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Angiosarcoma of the Left Tibia in 12 Years Old Child; An Extremely Rare case

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Abstract: **Angiosarcoma is a vascular malignancy that derived from mesenchymal cell source. It reports around 1-2% of all soft tissue sarcomas. The incidence of angiosarcomas cannot be determined by age because of insufficient data. The Angiosarcomas are found more commonly in men in comparing to women.**

Case presentation: 12 years old female presented with swelling of the left upper tibia since 3 months, progressive over time. X-Ray, MRI and bone scan were done (Fig. 1, 2). There were an Osteolytic lesion at the proximal tibial epiphysis and metaphysis with extension to epiphysis broad plate. The first biopsy was interpreted as Telangiectatic Osteosarcoma. There was no Fever, no discharge from swelling and no history of trauma. After repeating the biopsy with special immunostaining, the final diagnosis was made to High grade angiosarcoma of the bone.

Conclusion: The angiosarcoma of the bone is extremely rare, according to our knowledge, no such cases have been reported in children. This case report shows the radio-pathological correlation in regarding to understanding those cases in the future.

Keywords: **Angiosarcoma, Bone, Children.**

I. INTRODUCTION

Angiosarcoma is a vascular malignancy that derived from mesenchymal cell source. It reports around 1- 2% of all soft tissue sarcomas [1]. The incidence of angiosarcomas cannot be determined by age because of insufficient data [2]. Upon reviewing literatures, no such case have been reported in children. These types of tumors could be found anywhere but in bone is considered to be rare [3]. Of the bones, the Tibia and femur are commonly sites. The Angiosarcomas are found more commonly in men in comparing to women [4]. Angiosarcoma is known to be aggressive in presentation and those who have this tumor ordinarily die within a year [5].

This paper represent a case Report of angiosarcoma of left tibia in a 12-old female. The tumor has been diagnosed after radiographic examination as well as the biopsy.

II. CASE REPORT

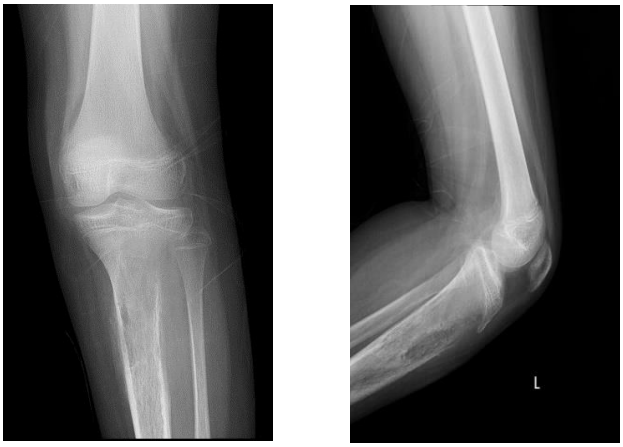
12 years old female presented with swelling of the left upper tibia for 3 months, progressive over time. X-Ray, MRI and bone scan were done (Fig. 1, 2). There was an Osteolytic lesion at the proximal tibial epiphysis and metaphysis with extension to epiphysis broad plate. The first biopsy was interpreted as Telangiectatic Osteosarcoma. There was no Fever, no discharge from swelling and no history of trauma. After repeating the biopsy with special immunostaining, the final diagnosis was made to High grade angiosarcoma of the bone.

III. DISCUSSION

Angiosarcoma is a vascular malignancy that derived from mesenchymal cell source. It account for about 1- 2% of all soft tissue sarcomas [1]. The Angiosarcomas are found more commonly in men in comparing to women [4]. In Angiosarcoma patient, Unifocal or Multifocal osseous lesion could be seen [6]. On radiographic examination of angiosarcoma in the bone has variant shapes and characteristic [6]. And they represent largely by destructive lytic lesion [7].

