

Spindle Cell Lipoma of Foot in a Young Girl - A Case Report

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Abstract: Spindle cell lipoma are slow growing neoplasm originating in subcutaneous layer, presenting mostly in upper extremities, posterior neck and back with clinical features of painless mobile swelling. Radiological MRI suggesting hyperintensity on T1. Microscopic features showing spindle cell with mature fat and collagen and with preponderance in males significantly more than females & with incidence of 1.5% of all adipocyte tumors with differentials like pleomorphic lipoma and atypical lipoma. We came across a case of soft tissue tumor in young girl in foot with features of pain and deformity necessitating us to resect for definitive diagnosis and further immunohistochemical typing.

Keywords: Spindle cell, lipoma, foot swelling, dermatology, popliteal block, CD34, spindloid cells, neoplasm, foot tumor, foot and ankle, adipocyte tumor

1. Introduction

- Spindle cell lipoma are rare, slow - growing benign neoplasm arising from subcutaneous layer which typically presents in age group of 40 – 70 years age group with rare chance of metastasizing to other parts
- Male to female ratio is 9: 1⁽¹⁾
- Found in 88% cases with typical locations like back, neck and upper extremities, 12% in atypical locations like leg, buttocks and only 3% in foot⁽²⁾
- Histology include mature adipocytes blended with spindle cell and ropey collagen bundles and is accompanied with CD34 positivity⁽²⁾

2. Materials and Methods

- The patient is a 15 year old girl who presented to us with complaints of a soft tissue mass in her right foot since last 8 years, it was insidious in onset and had progressed very slowly in the intermetatarsal space of 2nd and 3rd metatarsal.
- It was initially painless but had become painful while walking since the preceding 6 months.
- It was a well - defined mass of size 2 x 3 x 2 cm, not adherent to skin or bone, with no local rise in temperature or any discoloration.
- No history of any infection or trauma and also all blood investigations were within normal limits.
- X - rays were inconclusive, but MRI revealed a soft tissue lobulated mass measuring 3.8 x 2.4 x 4.1 cm that extended anteriorly to the proximal phalanx and also from dorsal to plantar aspect of the foot with no changes in any surrounding muscle tendon or bone.
- Under Popliteal nerveblock after applying the tourniquet, swelling was found to be adhered to the periosteum of the 2nd and 3rd metatarsals and also the extensor digitorum brevis and was thus excised and sent for histopathologic and immunohistochemical typing.



Figure 1: Pre op xray of swelling

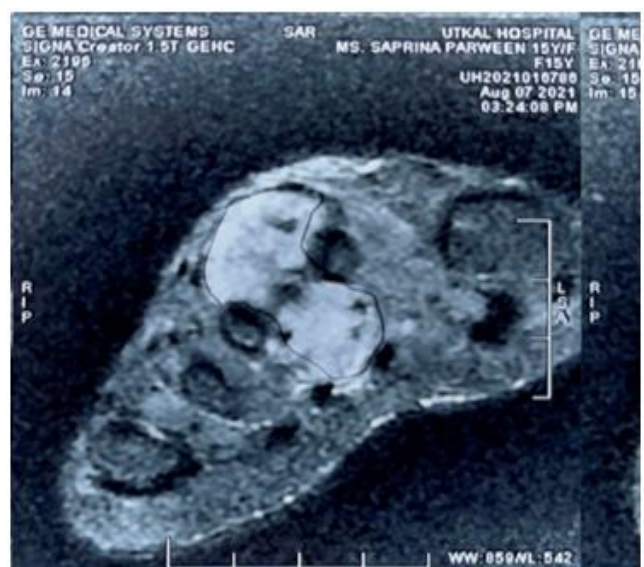


Figure 2: Soft tissue swelling compressing metatarsals

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Figure 3: Soft tissue mass involving superior till inferior plane



Figure 4: Local swelling



Figure 5: Swelling adhered to Metatarsals

3. Discussion

- Kirby⁽³⁾ analyzed 83 cases of soft tissue tumor of foot and suggested 87% of them were benign lesions and the remaining malignant, lipoma accounted for 8.4% cases, Ruggieri⁽⁴⁾ analyzed 1170 cases and out of 189 soft tissue masses, 91 were benign and 98 were malignant, lipoma accounted for 20 such cases.

- Lipoma is a well circumscribed lesion with the histologic appearance of mature adipocytes with pauci-cellular fibrous septa. It differentiates from spindle cell lipoma, which has spindloid cells mixed with mature adipocytes and dense sheets of collagenous matrix.
- Within the mass, MRI revealed hyperintensity on T1 and PDFS sequence.
- Subtypes like pleomorphic lipoma are accompanied by nuclear pleomorphism and atypical lipomas have multinucleated cells and adipocytes with large hyperchromic nuclei.
- Immunoperoxidase studies revealed that spindle cells were highly positive for CD 34⁽⁵⁾.

4. Conclusion

A case of a soft tissue mass between the 2nd and 3rd metatarsal presented to us with an MRI that suggested lipomatous tumours. The mass was excised and sent for histopathology, which confirmed our diagnosis. Such tumors are usually found in the neck and back and in the middle age group, contrary to our case, which is a rare occurrence in a 15 - year old girl presenting in the foot.

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