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CASE REPORT

Intraosseous Lipoma of the Ischium

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Abstract

Intraosseous lipoma (IL) is a rare benign bone tumor that arises from adipose tissue. These lesions usually present with mild pain and swelling of the involved area. Most of these lesions are seen in the lower limbs and only about 5% of these involve the pelvic bones. Here we are reporting a case of an intraosseous lipoma in the ischium in a 25-years-old lady who presented with vague pelvic pain. Our findings were consistent with the diagnosis of IL.

Introduction

Intraosseous lipoma (IL) is a rare benign bone tumor that arises from adipose tissue. These lesions are asymptomatic in most cases but when symptoms occur, they usually consist of mild pain and swelling of the involved area. Most of these lesions are seen in the lower limbs and only about 5% of these involve the pelvic bones.[1,2] Here we are reporting a case of an intraosseous lipoma in the ischium in a young lady who presented with vague pelvic pain.

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Case Report

A 25 -years-old female presented with vague pain in the pelvic region for the past three months. There was no history of trauma, fever, or pain in any other joints.

X-ray pelvis AP view was done which revealed a lytic lesion with internal trabeculations in the right ischium. No calcifications or cortical destruction were noted. Other pelvic bones, both sacroiliac joints and hip joints appeared normal. Subsequently, the patient underwent a CT scan to further characterize the lesion. CT revealed a well-defined mildly expansile lesion showing fat density and multiple trabeculations in the right ischium and the posterior column of the acetabulum. The lesion showed thin sclerotic margins. No cortical destruction or adjacent soft tissue mass lesion was noted. The lesion measured 4.7 x 3.1 x 1.9 cm (CC X AP X TR). These findings were consistent with the diagnosis of IL. The patient was managed conservatively. She was advised to come for a follow-up after six months or if there was increased pain in the region of her right hip.

DISCUSSION

IL is a benign tumor derived from adipose tissue with a very low incidence of about 0.1% of all primary bone tumors. There is a male predominance and patients

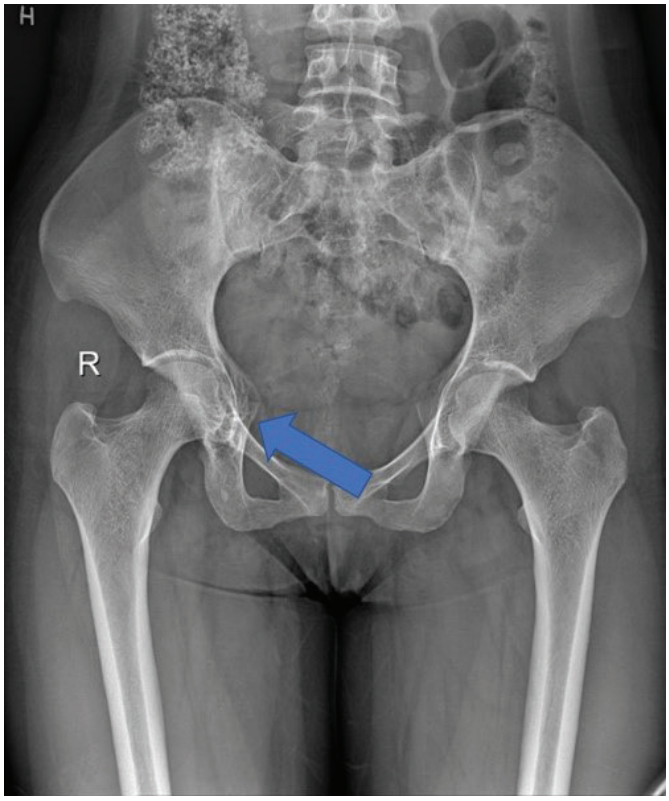

FIG 1: Xray Pelvis AP view shows a lytic lesion with internal trabeculations in the right ischium (arrow).

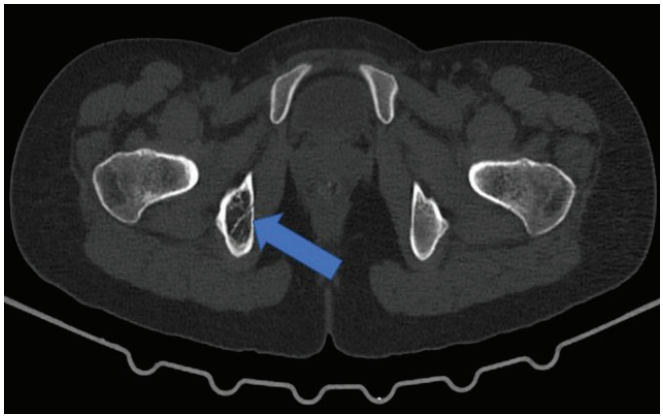

FIG 2: Axial CT image of the pelvis showing a well-defined mildly expansile lesion with fat density and multiple trabeculations in the right ischium (arrow). No calcifications or cortical destruction are noted.

