IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 11 Ser.2 (November. 2019), PP 41-43
www.iosrjournals.org

Case of Diffuse Large B Celllymphoma of Tibia

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Abstract: *Primary bone lymphoma is a rare entity in itself. A number of studies on primary bone lymphomas have been reported from western countries but only a few reports are available from Asia*.

Date of Submission: 24-10-2019 Date of Acceptance: 09-11-2019

I. Introduction

The clinical manifestations of diffuse large B cell lymphomas vary and depend on the site of disease involvement. Most common location being spine, ischium, long bones particularly femur and most common presentation being pain followed by swelling.[2]

Epidemiologic data indicate that lymphoma of lower extremity bones has excellent prognosis compared with non-Hodgkin lymphoma presenting in young patients at other sites.[3]

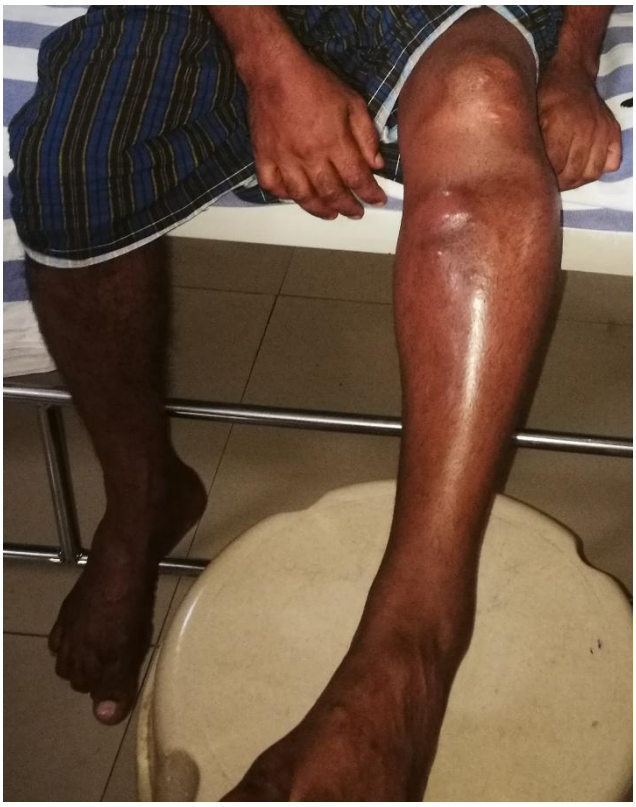
Primary lymphoma of bone is an uncommon clinical entity and accounts for less than 5% of malignant bone tumors, 4–5% of extra nodal lymphoma and less than 1% of all non-Hodgkin's lymphoma. Diffuse large-B-cell lymphoma (DLBCL) accounts for the majority of cases of primary bone lymphoma[4]

II. Case Report

A 40 year old male presented with complaints of pain over the left knee joint since 1 year and swelling below the left knee joint since 2 months.

There was history of fall from height 1 year back which was treated conservatively. The patient had no known comorbidities.

On examination, 8 x 10cm lesion noted 4 cms below the left tibial tuberosity with local rise in temperature and erythema. Swelling was hard in consistency, skin over the swelling was tense, stretched and shiny. There was bilateral inguinal lymphadenopathy, largest measuring 2x 2 cms on the left side.



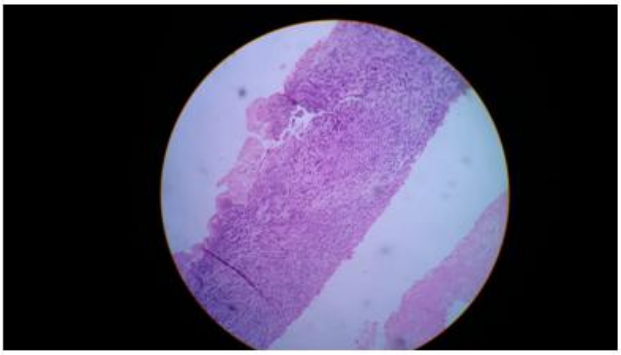
Routine blood workup was unremarkable.

