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Case Report

Monophasic Synovial Sarcoma of Knee: A Case Report

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ABSTRACT

Synovial sarcoma usually arises in the soft tissues of the extremities and rarely presents as a primary bone tumor. Here, we report a case of a 40 year old female who came with complaints of a swelling in her right knee associated with mild pain on walking. After getting operated, we received a 12cm x 13cm x 8cm grey white tissue mass. Histopathological examination showed spindle shaped tumour cells arranged in solid compact sheets, fascicles and herring bone pattern and the individual tumour cells were uniform, well oriented showing darkly stained nuclei along with scanty and indistinct cytoplasm suggestive of monophasic synovial sarcoma.

Keywords: synovial, sarcoma, monophasic, herring.

INTRODUCTION

Synovial sarcoma (also known as malignant synovioma) depicts up to the 8 % of the all the soft tissue sarcomas. [1] It is most prevalent in adolescents and young adults 15 to 40 years of age. [2] Among the population, male and female ration of distribution is 1.2:1. [2]

CASE REPORT

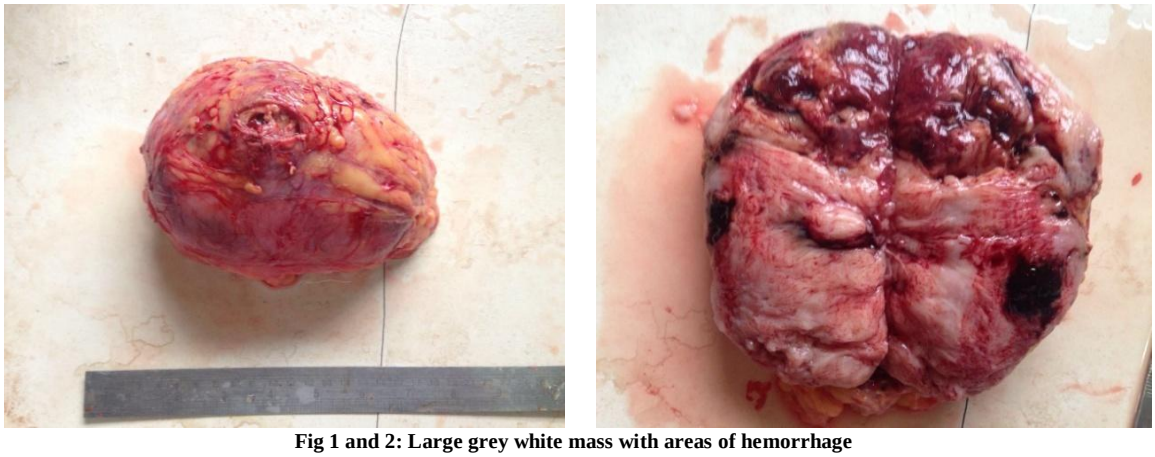

Fig 1 and 2: Large grey white mass with areas of hemorrhage

A 40 year old female came with complaints of a slow growing swelling at the back of her right knee since 5 months associated with mild pain while walking. We received a single, oval, well circumscribed, soft to firm, grey white tissue mass measuring 12cm X 13cm X

8cm. External surface showed whitish areas. Cut surface had hemorrhagic areas.

On microscopy, sections showed spindle shaped tumour cells arranged in solid compact sheets, fascicles and herring bone pattern. Individual tumour cells were uniform, well oriented showing darkly stained nuclei and scanty and indistinct cytoplasm.

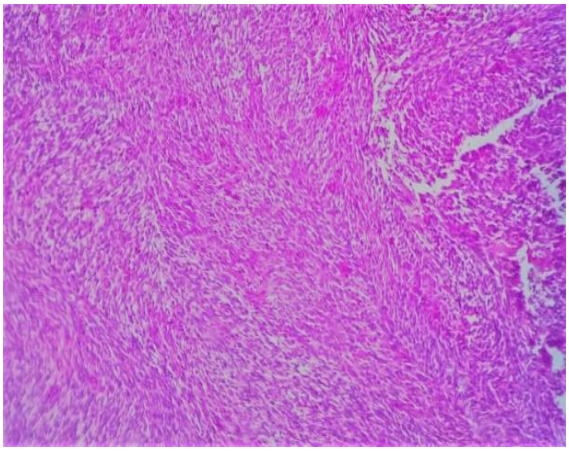
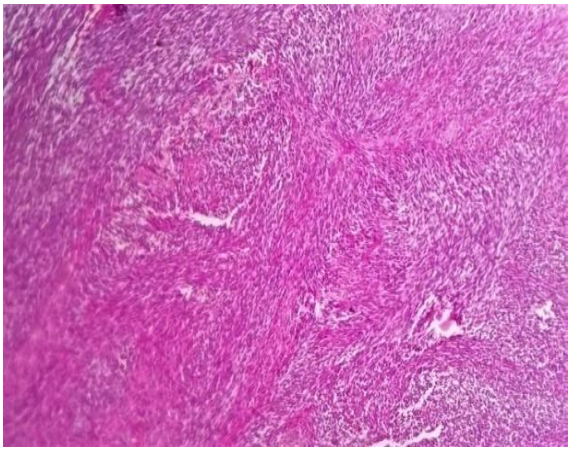