usually present in the fourth and fifth decade of life.[1] Majority of the lesions are seen in bones of the lower limbs, about 71%, especially in the calcaneus. Other sites include the femur, tibia, and fibula. The involvement of upper limb bones and the axial skeleton is infrequent. Pelvic bones are involved only in about 5% of cases.[2,3] Most of the patients

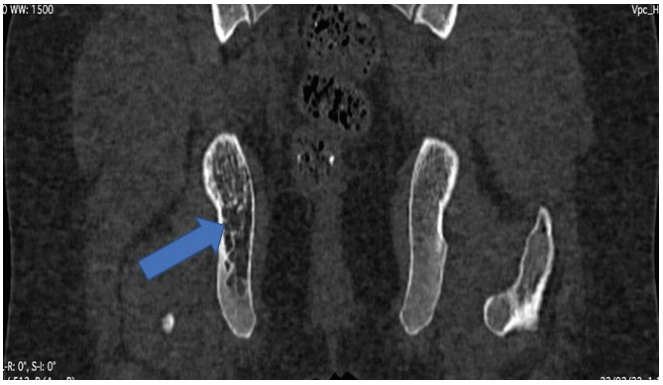

FIG 3: Coronal reformatted CT image showing the extent of the ischial lesion (arrow).

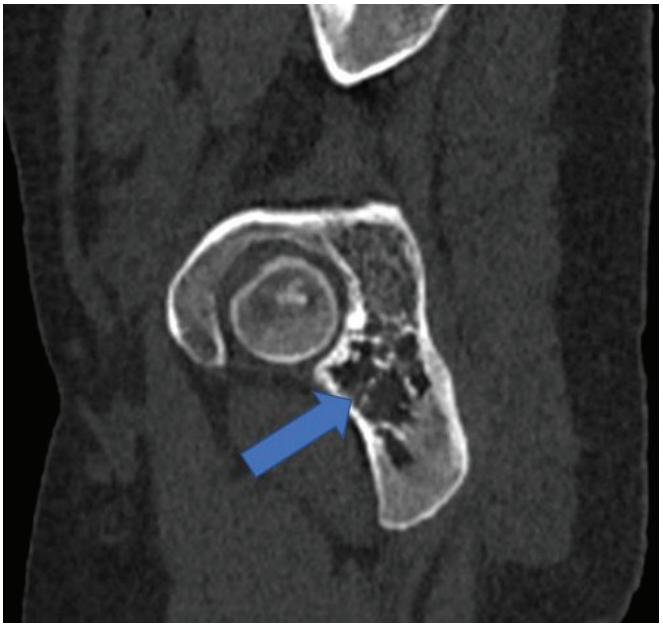

FIG 4: Sagittal reformatted CT image showing the lesion extending into the posterior column of the acetabulum (arrow).

are asymptomatic and diagnosed incidentally when imaging is performed for other causes. Some patients may present with pain, swelling, and tenderness can be elicited on examination.[2,4]

Milgram classified IL into three stages based on their histological characteristics. Stage 1 lesions were solid lesions composed of tissue similar to normal fat. Stage 2 lesions were composed of fat cells with interspersed areas of necrosis and calcification. Stage 3 lesions are composed of proliferating fat cells and there is no evidence of the native bone trabeculae.[5]

Plain radiographs show a well-defined lytic lesion with thin sclerotic margins causing bone

expansion. Internal septa or calcification may be noted. Both CT and MRI can establish the diagnosis by demonstrating that these lesions predominantly show fat composition with interspersed calcification. Fat shows low density with HU values ranging from -110 to -40 in CT images. Fat appears hyperintense in both T1W and T2W MR images and fat signal is suppressed in fat-saturated sequences. Calcification appears hyperdense in CT while it shows hypointense signal in MRI in all pulse sequences.[3,6] Histologically, IL is composed of mature fat cells without any hematopoietic components. Interspersed fat necrosis and calcification may be present.[7]

Differentials for these lesions include bone infarcts and liposclerosing myxofibrous tumors. The typical appearance of bone infarct is a medullary metadiaphyseal lucent lesion with serpentine sclerotic margins.[8] Both CT and MRI show marrow fat within the lesion and marginal sclerosis.[9] On radiographs, liposclerosing myxofibrous tumor appears as a geographic lesion with mineralized matrix and sclerotic margins. On CT and MRI, the lesion does not appear similar to fat. This is due to the decreased fat content along with the presence of myxofibrous and fibro-osseous components. However, it is difficult to differentiate these tumors from lipomas that have undergone involution.[10]

Usually, these patients are managed conservatively as there is a possibility of spontaneous resolution and surgical procedures such as curettage and bone grafting is recommended only for patients with painful lesions or those at risk of pathological fracture.[11]

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