



**Case Report**

**SCLEROSING STROMAL TUMOR: AN INCIDENTAL FINDING IN PATIENT OF INFERTILITY**

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**Abstract**

Ovarian sex cord stromal tumors are infrequent and represents only 7% of all ovarian neoplasm. Cells of origin of these tumors are primitive sex cords or stromal cells. The stromal cells comprise of theca cells, fibroblasts and Leydig cells whereas the gonadal primitive sex cords include granulosa cells and Sertoli cells. According to recent WHO classification, sex cord stromal tumors are further subdivided into pure stromal tumors, pure sex cord tumors and mixed sex cord stromal tumors. Here we are going to discuss a rare case of pure stromal tumors i.e., Sclerosing stromal tumor.

**Keywords:** Pure stromal tumor, Ovarian Neoplasm, Sex cord stromal tumors, Sclerosing stromal tumor.

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## INTRODUCTION

Sex cord stromal tumors account for 7% of all ovarian neoplasm and occur in younger age group as compared to epithelial tumors.<sup>1</sup> They present in 2-3rd decade of life with adnexal mass, abdominal distension and abdominal pain. They also have clinical features of hormone production including menstrual changes, precocious puberty, hirsutism and/or virilization.<sup>2,3</sup> Sclerosing stromal tumor is a subtype of sex cord stromal tumor and has a prevalence of 1.6-6% of all ovarian stromal tumors. This name was given because cellular areas of this tumor undergo collagenous sclerosis.<sup>4</sup>

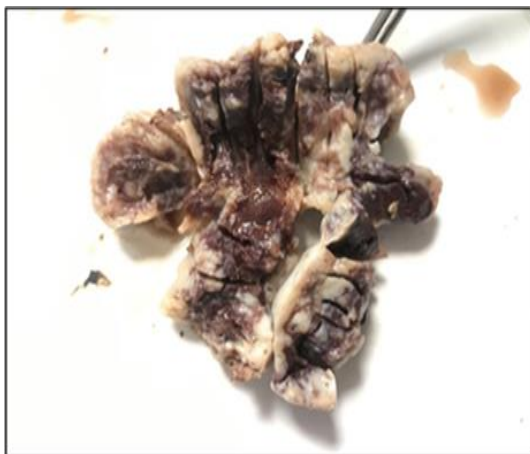
Aim of Study:

- 1-To highlight the clinical findings of rare ovarian neoplasm.
- 2- To study histopathological findings of sclerosing stromal tumor

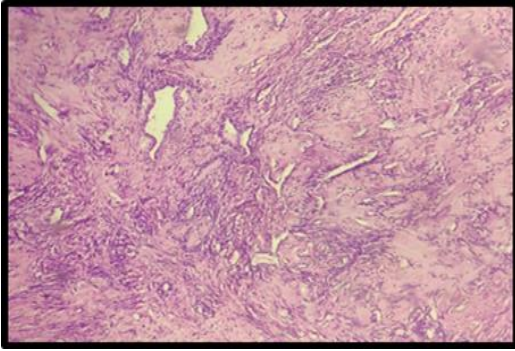
## CASE REPORT

A 29-year old female presented to gynaecology out patient department with complaints of menstrual disturbances for 4 months, abdominal distension and pelvic pain for 2 months. She was married for 3 years and was unable to conceive. There were no associated virilizing symptoms. On clinical examination abdomino-pelvic mass was palpable. Ultrasonography showed a 14cm heterogenous left ovarian mass. Computed tomography showed a large well defined heterogenous mass measuring 14x12x11cm with solid and cystic areas in left ovary. Radiological findings were in favour of malignant ovarian tumor. All haematological and hormonal assay were within normal limits. Patient underwent left salpingo-oophorectomy. Gross examination of resected specimen showed encapsulated mass measuring 14.5x12x11.2cm with attached ovary and fallopian tube. Outer surface was intact. Cut section showed yellow brown nodules with areas of haemorrhage. On microscopic examination alternating cellular and hypercellular areas were seen. Cellular areas showed prominent thin, dilated and branching hemangiopericytoma like blood vessels while hypocellular area was densely collagenous and oedematous. Individual cells were round to spindle shaped. Smooth muscle actin (SMA) immunohistochemistry was strongly positive in tumor cells.

