor that was not previously diagnosed and excised during the initial operation. Delayed "recurrence" is possibly due to the development of a new glomus tumor near the excision site [2].

Radiographs can depict glomus tumor but have low sensitivity. Ultrasound can depict tumors as small as 3 mm in diameter, particularly in the pulp of the finger. Magnetic resonance (MR) imaging has been used to diagnose glomus tumors. Most glomus tumors are highly vascular and show high signal intensity on T2-weighted images and strong enhancement after injection of a gadolinium compound. On T1-weighted images, the tumor ranges from low to intermediate signal [2].

The treatment of choice for solitary glomus tumor is surgical excision. For glomangiomas, excision may be more difficult because of the circumscription and the large number of lesions. Other reported treatment modalities include argon and carbon dioxide laser and sclerotherapy with hypertonic saline or sodium tetradecyl sulfate which useful treatment for glomangiomas [4].

The treatment for recurrent glomangiomas like in this case is more difficult because of poor circumscription and multiple with large number of lesions. Below knee amputation is better treatment for her other than excision. Therefore, early diagnosis and proper treatment is essential to improve outcome of patient.

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