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CASE REPORT

Intraosseous Lipoma Of The Calcaneum: A Case Report

ROMIT GUPTA*, AMIT THAKUR**, VISHALI KOTWAL***, DEEPAK ARORA****

Abstract

A forty year old man presented with left heel pain with difficulty in walking for the past two and a half years. The patient had received multiple injections in the heel, with no relief. A skiagram of the foot was advised, which revealed a well concealed cystic lesion in the calcaneum. Curettage was done and histopathology revealed intrasseous lipoma of the calcaneum.

Key words: heel pain, cystic lesion, curettage.

*DNB (Ortho), Assistant Professor; **M.S (Ortho), Assistant Professor, Department of Orthopaedics, Guru Gobind Singh Medical College and Hospital, Faridkot-151203, Punjab; ***MD, Assistant Professor, Department of Medicine, Guru Gobind Singh Medical College and Hospital, Faridkot-151203, Punjab; ****Assoc. proff, Department of microbiology, Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab.

Corresponding Author:
Deepak Arora(Assoc.proff)
Department of microbiology
Guru Gobind Singh Medical College and Hospital
Faridkot, Punjab.

Introduction

Intraosseous lipomas represent a small number of benign bone tumours, with incidence rates of approximately 0.1. About 15% of these neoplasms are localized within the calcaneus, mostly at the Wards triangle. [1],[2] The tumours usually remain clinically inapparent and diagnosis is often obtained incidentally. Although CT scan and MRI provide specific and sensitive diagnostic tools that can distinguish the morphology and status of the tumours, surgical treatment has not been standardized as yet.[3],[4]

Case report

A forty-year old man presented with heel pain on the left side and difficulty in walking for the past two and half years. To start with, the pain was mild in character, but the intensity of the pain increased with the passage of time, till it became constant and the patient had difficulty in walking and attending to his daily routine work. The pain would increase on prolonged walking and would be relieved on taking rest.

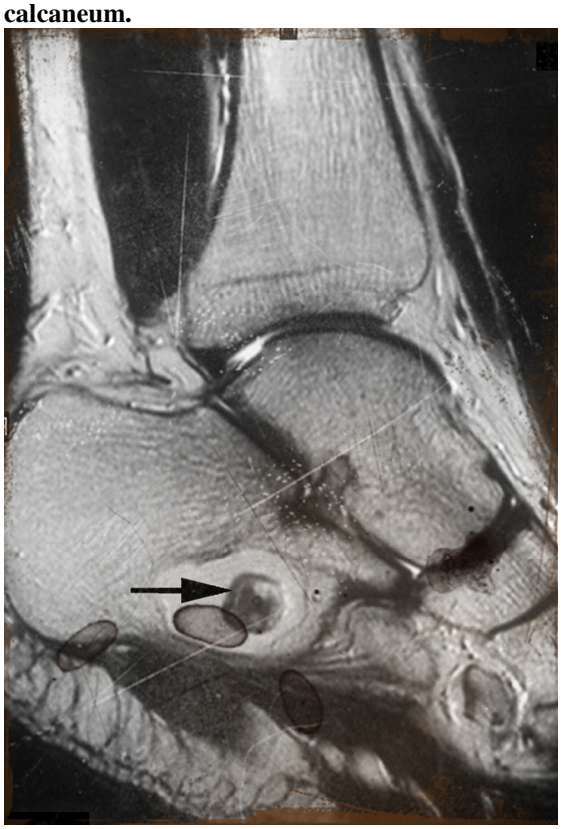
The general physical examination was non-contributory. Local examination revealed tenderness on applying deep pressure on the plantar aspect of the foot. The laboratory investigations were within normal limits.

Over the past few years, the patient was treated for plantar fascitis and was given steroid injections in the heel around the plantar fascia and the heel pad. But there was no relief from the pain and the pain continued to progress. With the provisional diagnosis of a calcaneal spur, a skiagram of the foot was advised, which revealed a well-defined, well-concealed cystic lesion in the left calcaneum [Table/Fig 1].

[Table/Fig 1]: Skiagram of foot showing well-defined, well concealed cystic lesion in the calcaneum.

MRI was done, which revealed a demarcated, homogenous, high signal intensity lesion, which suggested the presence of adipose tissue [Table/Fig 2]. Curettage of the cyst was done. Histopathology revealed the diagnosis of intraosseous lipoma of the calcaneum.

[Table/Fig 2]: MRI of foot showing demarcated homogenous high signal intensity lesion in calcaneum.



Discussion

Intraosseous lipoma is an extremely uncommon entity despite the large amount of adipose tissue which is present in the bone marrow. The first case of intraosseous lipoma was described by Child in 1955, with Milgram having published the largest series of these lesions. [1],[2],[3] Milgram classified intraosseous lipoma into three histological groups, depending on their degree of involution; group I lesions are those with viable lipocytes; group II lesions are transitional, consisting of some viable lipocytes and some areas of fat necrosis and group III lesions are those which lack viable lipocytes.

The incidence of intraosseous lipoma is equal in males and females and it can present at any age. The commonest location of an intraosseous lipoma is the metaphyseal ends of the long bones, especially the fibula (20%), the femur (15%), the tibia (13%) and the calcaneus (15%). In the calcaneus, these lesions are located between the anterior and the middle thirds of the calcaneum, just plantar to the angle of the fissure. [6[,[7] In 40% of the cases, intraosseous lipomas are found incidentally. In the remaining cases, pain is the most common presenting symptom, occurring in upto 50% of the patients. Other reported sites are the ribs, skull, sacrum, ilium, coccyx, the thoracolumbar spine, the mandible, the maxilla and other bones. There are no specific symptoms of this disease. [8],[9] The common presenting complaints are local pain or swelling, or both, especially after exertion. The symptoms may be present for months and years.

Radiographically, these lipomas typically appear as osteolytic lesions that are surrounded by a thin, well-demarcated sclerotic border. Lobulation or internal osseous ridges are present frequently and osseous expansion may be evident. [4],[7] In the calcaneus, intraosseous lipoma occurs almostly invariably in the triangular area between the major trbecular groups, in the same location as the simple cysts. It is a significant fact that in none of the reported cases was the diagnosis of intraosseous lipoma possible on the basis of the radiological findings. The most common roentgenological diagnosis in these cases was that of a benign bone cyst. Other conditions which were considered in the differential diagnosis included fibrous dysplasia, giant cell tumour and other connective tissue tumours. Curettage of the lesion and histopathology revealed the correct diagnosis in all the reported cases.

Other imaging techniques — CT scan is able to identify the fatty component of intraosseous lipomas, definitely owing to the characteristic low attenuation value of such tissues. MRI imaging is also helpful. MRI revealed that all the lesions had demarcated, homogenous, high signal intensity lesions on both T_1 and T_2 weighted images, which strongly suggested adipose tissue.

The treatment of this rare tumour consists of curettage with or without bone grafting. [5] The recurrence of this tumour is not known.

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