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CASE REPORT

SYNOVIAL SARCOMA OF FOOT: A RARE CASE REPORT

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Abstract

Synovial sarcoma, fourth most common soft tissue sarcoma accounts for 8-10% all soft tissue sarcoma. In general, this tumor is found in the distal extremities, especially lower limb. Synovial sarcoma around the toes district is an unusual location. We report a rare case of synovial sarcoma of left forefoot in a 14 year old girl, managed with surgical excision and split skin graft.

Introduction

According to the AFIP [i,ii] synovial sarcoma is the fourth most common soft-tissue sarcoma after malignant fibrous histiocytoma, liposarcoma, and rhabdomyosarcoma, accounting for approximately 8-10% of all soft tissue sarcomas. [iii,iv] The neoplasm often originates in para-articular regions of the major joints and burses of the extremities, particularly around the knee, hip, and shoulder joints. Other localizations such as the foot, intraarticular, and internal organs are unusual sites. [v,vi] In general, this tumor is found in the distal extremities, especially lower limb and is associated with the tendon sheath, bursa, and joint capsule [ii] Synovial sarcoma around the toes district is an unusual location. [iii,iv] We report a rare case of synovial sarcoma of left forefoot.

Case report:

A 14 year old girl presented with complaints of pain and mass in the medial aspect of left foot. She had first noticed mass one and half year ago which gradually increased in size. There was history of trauma or any other significant history. On examination, a foul smelling 14 x10cm soft, pedunculated mass with lobulated (bosselated) surface on the sole of the fore foot with skin over the mass showing discolouration with secondary infection(fig 1) was noted. Laboratory investigations were within normal limits. Plain radiograph of foot shows a soft tissue mass with no calcifications (fig 2). MRI scan showed lobulated soft tissue mass. Fine needle aspiration cytology was suggestive of epithelial malignancy.

We made a provisional diagnosis of synovial sarcoma and decided to excise the mass and assess further. Hence, under spinal anaesthesia, we excised the mass with 2cm margin away from the pedicle. A split skin grafting was applied to close the defect (fig3, 4). Patient was given antibiotic coverage (cefoperazone sodium, amikacin and metronidazole) pre and post operatively. Post operative period was uneventful. Patient was discharged on the 14th post operative day.

Excised tissue was sent for histopathological examination which revealed a lobulated multicystic soft tissue mass received.(fig 5) giving an impression of Synovial sarcoma.

Discussion

Synovial sarcoma is commonly seen in adolescents and young adults between the ages of 15 to 40 years. Our patient's age was typical for synovial sarcoma, which is a tumor of young adults.[iii,iv] While the symptoms can be variable, the most frequent complaints are pain and a mass. The mass may only present with swelling, or it can be multi-lobular, firm, and well-circumscribed. In some cases, the mass may be painless for years[vii] and slow growing. Frequently, the duration of symptoms is 2 to 4 years.[ii] Our patient too presented with multilobular soft, pedunculated mass with lobulated (bosselated) surface since 1.5years.

The most common location of synovial sarcoma is in the extremities near a large joint, with a propensity for the knee. [ii] Occurrence near a small joint is relatively rare and our patient had it around the first metatarsophalangeal joint.

Plain radiographs generally do not provide much information and in about 15% to 20% of cases, underlying bone reaction (such as periosteal reaction, superficial bone erosion, or invasion) or multiple smalljadiopaclties from focal calcification can be seen in X-rays.[ii, vii] Radiographic findings of our patient was almost normal except for soft tissue swelling.

MRI is the modality of choice in the evaluation of soft-tissue tumors of the foot and ankle[i,viii,ix] allowing examination of a mass in the axial, sagittal, and coronal planes. Although the image does not provide a histological diagnosis, it shows features that allow differentiation between benign and malignant lesions.

The treatment for synovial sarcoma is wide or radical excision with adjunctive radiation therapy and possibly chernotherapy[vii,viii] A wide excision involves complete removal of the tumor with a surrounding margin of normal tissue and maintenance of the intact pseudocapsule. With a radical excision, the entire compartment is excised, usually by amputation.

The histological characteristics of synovial sarcoma are an epithelial component (similar to carcinoma) and spindle cells (fibrosarcoma appearing). The most common form of this disease is the biphasic type, with epithelial cells and fibroblast-like spindle cells present[ii, x] Histopathological examination of the excised mass from our patient revealed cellular lesion composed of sheets and fascicles of spindle cells with indistinct cytoplasm, irregular nuclear membrane, mild pleomorphism, open chromatin and prominent nucleoli. Few poorly formed glandular areas were seen; foci of necrosis, haemorrhages were seen but there was no evidence of vascular emboli. These features were suggestive of synovial sarcoma.

