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ORIGINAL RESEARCH

Benign spindle cell neoplasm presenting as large mass in the thigh

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ABSTRACT
A 45year old male reported in OPD with complaint of swelling in right inner aspect of thigh since 1year. On examination swelling was non-tender, skin coloured, well circumscribed of approximately 14x10cm, firm in consistency, mobile. On MRI heterogeneously enhancing on T1. This case underscores multidisciplinary approach to benign spindle cell neoplasm and its diagnostic challenges.

INTRODUCTION

Spindle cell neoplasm is a rare epithelial neoplasm which are differentiated based on cellularity, nuclear features, collagen content, and growth pattern. The growth pattern of spindle cell neoplasms can be unusual and can be confused with other spindle cell neoplasms, especially sarcomas. Carcinomas are tumors that differentiate into epithelial (or lining) cells, whereas sarcomas are tumors with mesenchymal differentiation, such as fibroblasts. Spindle cell carcinomas, although fundamentally differentiating into epithelial cells, lose much of these features and gain some features of mesenchymal cells. Most of these tumors are associated with exposure to tobacco and alcohol, and as many as 15–20% are thought to be secondary to radiation exposure for some other cancers [1]. This study will focus on clinical and diagnostic features of Spindle cell tumor and the select non-neoplastic or benign lesions which are occasionally hard to distinguish from it. These neoplasms frequently pose diagnostic challenges due to their clinical variability and nonspecific presentations [2]. Imaging techniques, particularly MRI and CT, have proven valuable in assessing the extent and characteristics of these tumors [3].

MATERIAL AND METHODS

- A 45-year old male came with complaint of swelling in right upper inner thigh aspect since 1year gradually increasing in size and associated with intermittent mild pain since 1month, dull aching in nature.
- On examination swelling was non-tender, skin coloured, well circumscribed of approximately 14x10cm, firm in consistency and mobile in vertical axis not in transverse axis(Fig1)

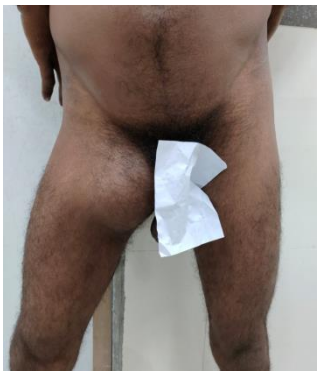

Figure1: Showing clinical presentation

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- His haematological and biochemical parameters were within normal limit
- On MRI T1 weighted sequence demonstrated heterogenous enhancement within the mass

A wide local excision surgery was performed which revealed a 12×9.0 cm solid mass embedded in the subcutaneous and muscular plane.

Grossly mass was smooth and solid cut surface showed grey white tumor (Figure 2).

Microscopically sections examined show a tumor composed of spindles cells arranged in interlacing fascicles. The cells show hyperchromatic with elongated nuclei, eosionophilic cytoplasm .Mitotic count -1-2 /10 HPF. Necrosis is not seen. Tumor is encapsulated(Figure 3)

Immunohistochemically, the spindle cells were negative for CD34, CD68, Ki67, Desmin and S-100, which could rule out dermatofibrosarcoma protuberans, atypical fibroxanthoma, sarcoma, myxoma and desmoplastic melanoma, respectively. But positive for Smooth muscle actin

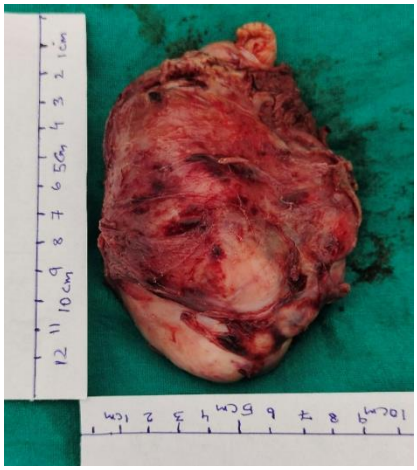

Figure 2: Specimen of tumor

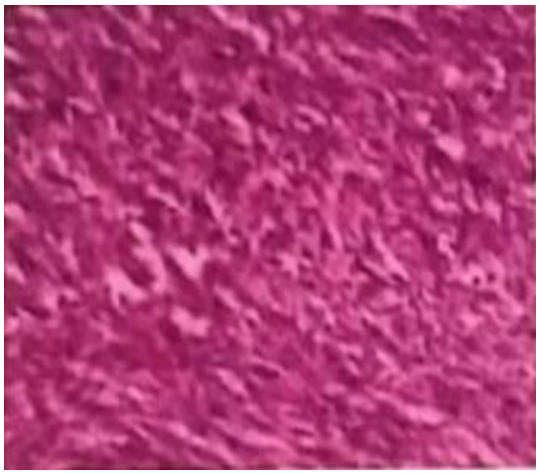

Figure 3: Histopathology showing spindle cell arranged in interlacing fascicles.

DISCUSSION

The diagnosis could be established only after complete wide local excision of the lesion and histopathological examination [4,5]. Diagnosing spindle cell neoplasm presents unique challenges, as this malignancy lacks specific imaging characteristics or clinical features that allow for a definitive diagnosis before histopathology [6]. Immunohistochemistry remains gold standard for prognosis and further management [7]. There was no recurrence after a follow up period of 6 months

CONCLUSION

In conclusion ,this study emphasizes with proper clinical approach, careful evaluation through histopathological features and use of immunohistochemistry ,clinician can arrive at definitive diagnosis . After ruling out so many differential diagnosis of spindle cell neoplasm and interdisciplinary approach can improve prognosis and outcome of the disease.

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