

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/mjafi

Case Report

Vertebral intraosseous lipoma



Lt Col Debraj Sen^{a,*}, Brig Lovleen Satija^b, Col Samar Chatterji^c,
Anusree Majumder^d, Meenu Singh^e, Aakansha Gupta^e

^a Classified Specialist (Radiodiagnosis), Command Hospital (Central Command), Lucknow 226002, India

^b Consultant & Professor (Radiodiagnosis), Command Hospital (Central Command), Lucknow, India

^c Associate Professor, Department of Radiodiagnosis, Armed Forces Medical College, Pune 40, India

^d Resident (Pathology), Command Hospital (Eastern Command), Kolkata, India

^e Resident (Radiodiagnosis), Command Hospital (Central Command), Lucknow, India

ARTICLE INFO

Article history:

Received 19 December 2012

Accepted 1 May 2013

Available online 2 August 2013

Keywords:

Vertebra

Intraosseous

Lipoma

Computerized Tomography

Magnetic resonance imaging

Case report

A 35-year-old male patient presented with chronic low backache of one year duration that was insidious in onset, moderate in intensity and aggravated by prolonged standing. The patient did not have radiculopathy or neurogenic claudication. There was no history of any comorbid condition, medication or spinal trauma. The patient's vital parameters were normal. Lower paraspinal muscle spasm was noted. There was no point tenderness, swelling, evidence of sacroiliitis or neurological deficit. All laboratory investigations were normal.

Lateral radiograph of the lumbosacral spine showed an ill-defined transradiant lesion in the superior part of L4 vertebral body (Fig. 1). Computerized Tomography (CT) revealed a sharply margined ovoid intraosseous lesion of fat attenuation (−70 Hounsfield Units) at the same location. The lesion had a thin rim of sclerosis. A punctate calcific focus was noted within the lesion (Fig. 2). The overlying endplate cortex was thinned without any obvious disruption. Degenerative changes in the form of marginal osteophytes and semilunar-shaped areas of endplate sclerosis were present. Magnetic Resonance Imaging (MRI) confirmed the CT findings and revealed a lesion of fat intensity (hyperintense on both T1- and T2-weighted images). A thin rim hypointense on both T1- and T2-weighted images consistent with marginal sclerosis was present. Disc desiccation and Modic changes were also noted (Fig. 3). There was no evidence of sacroiliitis. Based on these findings a diagnosis of lumbar spondylosis with intraosseous lipoma of L4 vertebral body was made.

Introduction

Lipomatous tumours are ubiquitous and the commonest tumours to affect soft tissues. Despite the fat content of bone medulla, intra-osseous lipoma is the rarest primary tumour to afflict bones.¹ Here we present an unusual case of vertebral intraosseous lipoma in a young male with low backache. This article aims to discuss and highlight the radiological and pathological features of this rare entity which may often be missed or misinterpreted.

* Corresponding author. Tel.: +91 9670574817 (mobile).

E-mail address: sendebraj@gmail.com (D. Sen).

0377-1237/\$ – see front matter © 2013, Armed Forces Medical Services (AFMS). All rights reserved.