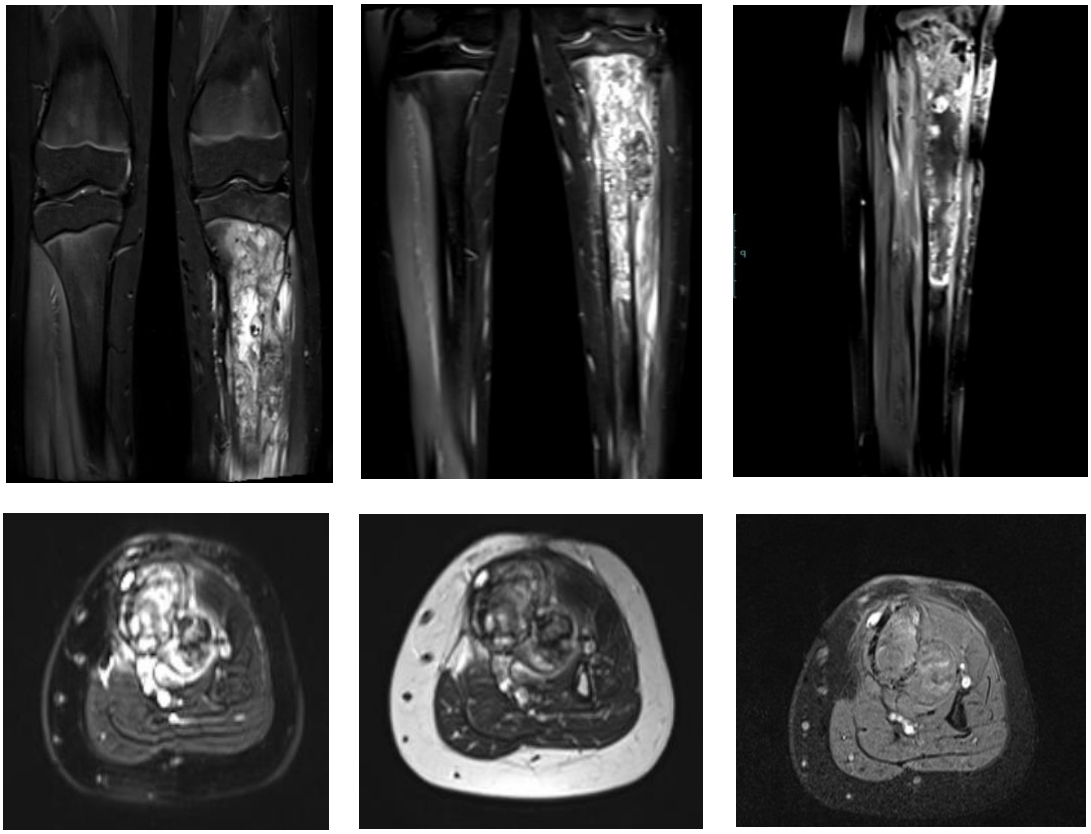
In our case the X-ray (Fig 1) and MRI (Fig 2) shows large destructive bony lesion involving the proximal and mid shaft of the left tibia, as detailed. The imaging features are most suggestive of an underlying malignancy such as osteosarcoma, less likely Ewing sarcoma considering the location and the lack of large extraosseous soft tissue component.

Fig. 1:



On X-ray, there is a destructive permeative lytic lesion of the proximal left tibia with destruction of the lateral and anterior cortex. There is a suggestion of small soft tissue component anteriorly.

Fig. 2:

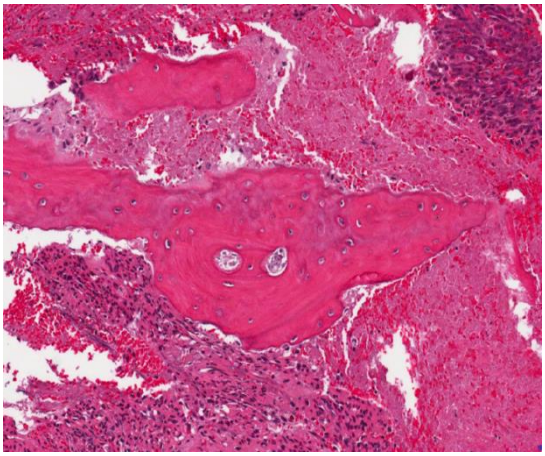


On MRI, there is a large heterogeneous destructive lesion arising from the proximal diametaphysis of the left tibia. Heterogeneous T1 and T2 signal with multiple areas of cystic change, calcification and multifocal areas of cortical breakthrough along its course. There is a moderate size Oval- shaped extra-osseous component at the lateral aspect of the lesion. After administration of contrast, it shows mild diffuse heterogeneous enhancement of both intraosseous and extra-osseous component.