Fig 3 and 4: Sections show spindle shaped tumour cells arranged in solid compact sheets, fascicles and herring bone pattern. (H&E-10x)

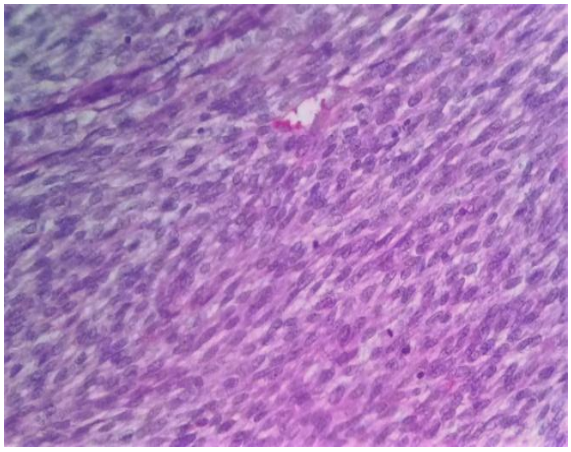
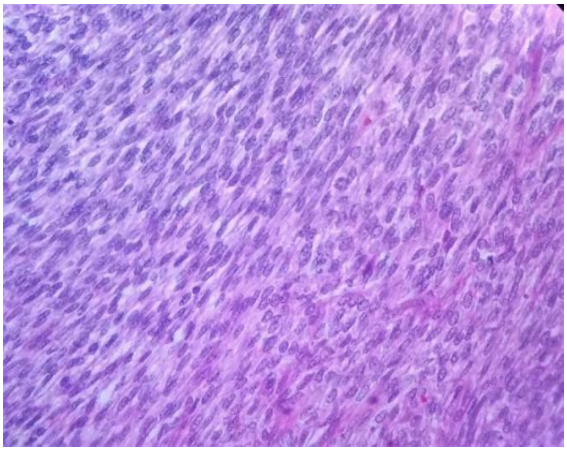

Fig 5 and 6: Sections show uniform, well oriented individual tumour cells with darkly stained nuclei and scanty and indistinct cytoplasm.

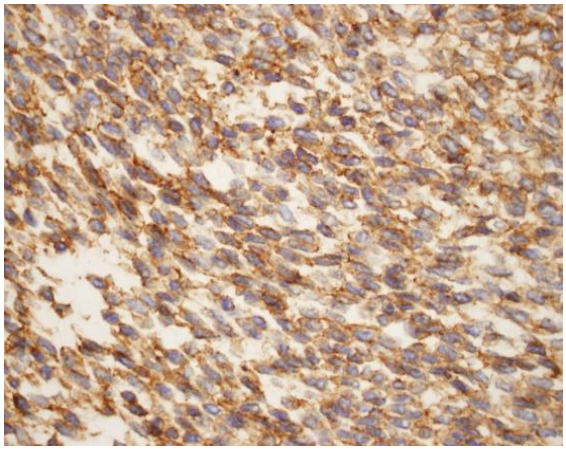

Fig 7 : Section shows positivity for Epithelial Membrane Antigen

Immunohistochemical studies showed positivity for epithelial membrane antigen (EMA) and vimentin and focal positivity for cytokeratin 7.

