

Case Report

A case report of a liposarcoma mimicking hemangioma

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ABSTRACT

Lipomas, one of the commonest soft tissue tumours encountered in surgical OPD's and liposarcomas are malignant tumours which may mimic the former. Here we present a case report of a 55 years old female who presented with a slow and progressively growing tumour over her right upper limb which was compressible and provided no pain or discomfort mimicking a hemangioma.

Keywords: Atypical lipoma, Hemangioma, Lipoma, Liposarcoma

INTRODUCTION

Lipomas are benign soft tissue tumours originating from the loose fatty connective tissue composed of adipocytes called the adipose tissue that are frequently encountered in surgical OPDs around the world. It may present in any part of the body, but most are located subcutaneously and commonest over neck, trunk and upper and lower proximal extremities. These tumours are generally asymptomatic but in some rare cases they may cause some discomfort or pain with direct pressure.^{1,2} Atypical lipomas aka well differentiated liposarcomas represents the lowest grade lesions of liposarcoma with a better prognosis when compared to their counterparts. These atypical lipomas have a relatively benign course.³⁻⁶ The diagnosis of lipomas are almost always clinical with physical examination and the liposarcomas also present in similar fashion which resembles the former in imaging techniques such as Computed Tomography and Magnetic Resonance Imaging.⁷

CASE REPORT

A 55 years old lady presented to us with swelling over her right forearm for the past 1year. Initially the swelling

was small in size and insignificant but gradually progressed to the size of a cricket ball. She was not complaining of any pain over or around the swelling nor did she presented with any difficulty or restriction in moving her right upper limb. Her general, systemic examination and vitals were normal. Local examination revealed a multilobulated swelling of size 6x4cm over the ulnar aspect of the right forearm and the skin over the swelling was devoid of any scars, ulcerations or discharge. The swelling was soft in consistency and compressible completely but got more prominent on contraction of the muscles as in Figure 1. There was no warmth or tenderness over the swelling and non-pulsatile. On auscultating, no hum or bruit heard. The radial artery pulsations were feebly felt, and the extremities of the upper limb were otherwise normal. Ultrasonogram of the local area showed a large isoechoic to hypoechoic lesion breaching forearm fascia noted at few sites in the flexor compartment of the right mid forearm. The Arterio-venous doppler of the right upper limb was normal. MRI scan confirmed the dimensions and the location of the tumour as it is seen in the muscle plane, displacing the flexor compartment muscle in the medial aspect and extending into the subcutaneous plane through fascial defect at few places and STIR hyperintensity region

suggestive of areas of fat necrosis. The neuro-vascular bundle was unremarkable and suggested the possibilities of Atypical lipoma with areas of fat necrosis without any neurovascular involvement thus ruling out the suspicious differential diagnosis of hemangioma which arise due to the compressibility of the tumour.



Figure 1: Preop picture of the tumor showing complete compressibility mimicking hemangioma.

Surgical excision of the tumour was planned under regional anaesthesia. About 6cm linear incision was made over the swelling, lipoma was seen popping out at 3 punched out fascial defects which was completely reducible through the defects. Deep fascia was opened and a huge 14 x 8cm well encapsulated lipoma was seen in a cramped space displacing the flexor compartment muscles and ulnar nerve.



Figure 2: Intraop picture showing lipoma popping out at 3 punched out fascial defects which was completely reducible through the defects.

Complete excision of well encapsulated lipoma was done preserving the ulnar nerve and wound closure done. Histopathological examination of the tumour

predominantly showed >95% lobules of mature fatty tissue divide by thin fibrous septae with few areas of fat necrosis, haemorrhage, aggregates of lymphoplasmacytic infiltrate and hemosiderin laden macrophages.

It also showed few scattered spindle shaped cells with nuclear enlargement, hyperchromasia and pleomorphism. Occasional cells show intranuclear inclusion and vacuolated cytoplasm and occasional lipoblasts were identified with no evidence of mitosis. And in view of the age of the patient, the size and the size of the tumour and the presence of few scattered pleomorphic cells, the tumour was reported as Atypical Lipomatous Tumour/Well Differentiated Liposarcoma. No adjuvant therapies were given. The patient was closely followed up with review scans at 6 months and 1 year which showed no signs of recurrence.

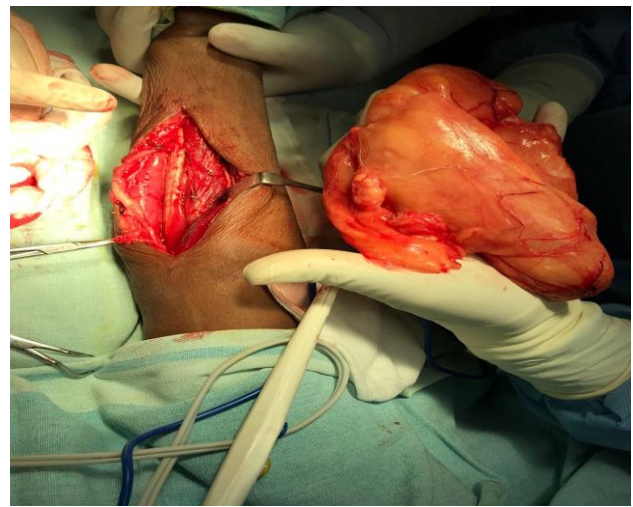


Figure 3: Complete excision of 14 x 8 cm well encapsulated lipoma was done retracting the flexor compartment muscles and preserving the ulnar nerve.