A histopathology images (Fig.3) show malignant spindle cells neoplasm composed of pleomorphic spindle cells with open nuclei, prominent nucleoli, and brisk mitotic activity including a typical mitotic figures. Large zones of necrosis and haemorrhage are noted. Vascular markers including CD34 and CD31 are diffusely positive.

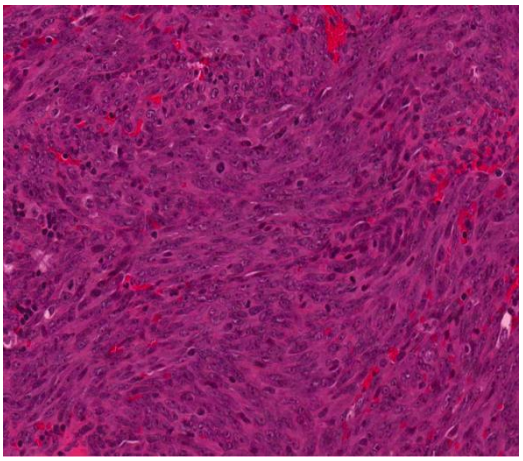
Fig. 3:

Section 1:



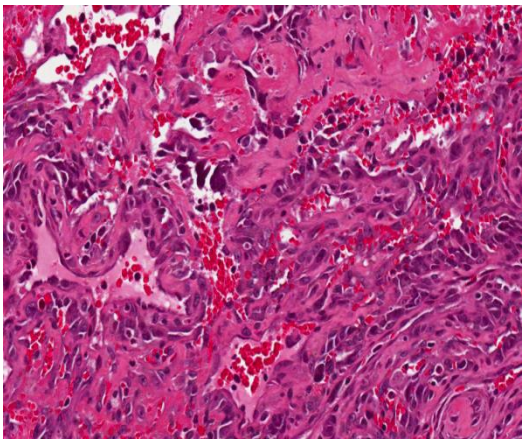
Tumour cells infiltrates the pre-existing bone trabeculae.

Sections 2:



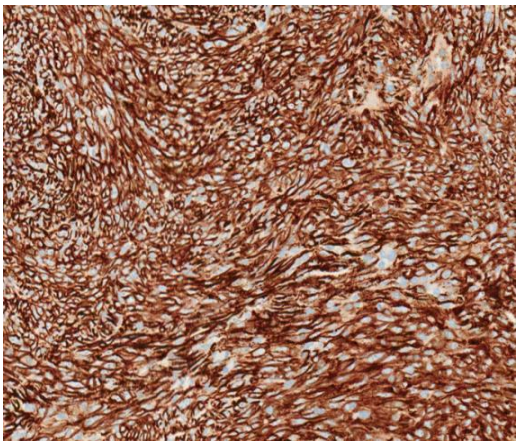
Malignant spindle cell neoplasm with moderate to marked nuclear pleomorphism and brisk mitotic activity.

Sections 3:



Vasoformative malignant neoplasm with prominent nuclear pleomorphism.

Section 4:



Immunostaining for CD31 shows strong membranous staining of the endothelial cells confirming the vascular nature of the neoplasm.

The final diagnoses is High grade primary angiosarcoma of the bone which considered extremely rare in children in comparing to cutaneous, visceral, and soft tissue cases.

A case of 69 years old man who was diagnosed similarly as our case of angiosarcoma and died due to lung metastasizes after two months [6]. Another case of 62 years man old who was diagnosed with angiosarcoma of the left tibia and received a chemotherapy is the much the same as our case except the demographic data, both patients died [8].

Finally, the management of these tumors is controversial, most of the cases treated with resection in addition to adjunctive radiotherapy. The chemotherapy (Doxorubicin) based course has been used as the treatment of angiosarcoma [6].

IV. CONCLUSION

The angiosarcoma of the bone is extremely rare, according to our knowledge, no such cases have been reported in children. This case report show the radio-pathological correlation in regarding to understanding those cases in the future.

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