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Intramuscular Spindle Cell Tumour: A Case Report

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ABSTRACT:
INTRODUCTION: Spindle cell lipoma is a rare variant of an adipocytic tumor. Intramuscular lesions of this tumor are yet again very rare. In this report, we depict a case of a patient with intramuscular spindle cell lipoma localized in a deltoid.
CASE PRESENTATION: A 53-year-old female visited us because of a soft tissue mass on the lateral aspect of the right shoulder that she has been noticing for the past 8 months. The tumor, which measured 15cm×10cm, was soft and firm on palpation and immobile. Magnetic resonance imaging revealed that the lesion was localized in the right deltoid muscle with heterogenous signaling. With a pre-operative diagnosis of intramuscular lipoma, we removed the tumor with the patient under general anesthesia. Histopathology discovered its benign nature and spindle cell lipoma. Hence, post-operatively she was diagnosed as a case of intramuscular spindle cell lipoma in the right deltoid muscle
CONCLUSION: Diagnosis and treatment of deep-seated lipomatous tumors like these remains a challenge due to the increased risk of malignancy. But this case has emphasized that benign spindle cell lipoma should also be considered a differential diagnosis.
KEYWORDS: Deltoid, Intramuscular lipoma, Spindle cell lipoma, Soft tissue tumour.

I. INTRODUCTION:

Common tumour of adipose tissue is called Lipoma. These lipomas are made of adipose (fat) cells, often encapsulated by a thin layer of fibrous tissue.[1] Enzinger and Harvery, in 1975 described a variant of lipoma, which is Spindle cell lipoma (SCL). SCLs are benign lipomatous neoplasm composed of mature adipose tissue, ropey collagen, and bland spindle cells.[2] SCLs are a rare variants occurring at a rate of 1.5% all adipocytic tumour.3 Men between 40 to 70 years of age are commonly affected by SCL. Often seen in the subcutaneous tissue of the neck, shoulder, or back.[4] Intramuscular lipoma and SCL occurring together is a rare presentation. This is a case report of a female with right intramuscular SCL.

II. CASE PRESENTATION:

A 53 year old Indian woman presented to general surgery OPD with a swelling in the right shoulder region for the past 8 months. The swelling gradually progressed to attain the current size of 15x10 cm. Her past and family histories were not contributory. On inspection, the skin over the swelling appeared normal with no signs of inflammation or ulcerations. On palpation, the swelling was not mobile. It was firm to soft in consistency. Lymph nodes were not palpable. All the other laboratory examinations showed no abnormalities.

Ultrasound of the right shoulder demonstrated well defined hypo-echoic lesion with no internal vascularity in intramuscular plane in the right deltoid. A focused magnetic resonance imaging (MRI) done showed tumor with low signal intensity or iso-intensity to skeletal muscle at the center and high signal intensity at the periphery of the lesion. A preoperative diagnosis of intramuscular lipoma was established based on these findings.

The patient underwent excision and biopsy under general anesthesia. A soft lobulated mass of size 6x7cm was excised intoto. The mass was found to be encapsulated in a fibrous capsule. It wasn't adherent to the surrounding tissue. The specimen was sent for histopathology. Post-operative histopathological report confirmed tumor to be intramuscular lipoma with benign mature adipocytes and spindle cells divided into lobules by fibro collagenous septae. There were no lipoblasts or atypical cells. The specimen was negative for immunohistochemical staining with MDM2,CDK4 and p16. Hence, she was confirmed to be a case of intramuscular SCL of the right deltoid.

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FIGURE 1: Preoperative photograph of the tumour. It was a 15*10 cm swelling, soft in consistency and immobile.

FIGURE 2: Signal intensity of the tumor on magnetic resonance Imaging. A low signal intensity or iso-intensity to skeletal muscle at the center and high signal intensity at the periphery of the lesion seen.

