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Primary Non-Hodgkin's Lymphoma of Bone Arising from Hip

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ABSTRACT

Non-Hodgkin's lymphoma can present as either a nodal form with local or regional lymphadenopathy or less commonly, as an extranodal form outside the lymphatic system. Primary lymphoma of bone (PLB) is uncommon malignancies. Here we present a case of primary non-Hodgkin's lymphoma of bone arising from hip with clinical and radiological diagnostic difficulty.

Keywords: lymphadnenopathy; malignancies; Non-Hodgkin's lymphoma; primary bone lymphoma.

INTRODUCTION

Non-Hodgkin's lymphoma can present as either a nodal form with local or regional lymphadenopathy or less commonly, as an extranodal form outside the lymphatic system.[1] Primary Lymphoma of bone (PLB) are uncommon malignancies that account for approximately 3% of all malignant bone and 4% to 5% of all extranodal NHL. There is a slight male preponderance and most patients are over 45 to 50 years of age.[2] Although PBL can arise in any part of the skeleton, long bones are the most common sites of presentation. Musculoskeletal involvement of non-Hodgkin's lymphoma occurs in 25% of patients, typically as metastasis and, rarely, as primary lymphoma of bone or soft tissue.[3] Here we present a case of primary non-Hodgkin's lymphoma of bone arising from hip with clinical and radiological diagnostic difficulty.

CASE

A 45 years old man presented with complains of pain in right hip for 5 months. He had difficulty in walking due to pain in the hip. He had no pain in other joints. He had no history of trauma, fever, any drug intake. He was nonsmoker, was not taking alcohol, and had no other medical illnesses.

On examination, he had antalgic gait with right lower limb, trendelenberg test was positive. The limb was externally rotated, Thomas test was positive with fixed flexion deformity of 25 degrees. Anterior joint line was tender and bitrochanteric compression was painful. Further flexion was from 25-100 degrees, abduction/adduction was 30 degrees, and rotations were painful with restricted extreme ranges.

Laboratory investigation showed marginal elevation of leucocytes count of 12,200/cmm with normal ESR and other parameters. His Mantoux test was positive with 21 mm induration. X-ray examination of the hip showed some changes in femoral head with maintained joint space (Figure 1a and 1b).

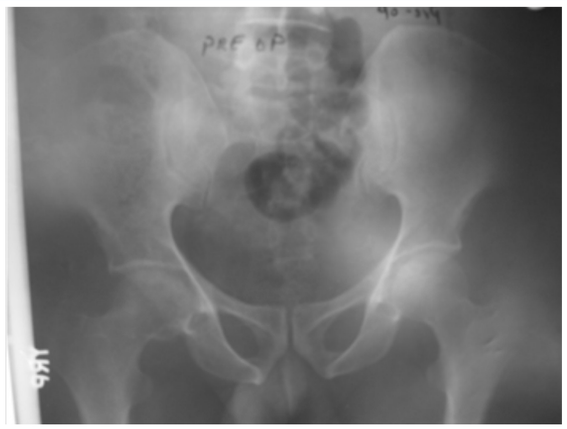

Figure 1a. X-ray hips showing changes in femoral head with maintained joint space.

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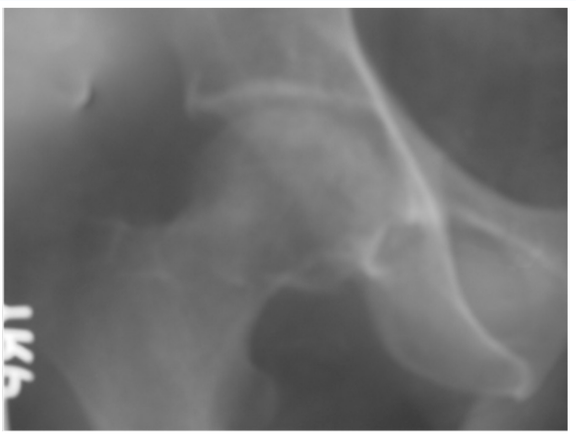

Figure 1b. X-ray hips showing changes in femoral head with maintained joint space.

Clinical and radiological diagnosis was made as avascular necrosis of femoral head with differential diagnosis of TB arthritis synovial stage. MRI also reported as AVN femoral head Mitchell class-2.

Considering the diagnosis as AVN of femoral head, core decompression was done

and free fibular strut graft was put. The patient was discharged and put on regular follow up for 3 months. He returned to the hospital after 5 months with the complaints of increasing pain in right hip for 2 weeks with fixed flexion deformity and restricted rotation. X-ray of the hip showed suspicion of ongoing necrosis and fracture at the neck.

He was advised for CT scan that was inconclusive so the patient was advised for non-weight bearing crutch walking and pain killer as required. The patient was still symptomatic. CT scan was repeated after 2 months.