We advised immunohistochemistry but was not performed as the patient could not afford. This test would have established the diagnosis.

The prognosis for 5-year survival ranges from 36% to 76%, and the 10 year survival rate is less (20% to 63%), because of late metastases.(7) Favorable prognostic factors include age of the patient (15 years or younger), less than 5 cm in size, distal extremity involvement, and low tumor stage.

It is 13 months since the surgery and there is no untoward event reported. Patient is doing well and there is no sign of recurrence noted till now.

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Figure 1 showing the mass in the medial aspect of left foot preoperatively.

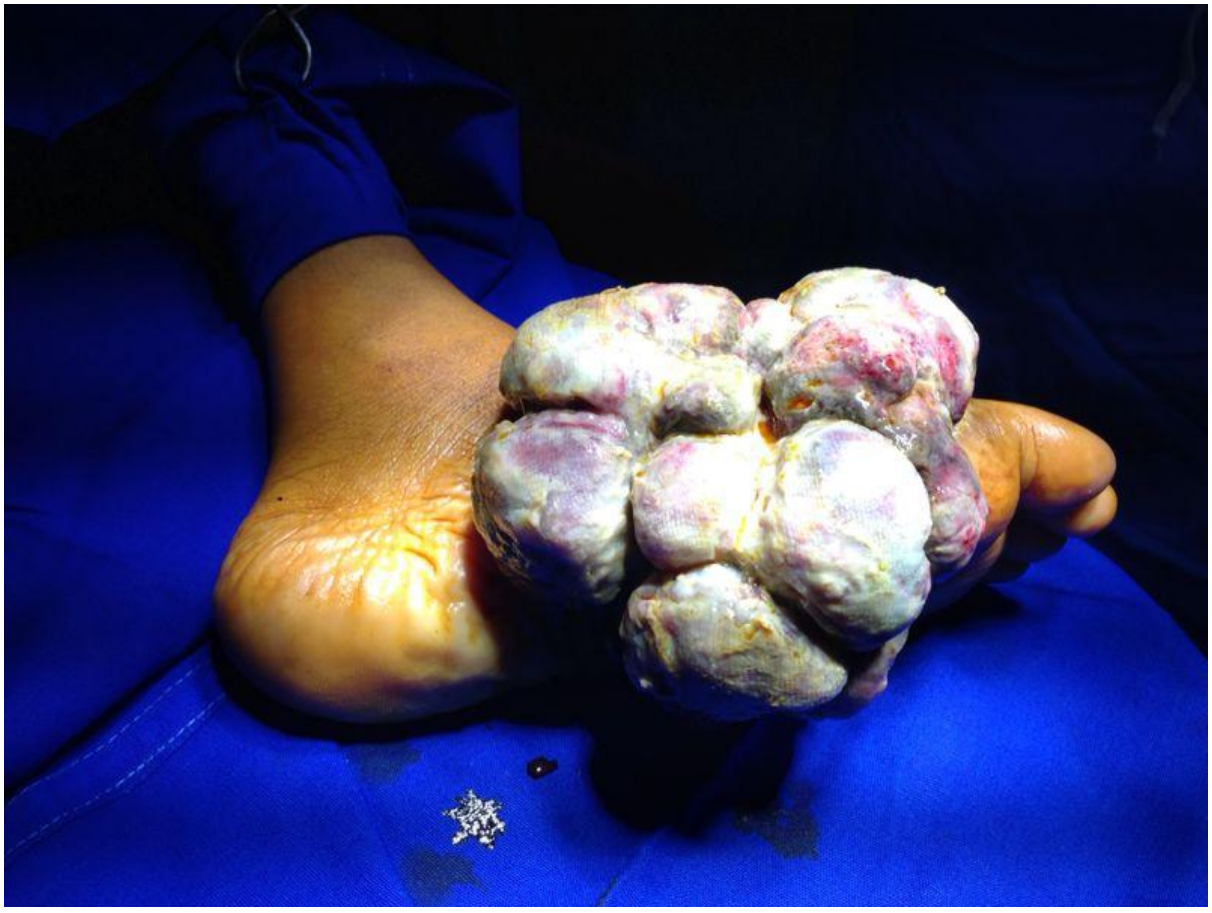


Figure 2 Plain X-ray of the left foot preoperatively

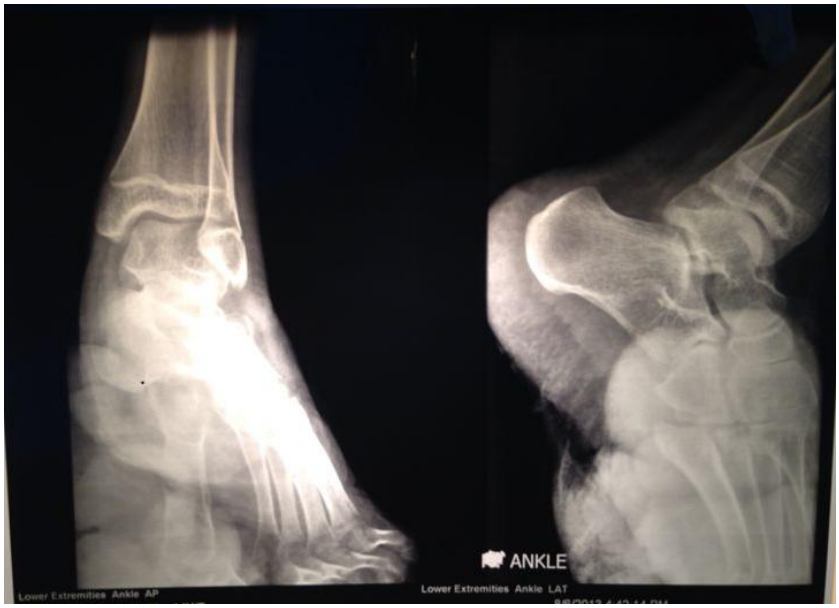


Figure 3 showing excision of the mass

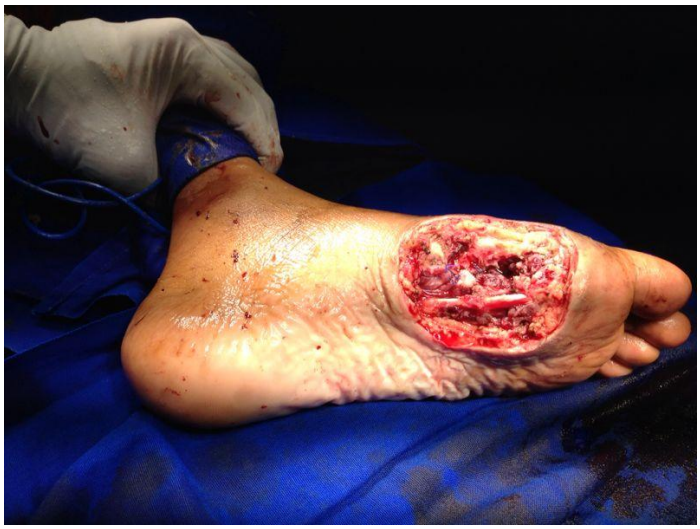
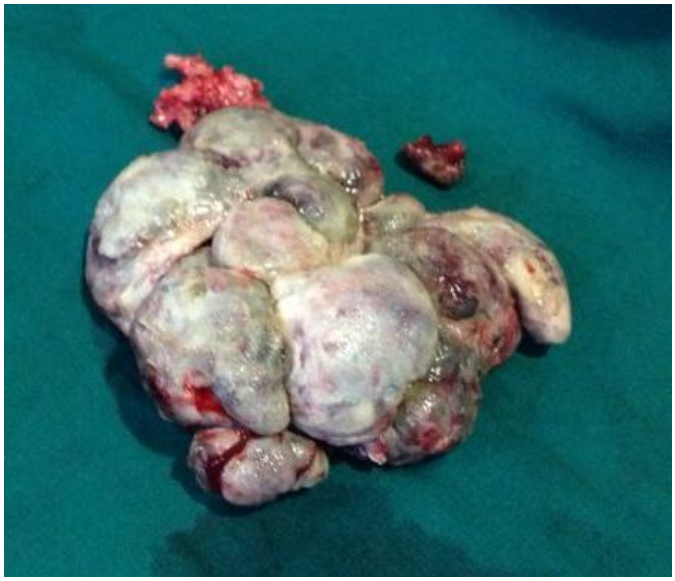


Figure 4 showing the excised mass



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