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Dual Presentation of Unclassified Mixed Germ Cell - Sex Cord Stromal Tumor and Yolk Sac Tumor in a Young Woman: A Case Report

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Abstract: ***Germ cell tumors constitutes 15% - 20% of all ovarian neoplasms and occur in women of reproductive age while sex cord stromal tumor constitutes 5% - 12% of all ovarian neoplasms and can occur in any age. Presence of three components with bilateral presentation of mixed germ cell - sex cord stromal tumor (sertolileydig cell tumor and dysgerminoma) in one ovary and germ cell tumor having a different component (yolk sac tumor) in the other ovary is very rare.***

Keywords: Germ cell tumors, mixed germ cell - sex cord stromal tumor, sertolileydig cell tumor, dysgerminoma, yolk sac tumor

1. Introduction

Germ cell tumors arising from the germ cells constitute 15% to 20% of all ovarian neoplasms and occur in women of reproductive age. [1] Sex cord stromal tumor are derived from the ovarian stroma which in turn is derived from the sex cords of the embryonic gonad. It constitutes 5% - 12% of all ovarian neoplasms and can occur at any age. [1]The bilateral presentation of mixed germ cell - sex cord stromal tumor in one ovary and germ cell tumor (different component) in the other ovary however is very rare.

2. Case Report

A 35year old female came with the chief complaints of abdominal pain and distension for 10days and amenorrhea for 4 months. CA - 125 was done and it was raised, the value was 286units/ml.

Ultrasound revealed a complex solid cystic lesion in left ovary measuring 10cmx10cm. CT Scan abdomen revealed left ovarian mucinous cystadenoma with internal septations and gross ascitis.

The ascitic fluid was sent for cytological examination for malignant cells

Patient underwent total abdominal hysterectomy and the sample along with part of the omentum was sent for HPE.

3. Gross findings

Received a specimen of uterus with bilateral adnexa measuring 15x6.5x6cm. Uterus measuring 7x4.5x3cm. Following normal anatomical orientation, ovaries are marked as left and right. Right sided fallopian tube measures 3.2cm in length. Right ovary measures 3.2x0.9x0.5cm. Left fallopian tube measures 4cm in length. Left sided ovary measures 13x7x6cm. Cut section of right ovary showed predominantly solid areas with focal areas of haemorrhage. Measurement of the largest solid area is 1x1cm. Cut section of left ovary showed areas of haemorrhage and cystic spaces and tumor growth measuring 2cm x 2cm x 1cm. Cut section of uterus, cervix, right fallopian tube and left fallopian tube was unremarkable.

Figure 1: Gross picture of right ovary

Figure 2: Gross picture of left ovary

Microscopic Findings - Right ovary shows predominantly endodermal sinus pattern with an astomosing glands lined by columnar cells with amphophilic cytoplasm and fusiform, hyperchromatic nuclei. Schiller Duval bodies are also noted. Left ovary shows features of dysgerminoma with tumor cells arranged in nests and lobules separated by lymphocytes

infiltrating fibrous septa. The tumor cells are large, vesicular having clear cytoplasm with well defined cell boundaries and centrally placed regular nuclei. Left ovary also shows another tumor component - sertolileydig cell tumor with sertoli cells arranged in tubular pattern surrounded by stroma containing plump leydig cells with eosinophilic cytoplasm.