<http://dx.doi.org/10.1016/j.mjafi.2013.05.001>

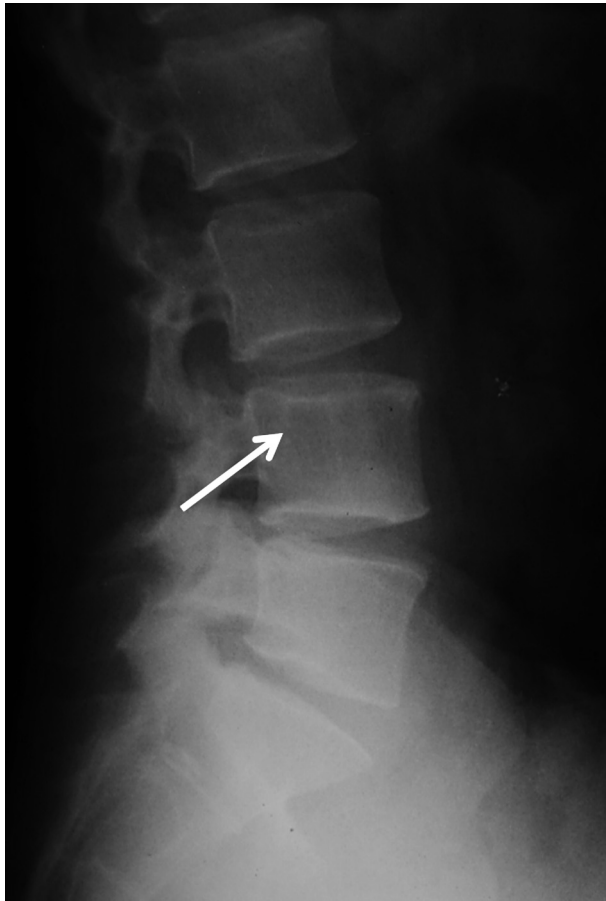


Fig. 1 – Lateral radiograph of the lumbosacral spine reveals a subtle transradiant lesion (arrow) in the superior part of the body of L4 vertebra.

Discussion

Fatty tumours affecting bones may be classified as: (a) soft-tissue lipomata or liposarcomata with secondary bone involvement; (b) parosteal lipomata, which arise from the subperiosteal tissue; (c) intraosseous lipomata, which arise from the medullary cavity; (d) liposarcoma of bone and (e) liposclerosing myxofibrous tumour.^{2,3}

First reported in 1880,⁴ intraosseous lipoma is the rarest primary bone tumour with an incidence of 0.1%.^{3,5,6} However, recent reports suggest a wider prevalence of up to 2.5%.^{3,6} Intraosseous lipoma is underreported for many reasons: (a) non-specific radiographic appearances which may simulate other entities, (b) benign radiographic appearances which preclude further CT or MRI, (c) difficulty in histopathologic interpretation if not correlated with radiology as fat in these lesions may be indistinguishable from normal fat in yellow marrow, and osteonecrosis if ischaemic changes are present.³

Intraosseous lipoma has been reported most frequently in the 4th and 5th decades^{3,7} and is slightly more common in males.⁷

Pain has been reported in up to 66% of cases.³ The aetiology of pain is speculated to be due to expansile remodelling of bone or co-existent intralesional ischaemic changes. Pathological fractures occur rarely.¹

Most of these tumours occur in the lower limb (71%). The commonest site is the calcaneum (32%) followed by the femoral sub-trochanteric region, proximal tibial and distal femoral shaft and the proximal and distal fibular shaft.⁷ Upper limb lesions usually involve the proximal and distal humeral and radial shafts. They are usually intramedullary, rarely intracortical and frequently eccentric in smaller long bones. They have also been reported in the spine,^{8,9} skull and sino-nasal cavities,^{10,11} mandible, pelvis and ribs.⁵ Multiple intraosseous lipomata affecting multiple bones have also been reported.^{3,4} Lesion size varies from 10 to 120 mm (mean 39 mm).^{3,7}

The aetiology and nature of intraosseous lipomas is controversial. While some regard them as benign tumours of the medullary adipose tissue, others consider them to be reactive changes secondary to infarcts, infections, or the result of healed bony infarcts secondary to trauma.¹² An association with hyperlipoproteinaemia¹ and chromosomal abnormalities has been reported.¹² The increased prevalence of intraosseous lipoma at sites with decreased trabecular bone, like the calcaneus, has led to the theory that they represent an 'overshoot' of haematopoietic to fatty marrow conversion, and may therefore be considered hamartomas.³

At gross examination, intraosseous lipomas are pale or bright yellow, may reveal lobulations with a thin capsule and septations.³ They are composed of mature adult fat and may contain a few atrophic trabeculae.



Fig. 2 – The panel of axial, coronal and sagittal CT images reveals a well-delineated lesion of fat attenuation with a central calcific focus in the body of L4 vertebra (arrow).

Download English Version:

<https://daneshyari.com/en/article/3160949>

Download Persian Version:

<https://daneshyari.com/article/3160949>

[Daneshyari.com](https://daneshyari.com)