ORIGINAL RESEARCH PAPER
Volume - 11 | Issue - 06 | June - 2022 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

PARA OVARIAN SOLITARY FIBROUS TUMOUR – A CASE REPORT

Pathology

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ABSTRACT

The solitary fibrous tumour is a rare fibroblastic tumour which accounts for less than 2 % of soft tissue tumours and is associated with NAB2-STAT6 fusion [1]. It was originally described in pleura but has been reported in various anatomical sites. We report a case of solitary fibrous tumour in Para ovarian location. A 69-year-old female presented with a large abdominal mass which was initially thought to be a parasitic leiomyoma on MRI. The tumour was surgically removed and the diagnosis of a solitary fibrous tumour was confirmed on immunohistochemical analysis. Para ovarian location of the solitary fibrous tumour is rare, hence presenting this case.

KEYWORDS

Solitary fibrous tumour, Staghorn vessels, STAT6

INTRODUCTION

The Solitary fibrous tumour is a fibroblastic tumour which usually presents as a painless growing mass. Abdominopelvic tumours present with constipation, abdominal distention and urinary retention. It has an equal sex predilection with a peak incidence between 40- 70 years. Radiology is nonspecific and a definitive diagnosis requires histopathological and immunohistochemical studies.

CASE REPORT

We here describe a case of a 69-year-old female who had complaints of urinary retention and painless mass per abdomen. MRI revealed a heterogeneous solid and cystic lesion measuring 5.5x5.9x8.5cm along the midline pelvis. Cystic and necrotic areas were appreciated in the posterior aspect, features more likely to represent a walled-off parasitic leiomyoma. The patient underwent laparotomy, bilateral salpingo-oophorectomy was done and a solid mass of 5x6 cm, adherent to parietal peritoneum, burrowing into the dome of the bladder was appreciated. The mass was friable, necrotic, and vascular and was removed surgically.

Macroscopically we received multiple grey-white tissue bits [**Fig 1**] and bilateral tubes and ovaries.

Fig 1: Multiple Grey-white Tissue Bits.

Histopathology of which showed a neoplasm composed of ovoid to spindle cells arranged in sheets in a variably hyalinized stroma. Individual cells have indistinct borders, moderate eosinophilic cytoplasm, oval to elongated nucleus, with fine chromatin and inconspicuous nucleoli [**Fig 2 and Fig 3**]. Numerous staghorn vessels were seen [**Fig 4 and Fig 5**]. 2-3 mitosis per 10 high power fields and numerous inflammatory cells composed of neutrophils and lymphocytes were seen. Both tubes showed congested vessels, one ovary was diagnosed as mucinous cystadenoma and the other ovary showed Corpus Albicans.