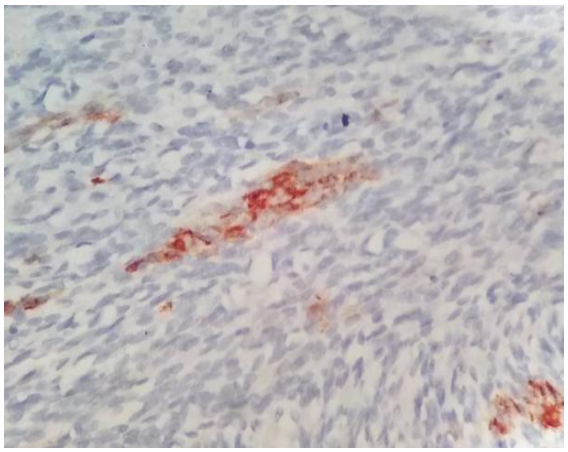

Fig 8 : Section shows focal positivity for cytokeratin 7

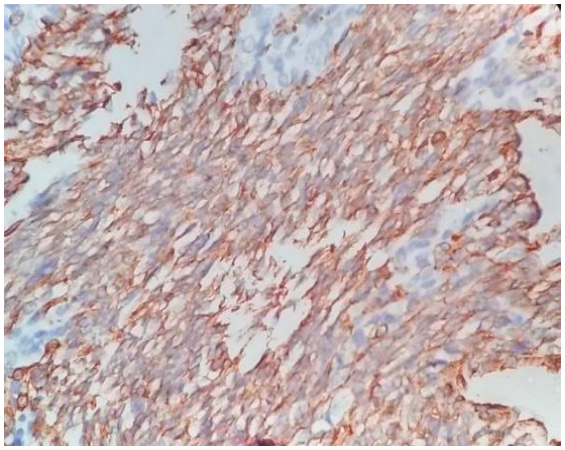

Fig 9 : Section shows Vimentin positivity

DISCUSSION

Synovial sarcoma is a malignant soft tissue tumor and comprises of 5-10 percent of all soft tissue sarcomas. Most synovial sarcomas arise in the extremities, with a predilection for the lower extremities; occurring in the vicinity of the knee, with few arising in the foot, lower leg-ankle region, and hip-groin. Many synovial sarcomas are seen to arise in other locations such as in the head and neck, [3] chest, [4] and abdomen. [5] The term is a misnomer as most of the cases of synovial sarcoma originate elsewhere where no synovial tissue is present. [6] It rarely presents as a primary bone tumor.

Histologically, there are two major categories of synovial sarcoma: biphasic and monophasic. *Biphasic synovial sarcoma* consists of distinct epithelial and spindle cell components, in varying proportions. Of the *monophasic synovial sarcomas*, the vast majority is of the *monophasic fibrous type*. There is also a *monophasic epithelial type* of synovial sarcoma. Most synovial sarcomas display immunoreactivity for cytokeratins and epithelial membrane antigen. In an immunohistochemical study of 100 synovial sarcomas by Guillou et al. [7] focal positivity for epithelial membrane antigen (EMA) and cytokeratin was found in 97% and 69% of cases, respectively. Similarly, our case of monophasic synovial sarcoma of the knee showed the similar positivity.

CONCLUSION

A case of synovial sarcoma should be diagnosed at the earliest due to its high metastatic potential and low 5 year survival rate. Routine histology is diagnostic and immunohistochemical markers like cytokeratin 7 and EMA positivity help in clinching the diagnosis.

REFERENCES

1. Mishra P K, Yadav V, Maravi D S, et al. Intra-Articular Calsified Synovial Sarcoma Of Knee – A case report of an imitating pathology. International Journal of Surgical Cases 2015 Oct-Dec; 1(2): 11-13.
2. Weiss & Goldblum. Enzinger and Weiss's Soft Tissue Tumors. 5th ed. Philadeplphia, USA, Elsevier, 2008, Pg 1161.
3. Raney RB: Synovial sarcoma in young people: background, prognostic factors, and therapeutic questions. *J Pediatr Hematol Oncol* 2005; 27:207.
4. Deraedt K, Debiec-Rychter M, Sciot R: Radiation-associated synovial sarcoma of the lung following radiotherapy for pulmonary metastasis of Wilms' tumour. *Histopathology* 2006; 48:473.
5. Egger JF, Coindre JM, Benhattar J, et al: Radiation-associated synovial sarcoma: clinicopathologic and molecular analysis of two cases. *Mod Pathol* 2002; 15:998.
6. Rao BAR, Reddy MS, Reddy SR. Poorly Differentiated Synovial Sarcoma over Tendo Achilles: A Rare Case. IJSS Case Reports & Reviews 2016; 2(10):11-12.
7. Guillou L, Wadden C, Kraus MD, et al: S-100 protein reactivity in synovial sarcomas: a potentially frequent diagnostic pitfall; immunohistochemical analysis of 100 cases. *Appl Immunohistochem* 1996; 4:167.

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