DISCUSSION

Lipomas are the most commonest of all benign musculoskeletal masses.⁸ These tumours arise from adipose tissues and contains adipocytes and are almost always benign and rarely evolve into malignant liposarcomas. Differential diagnostic considerations presented by Resnick for benign and malignant masses of soft tissues were noted in his series.⁹ Liposarcomas are the second most common malignant soft tissue tumour following histiocytoma and it resembles lipomas in CT scans and MRI. The liposarcomas may be well differentiated, pleomorphic, myxoid type and dedifferentiated.

Well differentiated liposarcomas comprises 40-45% of all liposarcomas. It is also called as atypical lipoma or atypical lipomatous tumour due to its relatively benign course when compared to the other types of liposarcomas. These tumours commonly occur in limbs and retroperitoneum but can also occur in spermatic cord

and mediastinum and have substantially different behavioural pattern depends on the location. Somatic soft tissue tumours show very little evidence of distant metastasis but can recur. These recurrent tumours usually have a dedifferentiated appearance and may lead to death. Based on histopathological appearance, atypical lipomas are classified into 4 subtypes- adipocytic, sclerosing, inflammatory and spindle cell type. Adipocytic type lipomas are large, well circumscribed, coarsely lobulated tumors with microscopically mature adipocytes of varying cell size. Crescent shaped nuclei are present, and lipoblasts are characteristic in benign adipocytic tumours. Sclerosing type lipomas are common in retroperitoneum and para-testicular regions. They are relatively pale and firm lesions. They have scattered hyperchromatic stromal cells, multivacuolated lipoblasts set in collagenous background and a foci of atypical lipomatous elements microscopically. Inflammatory tumors contain dense chronic inflammatory infiltrates obscuring the lipogenic areas. Lymphoid cells and plasma cells are prominently aggregated simulating an inflammatory pseudotumour. Spindle cell type lipomas contain bland spindle cells proliferation in a fibroid or myxoid background along with atypical lipomatous components. Tumour marker for diagnosis is Ring or Long marker chromosome derived from q13-15 region of chromosome 12.¹⁰

Pleomorphic liposarcomas are rare form of liposarcomas comprising 5% of liposarcomas. They are usually located in limbs of older adults. They are aggressive tumours and they show distant metastasis with a mortality rate of about 40%. Microscopically they have a high grade pleomorphic MFH like sarcoma containing few, scattered multivacuolated lipoblasts and a cellular pleomorphic or spindle cell neoplasm containing sheets of large bizarre lipoblasts.¹¹

Myxoid and round cell liposarcomas usually occurs in limbs of adult human beings between third to fifth decade of life and they represent 30-50% of all the liposarcomas. Pure myxoid liposarcomas are low grade tumours characterised by hypocellular bland spindle cells in a myxoid background. Univacuolated lipoblasts are present around the vessels and the multivacuolated lipoblasts are found around the peripheral subcapsular zone. They have the characteristic crow's feet/ chicken wire pattern formed by thin walled branching vessels arranged in a plexiform pattern. Pure round cell liposarcomas are rare and have more than 80% round cells with have increased potential for metastasis and these tumours are classified as high-grade tumors.¹² Mixed myxoid and round cell type are characterized by hypercellular areas with undifferentiated round cells. The cells are larger and more rounded in configuration when compared with the spindle cells of typical myxoid variant and also have an aggressive behaviour.

Dedifferentiated liposarcomas occurs usually within well differentiated liposarcomas. They are characterized by the abrupt transition from a low grade lipogenic morphology

to a high grade lipogenic morphology. 90% of these transitions occur in the primary tumour and 10% in the recurrent tumour. Microscopically, these are characterized by spindle and pleomorphic cells resembling storiform pleomorphic malignant fibrous histiocytoma or myxofibrosarcoma. A new variant of the dedifferentiated exhibiting neural-like whorls of spindle cells has been described. Between the low grade and high grade dedifferentiated liposarcomas there are no difference in biological behavioural pattern. The dedifferentiated liposarcomas are associated with 20 to 25% metastasis and their recurrence rates are usually high.¹³

CONCLUSION

Lipomas are one of the most common benign soft tissue masses encountered by the surgeons in the OPDs. It is important to have increased awareness and knowledge about lipomas and other soft tissue sarcomas and utilize the available resources for proper diagnosis of the tumour and treatment. As in our case, the compressibility of the tumor planted seeds of doubts in our diagnosis but with proper imaging techniques the pre-operative diagnosis of Atypical lipoma was made, and histopathological examination revealed a well differentiated liposarcoma to our surprise.

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