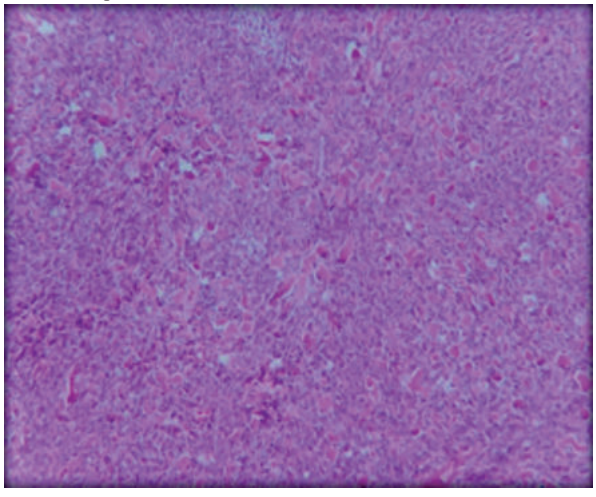

Fig 2: Spindle To Ovoid Cells In Hyalinized Stroma **(10X).**

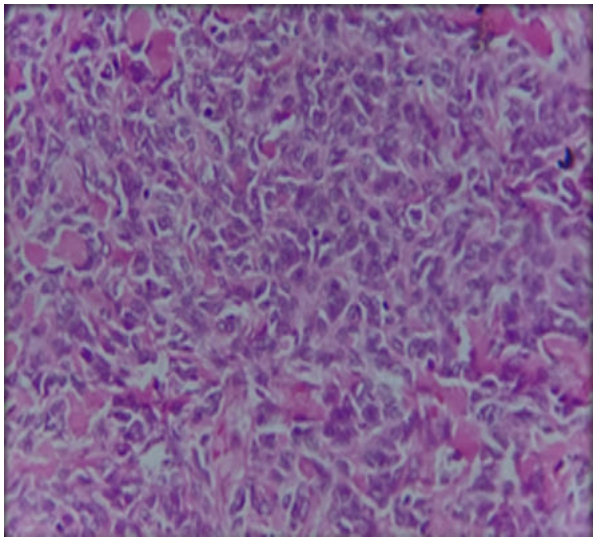

Fig 3: Spindle To Ovoid Cells In Hyalinized Stroma **(40X)**

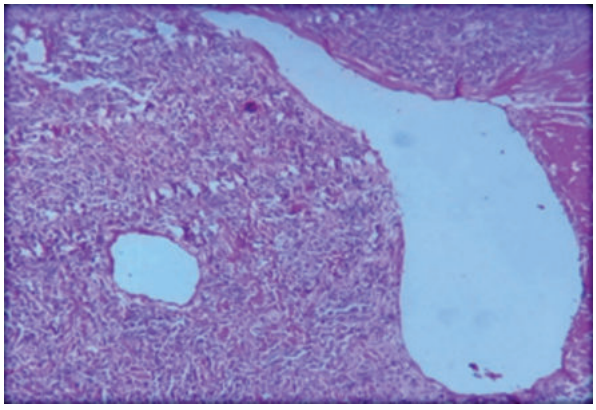

Fig 4: Staghorn vessels **(40X)**

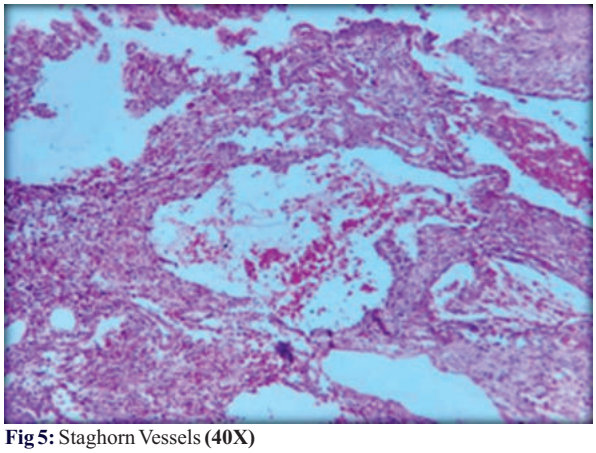

Fig 5: Staghorn Vessels **(40X)**

Immunohistochemical Panel

Tumour cells were positive for STAT 6 [**Fig 6**], BCL-2 [**Fig 7**], CD34 **[Fig 8]** and negative for H CALDESMON and CALRETININ.

A diagnosis of a solitary fibrous tumour of para ovarian origin was given.