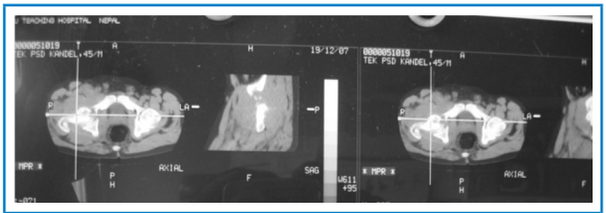

Figure 2. CT Scan of the hip with erosion of femoral head and acetabulum.

There was an erosion of femoral head and acetabulum with soft tissue mass (Figure 2). The diagnosis was made as Infective lesion or synovial tumor. Fine needle aspiration was not conclusive so, incisional biopsy was done. Preoperative laboratory and imaging findings were normal except ESR which was 42. Per operatively, whitish Fish fleshy vascular mass was extending to soft tissue around the greater trochanter was found.

Histopathology findings:

Photomicrograph of biopsy tissue showing diffuse infiltrate of large atypical lymphocytic cells with irregular nuclei, diagnosis was made as Non-Hodgkin's lymphoma -diffuse large cells type (Figure 3).

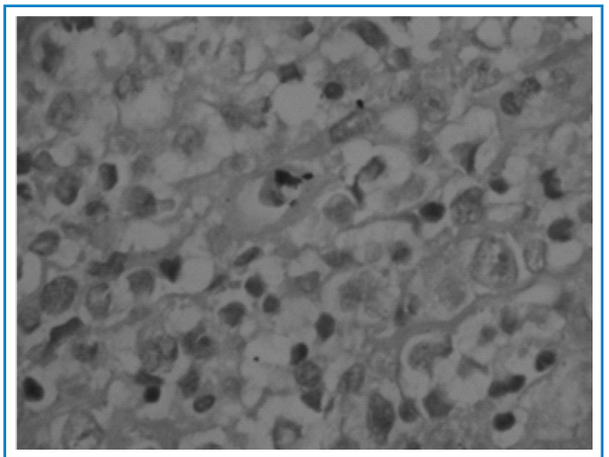

Figure 3. High-power view of the atypical lymphocytic cells.

Since there was no possibility of reconstructing the hip joint, after the final diagnosis patient was referred to cancer hospital for palliative chemotherapy and radiotherapy.

DISCUSSION

The case of our patient presented a challenging diagnostic problem not only because of the rarity of the condition but also because of the presentation of the disease without symptoms usually associated with a malignant condition. Usual diagnosis at this age could be avascular necrosis of the femoral as the first diagnosis. Since tuberculosis in our part is quite common and Mantoux test was positive, we had to seek other diagnostic modalities as well. On X-ray and MRI, joint space was maintained and there was no feature of any inflammation or effusion inside the joint, we decided to rule out the tubercular infection, so avascular necrosis of femoral head was put as provisional diagnosis.

In this report, we have described the clinical and radiological findings of primary bone non-Hodgkin's lymphoma presenting as avascular necrosis of femoral head to show the possible difficulties of clinical and radiographic diagnosis, particularly when the tumor involves the joint.

Non-Hodgkin's lymphoma can present as either a nodal form with local or regional lymphadenopathy or, less commonly, as an extranodal form outside the lymphatic system.[1] Primary Lymphoma of bone (PLB) is uncommon

malignancies that account for approximately 3% of all malignant bone and 4% to 5% of all extranodal NHL.There is a slight male preponderance, and most patients are over 45 to 50 years of age.[2] Although PLB can arise in any part of the skeleton, long bones are the most common sites of presentation. Heyning et al,[3] found in a study of 60 cases of primary NHL, that long bones were affected in 48% of cases (29 localizations), 17 in the femur, 6 in the humerus, and only 1 in forearm bones .

Primary lymphoma of bone (PLB) is a rare disease;moreover,adult PLB is still rare and constitutes less than 1% of all non-Hodgkin lymphomas.[4] Primary Lymphoma of bone was first described by Oberling in 1928.[3] It was not until 1939 that Parker and Jackson[3] described 17 cases of 'primary reticulum cell sarcoma of bone' and established PLB as a distinct clinicalentity. Even today the diagnosis of PLB can be difficult due to the relatively non-specific radiographic appearance and the sometimes profound proliferation of reactive fibroblasts at the histological level.[3] De Beer et al,[5] reported a case of primary malignant lymphoma presenting as a popliteal mass in a patient treated for rheumatoid arthritis, and Haase et al,[6] described another case of NHL presenting as a knee monoarthritis with popliteal cyst. All these cases are illustrating the possibility of diagnostic error.

The radiographic appearance of PBL is variable and to some authors not specific.[7] The lytic-destructive pattern is the most common radiographic appearance; it was reported in approximately 70% of 237 cases reviewed by Mulligan et al.[8]Histologically, primary bone lymphoma most commonly are large cell or mixed small and large cell lymphomas of the B cell type.[3,8] With a very high frequency of multilobatedcentroblastic subtype.[7]

In conclusion, Lymphoma should also be included in the differential diagnosis of a patient with joint pain. Histopathological examination of Core Biopsy material in suspected avascular necrosis is always advisable.

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