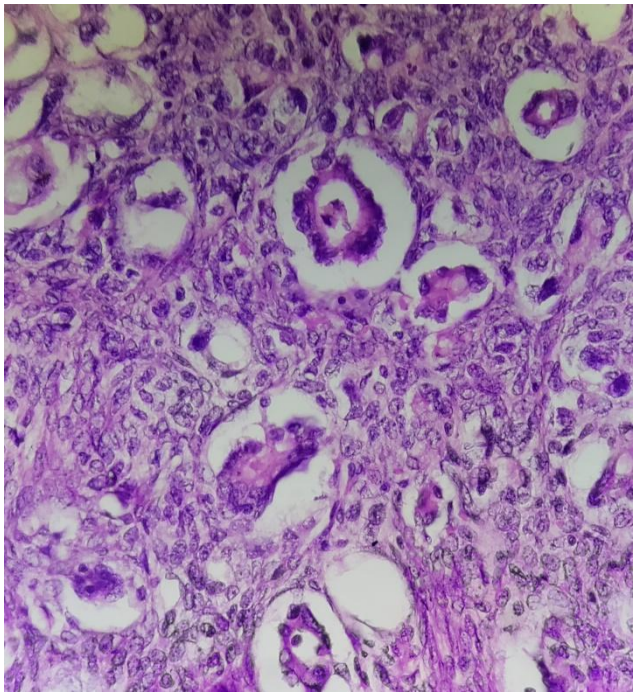

Figure 2: Section from right ovary showing endodermal sinus pattern

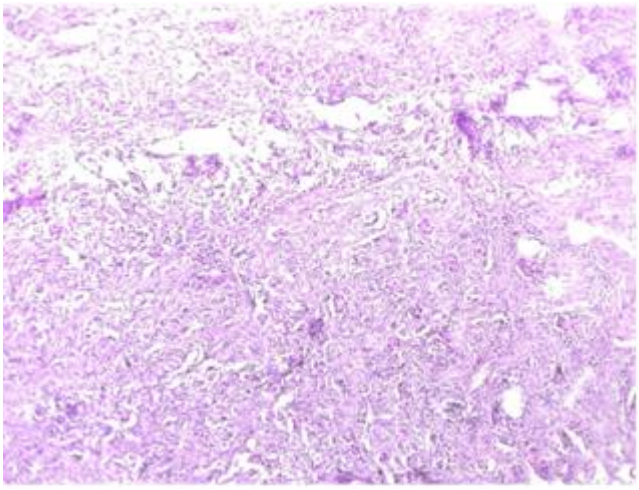

Figure 3: Left ovary showing features of sertolileydig cell tumor

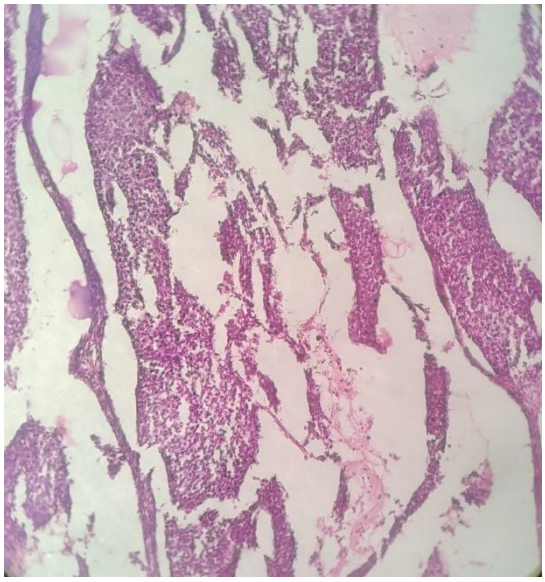

Figure 4: Left ovary showing features of dysgerminoma

Ascitic fluid was negative for malignant cells. A final Diagnosis of Yolk sac tumour of right ovary and Unclassified mixed germ cell - sex cord stromal tumour (dysgerminoma and well differentiated sertolileydig cell tumour) of left ovary was made.

4. Discussion

Unclassified mixed germ cell - sex cord - stromal tumor composed of germ cells and sex cord derivatives is a rare neoplasm and only few cases have been described in the literature over the past 30 years. [2] Most of the cases are encountered in children in the first decade and rarely seen in post menarchal girls and women of reproductive age [3, 4, 5] Most unclassified mixed germ cell - sex cord - stromal tumor are unilateral except two cases in which the tumors were bilateral. [5, 6]Dysgerminomais the most common malignant tumor of germ cell origin of ovary and yolk sac tumour is the second most common tumor of germ cell origin. Both are malignant tumors of ovary and carries good prognosis when treated with chemotherapy after salpingoophorectomy with overall survival exceeding 80%. Sertolileydig cell tumor is a rare malignant tumor which produces steroid hormones and recapitulates to a certain extent testicular sertoli or leydig cells at various stages of development causing defeminisation in females. In majority of cases the tumors are confined to the ovary with no recurrence and metastasis after excision of the affected adnexa. [3, 6, 7]In our case the age of presentation was 35yrs. The patient underwent total abdominal total abdominal hysterectomy following which she was referred to higher centre where she received chemotherapy and was doing well.

5. Conclusion

The present case puts light on the importance of early presentation for early diagnosis and effective treatment of such rare but good prognostic tumors.

Conflict of interest - None

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