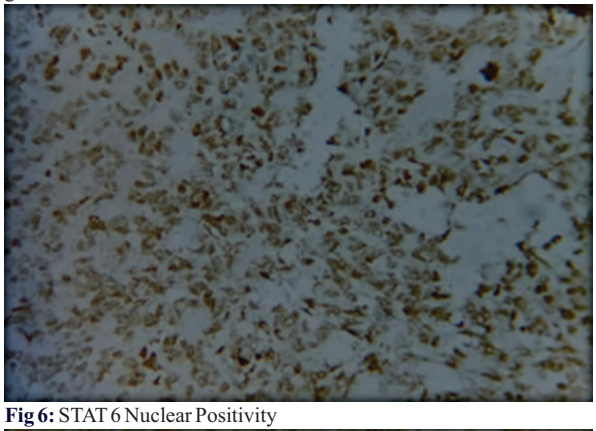

Fig 6: STAT 6 Nuclear Positivity

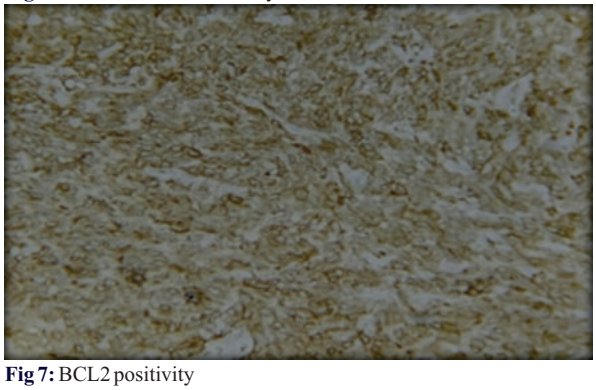

Fig 7: BCL2 positivity

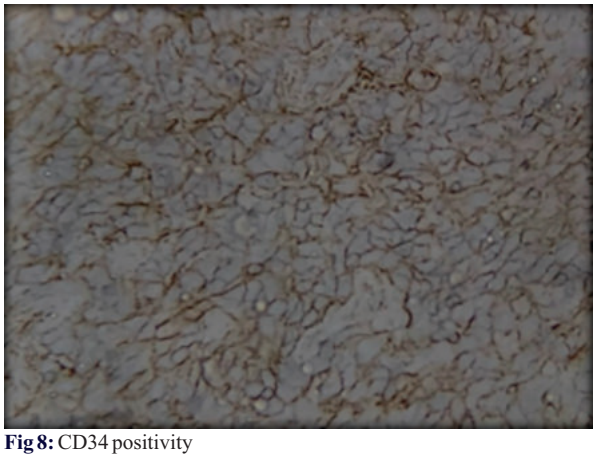

Fig 8: CD34 positivity

DISCUSSION

The solitary fibrous tumour is a rare fibroblastic tumour with chances of late relapse and metastasis. For the risk stratification and prognostification of these tumours, age, size, mitosis and necrosis are taken into consideration [2][3].

The solitary fibrous tumour has shown diversity in its morphological features. Giant cell-rich variant, fat forming variant, malignant form, and dedifferentiated variant have been recognized. Because of these diverse histological features and anatomical locations, the diagnosis of a solitary fibrous tumour is challenging and an accurate diagnosis is important for its management and prognosis. NAB2-STAT6 fusion has now been recognized as a sensitive and specific molecular marker and its immunohistochemical surrogate marker signal transducer and activator of transcription 6 (STAT6) have also shown specific sensitivity and specificity [4].

Considering the anatomical location, differential diagnosis of leiomyoma, solitary fibrous tumour, mesothelioma, and gastrointestinal stromal tumour were considered in our case. The immunohistochemical panel of these tumours were performed. H-caldesmon and calretinin turned out to be negative, which excluded leiomyoma and mesothelioma [8].

GIST is a close differential diagnosis to be considered in this location which is negative for STAT6 and positive for CD117 and DOG1.STAT 6 nuclear positivity excluded GIST [6][9]. Hence the diagnosis of the solitary fibrous tumour was given.

Anthracyclines have been known to show antitumour activity on Solitary fibrous tumours, especially in dedifferentiated solitary fibrous tumours in comparison to the malignant solitary fibrous tumour [10]. Surgical resection is essential.

CONCLUSION(S)

Morphological evaluation and judicious use of immunohistochemistry enable the diagnosis of a solitary fibrous tumour. The spindle cell lesions of the female genital tract need to be excluded before making the diagnosis [5].

Although most of the extrapleural solitary fibrous tumours follow a benign clinical course, some have demonstrated aggressive behaviour in the form of recurrence or malignancy [7]. Hence prompt diagnosis and early surgical resection are mandatory.

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