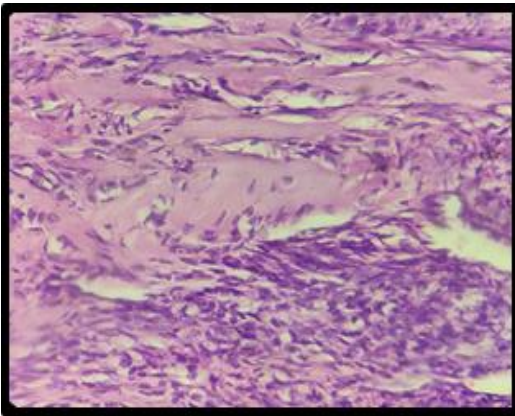
On the basis of history, clinical examination, radiological and histopathological findings diagnosis of Sclerosing Stromal Tumor of Left Ovary was rendered.



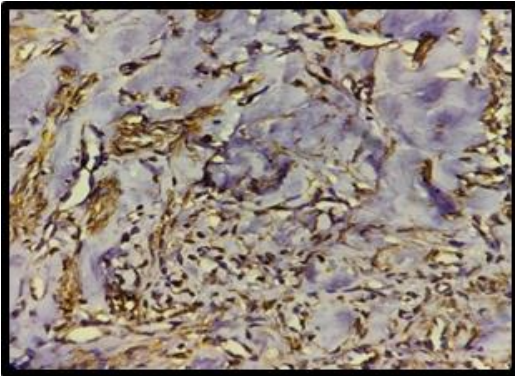
**Figure 1:** Gross: C/S shows predominantly creamish brown solid areas with small cysts and areas of haemorrhage.



**Figure 2:** Sclerosing stromal tumour: Cellular nodules with haemangiopericytoma like blood vessels and hypocellular fibrous stroma(H&E, x100)



**Figure 3:** Sclerosing stromal tumour. Hypercellular area shows plump rounded cells with vesicular chromatin, inconspicuous nucleoli and scant eosinophilic cytoplasm: Hypocellular area shows dense collagenous stroma (H&E, x400)



**Figure 4:** Sclerosing stromal tumour: Tumor cells with immunoreactivity for Smooth Muscle Actin (SMA)

## Discussion

Sclerosing stromal ovarian tumors were first defined by Chalvardjan and Scully in 1973. It is an extremely rare sex cord stromal ovarian tumor of benign nature and has distinctive pathological features.<sup>5</sup> 80% of these tumors occur in second and third decade of life distinguishing them from other stromal tumors which are more common in fifth and sixth decade.<sup>6</sup> Most common clinical features include menstrual irregularities, pelvic pain and symptoms related to pelvic mass.<sup>7</sup> Our patient also presented with these symptoms but she also complained of infertility.

Microscopically Sclerosing stromal tumor has pseudolobular pattern of growth, interlobular fibrosis, marked vascularity and dual cell population: one is spindle cells that produce collagen and other is lipid containing

round or ovoid cells.<sup>8</sup>Dilated vascular channels seen in cellular areas produce a haemangiopericytoma like pattern. The peculiar microscopic findings help to distinguish it from other lesions like thecoma, fibroma, signet ring stromal tumor and kruckrnberg's tumor.<sup>9,10</sup> These findings were appreciated in our case also (Figure 2 and 3). Tumor cells showed immunoreactivity for SMA (Figure-4). Fibroma has storiform and fascicular spindle cell proliferation with variable cellularity. Thecoma has vacuolated spindle cells with ill-defined pale cytoplasm, collagen deposition and hyaline plaques which are absent in sclerosing stromal tumor. Signet ring stromal tumor has signet ring cells with no atypia and vacuoles are empty with no mucin or lipid.<sup>10</sup> Sclerosing stromal tumors are usually unilateral and non-functioning but few cases have shown estrogenic and androgenic effect.

Ultrasonographic findings of this tumor are non-specific includes solid and multilocular components, irregularly thickened septa and tumor walls, and heterogenous internal hypoechoogenicity.<sup>11</sup> We have presented this case because it's a very rare ovarian tumor and discovered accidentally when patient was being investigated for Infertility. Our patient was treated by unilateral salpingo-oophorectomy as a fertility sparing surgery.<sup>12</sup> Patient is expected to conceive because of normal functions of opposite ovary although chances are reduced. She was followed for a period of 1 year. She developed no fresh complaints and was able to conceive.

### **Conclusion**

Sclerosing ovarian tumor is rare ovarian neoplasm. These can be discovered accidentally as was the case in our patient. So, proper investigations of all infertility cases along with histopathological examination of any tumor identified is of utmost priority for early and better management of patient.

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Nil

### **Conflicts of interest**

There are no conflicts of interest

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