

# Bilateral Ovarian Fibroma With Minor Sex Cord Elements: An Unusual Neoplasm

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## ABSTRACT

Ovarian fibromas constitutes 4% of all the ovarian neoplasms and ovarian fibromas with minor sex cord elements are still rare. We are reporting here a case of a 36-year old female who presented with complaints of abdominal pain and an abdominal mass of one month's duration. USG examination revealed large bilateral ovarian masses for which a panhysterectomy with a partial

omentectomy was done. The histopathological examination of both the masses showed a predominantly fibromatous tumour with sex cord elements which are arranged as tubules, and are seen to occupy < 10% of the tumour area on each side. Hence, a final diagnosis of bilateral ovarian fibroma with minor sex cord elements was made.

**Key Words:** Ovarian fibroma, Sex cord element, Sex cord stromal tumours

## INTRODUCTION

Ovarian fibromas are included in the group of ovarian sex cord stromal elements. They constitutes 4% of all ovarian neoplasms [1]. Very rarely does ovarian fibroma shows the small nests and tubules of cells which resemble granulosa cells, Leydig's cells and undifferentiated sex cord elements, which are seen to occupy <10% of the tumour. These tumours are classified as ovarian fibromas with minor sex cord elements. This rare entity was first described by Young and Scully in 1983. To the best of our knowledge, only 11 cases of these tumours have been reported till date. These tumours behave in a similar benign fashion as fibromas. However, the knowledge on this entity is crucial for a practising histopathologist to avoid a misdiagnosis of other sex cord neoplasms, adenofibromas, Brenner's tumour, etc.

## CASE REPORT

A 36-year old female presented with complaints of abdominal masses and pain of one month's duration. USG examination revealed large bilateral ovarian masses for which a panhysterectomy, with a partial omentectomy was performed.

We received an intact single hysterectomy specimen with bilateral ovarian masses and a piece of omentum separately in the same container in formalin. The uterus with the cervix, measured 7x5x2 cm. The endometrial cavity measured 3.5 x 1 cms, the endometrium measured 0.2 cms and the myometrium measured 1.2 cm. The larger ovarian mass measured 14x12x8 cm and the smaller ovarian mass measured 9x8x8 cm. The cut surfaces of both the ovarian masses were firm and grey white [Table/Fig-1]. No yellowish areas were seen. A piece of the omentum which was received separately measured 9x6 cm. Its cut surface was unremarkable. No hard / nodular areas were seen.

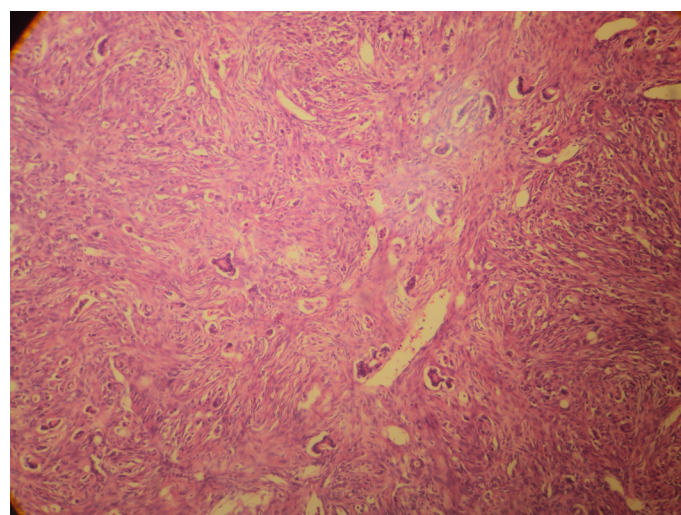
## MICROSCOPIC EXAMINATION

The sections from both the ovarian masses showed a cellular neoplasm which was composed of spindle shaped cells which were arranged diffusely and in sheets. The cells had elongated vesicular

nuclei and moderate eosinophilic cytoplasm. No increased mitotic activity was noted were small tubular structures which were lined by cells which had round vesicular nuclei and inconspicuous nucleoli. Scattered amidst these spindle shaped cells were small tubular



**[Table/Fig-1]:** Gross showing large bilateral ovarian masses



**[Table/Fig-2]:** Fibroma with minor sex cord element (40 X)

structures which were filled with eosinophilic material, which were seen to occupy <10% of each tumour mass [Table/Fig-2]. The endometrium showed a proliferative phase.

Based on these histomorphological features, a diagnosis of bilateral ovarian fibroma with a minor sex cord element was made.

## DISCUSSION

Ovarian sex cord stromal tumours are rare tumours which comprise 5% to 8% of all the ovarian neoplasms [1,2,3].

Fibromas with a minor sex cord element are still very rare [4,5,6,7,8]. The sex cord stromal tumours include all those ovarian neoplasms that contain granulosa cells, theca cells, Leydig's cells and fibroblasts of gonadal and stromal origin, singly or in various combinations, and in varying degrees of differentiation. Most of the reported cases of ovarian fibromas with a minor sex cord element are seen in the age group of 16-65 years, they are mostly unilateral and they range in size from 1-10 cm in diameter [4,5,6,7,8].

In our case, the patient's age was 36 years, which was similar to the age group which was reported in earlier studies. However, the neoplasm was bilateral and the size of one tumour was 14 cm, which was more than that which had been reported earlier. In most of the reported cases, the patients presented with the complaint of abdominal pain and rarely did they present with features of hyper-oestrogenaemia [4]. In our case, the patient presented with a short history of abdominal pain and an abdominal mass of one month's duration and there were no features of hyper-oestrogenaemia. Microscopically, fibromas with a minor sex cord element are fibromatous tumours, but the tumour in our case also contained small nests and tubules which were composed of cells which resembled granulosa cells, Sertoli cells and or indifferent cells of the sex cord type, which were seen to occupy < 10% of the tumour [4].

The immunohistochemistry of these tumours shows diffuse SMA positivity in the spindle cells. The spindle cells are negative for EMA and CK. Vimentin and inhibin were weakly expressed in these cells. The sex cord cells were positive for inhibin and they are negative for SMA and EMA [9].

Most of the reported cases of ovarian fibroma with a minor sex

cord element have behaved in a benign fashion which is similar to that of a fibroma. However, a single case report of fibrosarcoma in fibroma with a minor sex cord element has been described [10].

In conclusion, ovarian fibromas with a minor sex cord element are rare tumours and they can pose a diagnostic dilemma to the histopathologists. The knowledge of this entity is crucial in order to avoid a misdiagnosis with other sex cord tumours.

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