A RARE CASE OF THECA CELL TUMOUR IN A 20 YEAR OLD GIRL
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Abstract

Introduction: Theca cell tumour or thecoma is a rare variety of ovarian sex cord-stromal tumour predominantly seen in perimenopausal or postmenopausal age group. It is a low grade malignant tumour and it may cause precocious puberty in prepubertal girls rarely due to high oestrogen secretion.

Case report: This is a case report of a 20 year old unmarried girl who presented with huge swelling of the abdomen along with irregular menstruation for 6 months. On examination, the mass was found to be mobile and lateral to the uterus. Ultrasound showed a huge solid mass occupying whole of the pelvic cavity and lower abdomen. Serum CA-125 was normal. Laparotomy was done and a left sided huge smooth firm pear-shaped ovarian mass was seen with intact capsule. Left sided oophorectomy was done. Histopathology showed features of hyalinising thecoma.

Discussion: Fibroma and thecoma of the ovary is relatively rare and are seen in female patients below 30 years of age in less than 10% of cases. Timely evaluation, diagnosis and proper treatment are needed for the tumour to avoid unintended symptoms due to excessive hormone secretion. The case is presented here due to its rarity.

Keywords: Tumour, Thecoma, Theca Cell, Ovarian mass

Introduction

Theca cell tumour or thecoma is a rare type of ovarian sex cord-stromal tumour. The group of ovarian sex cord-stromal tumour usually contain granulosa cells, theca cells, Sertoli cells, Leydig cells, and fibroblasts of stromal origin, singly or in various combinations. Granulosa cell tumour and thecoma arises respectively from the 'female cell' lines such as granulosa cells and theca cells but the two types of cells are usually admixed with each other. Granulosa cell tumour is a low grade malignant tumour but rarely thecomas have morphologic features of malignancy. Predominantly it occurs in females of perimenopausal or postmenopausal age group and it is very rare in teenage group. Sex cord-stromal tumour comprises of 5-8% of all ovarian malignancies. This type of tumour may secrete oestrogen so that there may be oestrogen related complications such as endometrial hyperplasia or endometrial carcinoma and abnormal uterine bleeding. Though it is very rare in pre-pubertal age group, it may cause precocious pubertal change.1,2

Case report

A 20 year-old unmarried female Miss R D from tribal area of Northeast India presented to the outpatient clinic, Department of Obstetrics & Gynaecology, Medical College, Kolkata with a huge swelling of lower abdomen and irregular menstruation for last six months. The swelling was gradually increasing in size and it was associated with pain. On examination, there was mild pallor and per abdominally, a firm to hard 30cm×25cm (approx) mobile mass was felt suprapubically. On per rectal examination, there was a non-tender mass lateral to uterus. On ultrasonography, it was revealed that uterus and right ovary were normal but a large rounded heterogeneous solid space occupying lesion occupied whole of the pelvic cavity and lower abdomen. Serum CA-125 estimation was done by chemiluminescence assay method and it was 15.24 U/ml. On laboratory examination haemoglobin was 9.98 gm% and other blood tests such as total count, differential count, platelets, fasting blood sugar, liver function tests, urea, creatinine were within normal limits. Chest x-ray showed no abnormalities.

Laparotomy was done under general anaesthesia and 10-15 ml of ascitic fluid found inside the peritoneal cavity was sent for cytological examination. There was left sided huge smooth firm pear-shaped ovarian mass seen with intact capsule (Figure 1).

Figure 1: The Gross specimen showing ovarian mass

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The uterus and the right ovary were normal in appearance. Left sided oophorectomy was carried out and biopsy was taken from other ovary. All other organs such as gut, omentum, and lymph nodes were not involved. Her postoperative recovery was uneventful. Findings of cytological examination revealed no malignant cells in ascitic fluid. Histopathological examination of left ovarian mass showed features of hyalinising thecoma and histopathological examination of right ovarian biopsy showed no significant pathology.

**Pathological findings**

Grossly, the sent tumour measured 14.0 X 8.0X 7.0 cm and the cut section was solid, whitish in colour with focal yellowish areas. Microscopically, the tumour was composed of fascicles and sheets of round to ovoid cells with clear or pale eosinophilic cytoplasm and oval to fusiform nuclei, reminiscent of the cells of theca interna. The tumour had abundant areas of hyalinized connective tissue plaques (marked with black arrows in Figure No. 2 favouring the diagnosis of hyalinized thecoma *(Figure 2).*

![Figure 2: Histopathology of the tumour microphotograph showing tumour composed of sheets of pale, vacuolated cells. (Hematoxylin and eosin stain, X 100 magnification) Inset showing a high power view of the cells resembling those of theca interna. (Hematoxylin and eosin stain, X 400 magnification). The hyaline plaques are marked with black arrows.](image)

Luteinized cells, calcification or steroid forming cells were not seen. After 3 years of follow up, the patient was found to be asymptomatic and there were no signs of recurrence.

**Discussion**

Fibroma and thecoma of the ovary is relatively rare and are seen in female patients below 30 years of age in only less than 10% of cases. 14 Thirteen cases of theca cell tumors were reviewed by Sternberg and Gaskill in the year 1950 and 7 cases out of 13 cases were in post-menopausal age group. 15 The theca cell tumour secretes more oestrogen than granulosa cell tumour. Few cases cited had associated leiomyoma probably due to oestrogenic stimulation. 15 In our case, there were only pressure symptoms but no symptoms related to hyper-oestrogenemia. Histopathological features of the presenting tumour showed tumour cells composed of sheets of pale, vacuolated cells resembling those of theca interna suggesting that it was a case of hyalinized thecoma. Theca cell tumour may be luteinized associated with sclerosing peritonitis. 15 Timely evaluation, diagnosis and proper treatment are needed for the tumour to avoid unintended symptoms due to excessive hormone secretion. The case is presented here due to its rarity.

**Conclusion**

Although, theca cell tumour is very rare, it is mainly a tumour of premenopausal women, sporadic cases of young women presenting with such tumour do occur and thus its possibility is to be kept in mind.

**Editor’s Comment**

Theca cell tumour of the ovary is a comparatively rare tumour with oestrogenic activity. Endometrial hyperplasia, fibroid and carcinoma are known to occur in many cases. However, in this case, there were only pressure symptoms but no symptoms occurred relating to hyperoestrogenic activity. Evaluation, timely diagnosis and proper treatment are needed for the tumour to avoid unintended symptoms due to excessive hormone secretion.

**References**