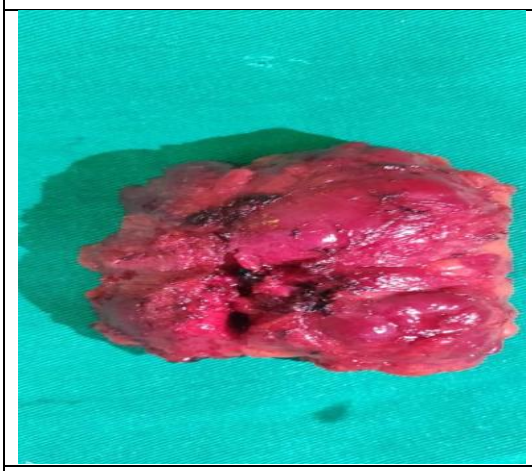

FIGURE 3: Postoperative photograph of the excised tumour. A soft lobulated mass of size 6x7cm was excised intoto.

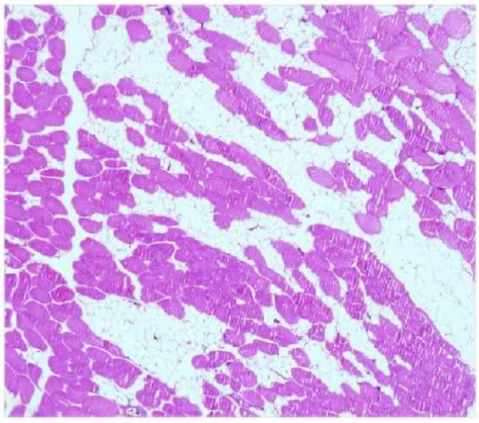

FIGURE 4: Formalin-fixed, paraffin-embedded specimens stained with hematoxylin and eosin for analysis. Demonstrate benign mature adipocytes and spindle cells divided into lobules by fibro collagenous septae.

III. DISCUSSION:

The benign neoplasm of the fat cells is lipoma. They progress slowly and occur in single among men more than 40 years of age. It can arise in any part of the body but is commonly seen in the shoulder and posterior neck.[5] These ordinary type of lipomas occur among 80% of the patients. The rest 20% of the patients can have angiolipoma, intermuscular/intramuscular lipoma, Spindle Cell Lipoma, myolipoma, chondroid lipoma and pleomorphic lipoma.[6] SCL are rare variant, 1.5% of all adipocytic neoplasms, presenting as painless swelling.[2] Except for the sex, all the other factors like age, presentation, site were all similar to SCL.

Radiologically, a mass exhibiting uniformly homogeneous signals as well as homogeneous high T1 and T2 signal is suggestive of a benign fat tumor. On the other hand, large size, deep-seated mass with heterogeneous signal and, an increase in diameter of soft tissue tumors will arise the doubt of malignancy.[7] Deep-seated tumors are further classified as those arising intramuscularly (infiltrative and well-circumscribed) and those developing intermuscularly and they comprise only 1.8 and 0.3%

respectively of all fatty tumors. And the risk of recurrence with these is higher compared to the typical ones.[8] In the case of this patient, the MRI showed heterogeneous signaling and deep-seated soft tissue tumour which raised the doubt of malignancy.

Histologically a well-defined lesion can be defined by the commutation of mature fat by a mixture of mature adipocytes and undifferentiated spindle cells.[9] It is essential to differentiate it from malignant lesions like liposarcomas because they require more definitive treatment. Hence it is essential to check for uniformity of the proliferated spindle cells, absence of lipoblasts, and presence of thick collagen fibers within the mucoid matrix.[2] The absence of these features and the presence of spindle cells and mature adipocytes confirmed the diagnosis of SCL.

Marginal excision of SCL along with its surrounding thin fibrous capsule is the treatment of choice.[2] As they are benign and there have been no reports of local recurrence, complete excision of the tumor results in a good prognosis.[10]

IV. CONCLUSION:

This is a case of the concurrent existence of intramuscular lipoma and spindle cell lipoma. Diagnosis and treatment of deep-seated lipomatous tumors like these remains a challenge due to the increased risk of malignancy. But this case has emphasized that benign spindle cell lipoma should also be considered a differential diagnosis.

CONSENT:

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

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