AST 104, ALT 115
Peripheral smear was normal.
Sputum AFB was negative

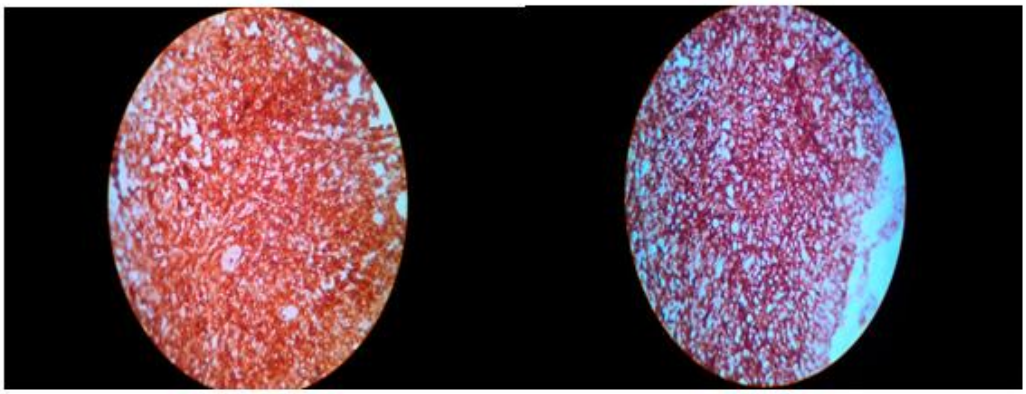
MRI showed altered marrow signal in proximal 2/3rd of tibia with soft tissue component in proximal shaft region causing significant mass effect on neurovascular bundles and adjacent muscles. Subcutaneous planes show marrow oedema. Medial meniscal tear in posterior horn (grade I) Anterior cruciate ligament partial tear. Mild left knee joint effusion- likely to be sarcoma.

As open trucut biopsy was inconclusive, CT guided trucut biopsy under spinal was performed and specimen sent for imprint cytology and histopathological examination.

HPE suggestive of diffuse large b cell lymphoma.
Immunohisto chemical stains were reviewed and found to be CD45, CD20 , CD 10 and CD79a positive.

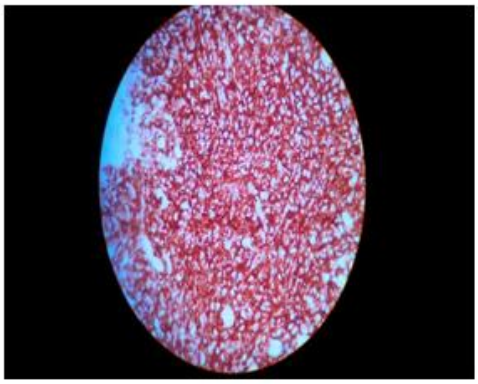


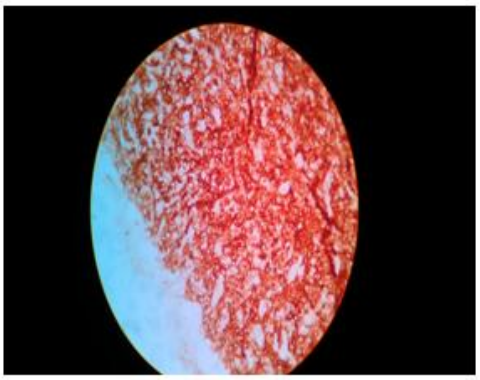
LOW POWER VIEW OF THE TUMOUR CELLS



CD 45 POSITIVE

CD 79a POSITIVE





CD 10 POSITIVE

CD 20 POSITIVE

Bone marrow biopsy was normal
Ct chest was unremarkable.
Medical oncologists opinion was sought and patient was planned for 6 cycles of RCHOPP chemotherapy regimen.
After 3 cycles of chemotherapy drastic reduction in size of tumor was noted and patient was symptomatically better.
Patient is due for his 4th cycle of chemotherapy

III. Discussion

As per a small case series, an association of trauma with bone lymphomas has been proven.

Owing to the possibility of repetitive, microtrauma and subsequent inflammation of proximal tibia which is common in young age who involve in most of the athletic activities.[4]

Bone lymphomas in young are more common in the tibia, more often bilateral and has a favourable prognosis in comparison to other sites.

IV. Conclusion

PBL in itself is a rare tumor with a comparably favorable outcome and only few studies having been done on it. Therefore, its varied clinical and histopathological profiles are yet to be studied in detail. Although primary bone lymphoma is a rare entity, still it should be kept in mind while dealing with bone lesions especially in the setting of an unusual presentation. A final diagnosis should be made only after proper clinical, radiological, histopathological and immunohistochemical correlation.

The locally limited primary bone lymphoma should be differentiated from potentially systemic variant because they have different characteristics with regard to clinical outcome.[5]

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Ramya Shetty. "Case of Diffuse Large B Celllymphoma of Tibia." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 11, 2019, pp 41-43.