

Intraosseous Lipoma of the Calcaneum: A rare cause of heel pain

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Mawardi M, Hussin P. Intraosseous Lipoma of the Calcaneum: A Rare Cause of Heel Pain. *Malays Fam Physician*. 2018;13(3): 38–39.

Keywords:

Intraosseous lipoma, heel pain, calcaneal pain

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Introduction

Heel pain is a common presentation at any outpatient clinic. Heel pain may originate from either bone or the surrounding soft tissues. Tendo achilles tendinitis and plantar fasciitis are the two most common causes of heel pain. We report a case of an uncommon condition presenting through a common presentation at the primary care clinic, i.e., an intraosseous lipoma of the calcaneum presenting through heel pain. This tumour constitutes 0.1% of benign bone tumours and is 8% prevalent in the calcaneum bone.¹

Case report

A 50-year old man, who is a carpenter, presented to the outpatient clinic with a complaint of sudden onset of right heel pain which had been continuous in nature for the past month. It worsened after prolonged walking and was partially relieved with rest. He had been limping ever since it began, and it affected his normal daily activities. He denied any history of trauma to the heel. He was dependent on celecoxib 200mg daily to ease the pain. He was a known diabetic on oral anti-diabetic drugs. He had no constitutional symptoms, such as loss of appetite or weight, and none of his family members had had malignancies.

On examination, he showed evidence of an antalgic gait and could not walk on the heel. There were no signs of physical abnormalities on his right foot. However, there was some tenderness over the lateral aspect of the right ankle overlying the calcaneal bone. There was no restriction of joint motion around the ankle joint. There were also no palpable lymph nodes in the inguinal region.

Blood biochemistry investigation showed no signs of infection or inflammation. Plain radiography of the right ankle revealed a lytic lesion in the calcaneum with central calcification (**Figure 1**). This is differentiated

from a bone infarction, which will result in sclerotic changes. Magnetic resonance imaging (MRI) reported an intraosseous lesion consistent with a lipoma.

He underwent surgery, and the intra-operative finding was a cystic lesion in the calcaneum with multiple loci containing fat tissue. Bone curettage was carried out, followed by packing the cavity with polymethylmetacrylate (bone cement). A histopathological examination confirmed the diagnosis of lipoma. The patient was pain-free after the surgery, and he was able to ambulate at his old capacity one month after surgery.



Figure 1. Multiseptate radiolucent lesion in the calcaneum. There is a cortical breach over the inferior border of the lesion.

Discussion

Heel pain is a common presentation among patients in the primary care setting. Most of the causes are degenerative or inflammatory in nature. Most presentations are due to tendo achilles tendinitis, plantar fasciitis, stress fracture or arthritis. The location of the pain itself may cause significant daily activity impairment.

Intraosseous lipoma is a rare, benign tumour in the calcaneum. There is no gender preponderance, and this type of tumour is commonly seen in the fourth decade of life. It may occur in any bone; nonetheless, the proximal femur is the most common site

(34%).^{1,2} Most of the cases are asymptomatic; however, symptoms such as pain, are seen when the lesion is in the calcaneum.

As most patients are asymptomatic, its diagnosis is made incidentally on a routine plain radiography, computed tomography (CT) scan or MRI.³ The definite diagnosis is still made through histopathological examination. Therefore, it is mandatory that the clinical and radiological findings and biopsy be correlated. The differential diagnoses which must be ruled out include a non-ossifying fibroma, an aneurysmal bone cyst, a bone infarct, a bone cyst, a giant cell tumour or even a metastatic bone tumour.

Conservative treatment is the treatment of choice in an asymptomatic individual.^{4,6}

However, regular follow-up is recommended. In the case of an asymptomatic patient with suspicion of malignancy or impending fracture, surgery has to be considered. Curettage and autologous bone grafting is the surgical option of choice. The bony defect or cavity can be filled and packed with bone hydroxyapatite or polymethylmetacrylate (bone cement).^{4,5,6}

Even though this tumour is rare, there is a need for physicians to recognize its radiological findings and offer the appropriate treatment options. It is also important for primary care physicians be aware that there are other causes of heel pain than the common suspects.

References

- Schajowicz F. Other connective tissue tumors. Lipoma. In: Schajowicz F, editor. Tumors and tumorlike lesions of bone. Pathology, radiology and treatment. *New York: Springer-Verlag*; 1994; p. 406-11.
- Hatori M, Hosaka M, Ehara S, Kokubun S. Imaging features of intraosseous lipomas of the calcaneus. *Arch Orthop Trauma Surg*. 2001;8:429-32.
- Ozdemir H, Bozgeyik Z, Kocakoc E, Kalender O. MRI findings of intraosseous lipoma: Case report. *Mag Reson Imaging*. 2004;22:281-4.
- Weinfeld GD, Yu GV and Good JJ. Intraosseous lipoma of the calcaneus: A review and report of four cases. *J Foot Ankle Surg*. 2002;416: 398-411.
- Yildiz HY, Altinok D, Saglik Y. Bilateral calcaneal intraosseous lipoma: A case report. *Foot Ankle Int*. 2002;23:60-63.
- Hirata M, Kusuzaki K, Hirasawa Y: Eleven cases of intraosseous lipoma of the calcaneus. *Anticancer Res*. 2001;21:4099- 4103.