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Metastatic Tubal Dysgerminoma: A Rare case report

Mondita Borgohain[1], Utpal Dutta[1*], Jayanta Kr. Das[1]
1.Department of Pathology, Assam Medical College, Dibrugarh, Assam, 786002

ABSTRACT

Dysgerminomas are the most common of the primitive germ cell tumours. They account for nearly half of such tumours, 1% of all ovarian cancers. About 10% of these tumours are grossly bilateral. Though rare, dysgerminoma can metastasize to fallopian tube. **Case report**: A 20 year old female presented to the gynecology OPD with complain of abdominal swelling, was found to have bilateral abdomino-pelvic lump. On CT-Scan, heterogeneously enhancing solid SOL was noted in abdomino-pelvic cavity. During operation bilateral ovarian mass with lymphadenopathy was seen and resected mass was sent for histopathological examination. Microscopically both the ovaries showed the picture of Dysgerminoma with involvement of the left tube. This case of dysgerminoma with tubal metastasis has been reported in view of its rarity. However, diagnosis of these tumours should only be given after proper extensive sectioning to rule out any other germ cell component.

Keywords: Germ cell tumours, Dysgerminoma, tubal metastasis

*Corresponding Author Email: duttautpal8@gmail.com
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INTRODUCTION

Germ cell tumours of the fallopian tube are uncommon, and most examples have been teratomas (1). Carcinoid arising in a mature tubal teratoma as well as a mixed immature teratoma and yolk sac tumour of the fallopian tube has been described in some studies (2). Tumours metastatic to the fallopian tube are more common than primary tubal neoplasms. Most examples represent secondary involvement of the tube by primary tumours arising elsewhere in the female genital tract, including ovary, endometrium, and cervix.

Dysgerminomas are the most common of the primitive germ cell tumours. They account for nearly half of such tumours, 1% of all ovarian cancers, and 5% to 10% of ovarian cancers in the first two decades of life (3). About 10% of these tumours are grossly bilateral. Though rare, dysgerminoma can metastasize to fallopian tube.

It occurs almost exclusively in children and young women, with an average patient age of 22 years. It can be found in a pure form, or, as an admixture of malignant teratoma, choriocarcinoma, or endodermal sinus tumour, and, in the latter situation could be amenable to tumour marker assay (4).

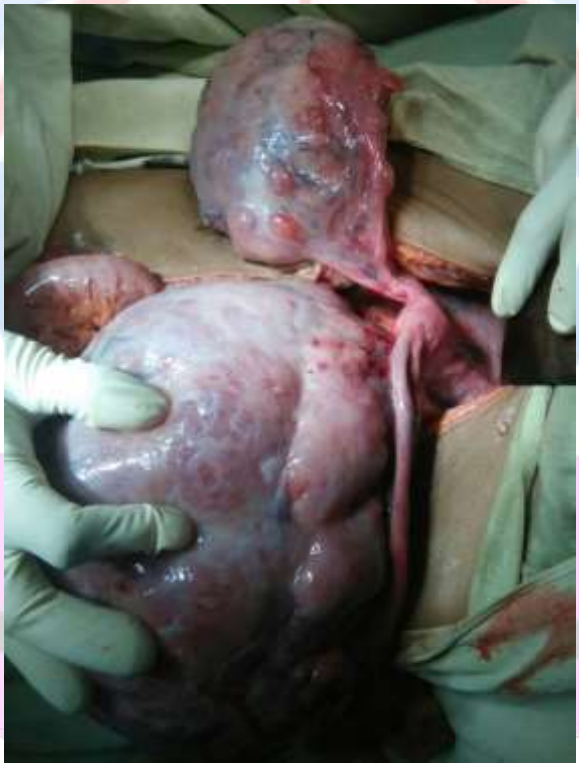

Figure 1: Gross appearance of the tumour

Case report:

A 20 year old female presented to the gynecology OPD with complain of abdominal swelling and gradually decreasing urinary output for 45 days. On examination bilateral abdomino-pelvic lump was noted. On CT-Scan bilateral ovaries were not visualized and rather large lobulated heterogeneously enhancing solid SOL was noted in abdomino-pelvic cavity

abutting the superior surface of uterus. Multiple heterogeneously enhancing enlarged lymph nodes were noted in the mesenteric, left para-aortic and aorto-caval region, compressing the left ureter resulting in hydroureteronephrosis. Ascites and right sided pleural effusion were also visualized in the CT-scan.

Exploratory laparotomy for removal of pelvic mass was done and during operation bilateral ovarian mass with lymphadenopathy was seen. Intra-operative Frozen section and imprint cytology were done and the respective tissue sections and imprint smears from the ovarian mass and para-aortic lymph node were found to be diffusely infiltrated by neoplastic cells.

Bilateral salpingo-oophorectomy along with para-aortic lymph node dissection was performed. Ascitic fluid collection was sent for Cytopathological evaluation.

On gross examination, left and right ovarian masses of size 14cmX6cmX5cm and 7cmX5cmX4cm, respectively with attached fallopian tubes were noted. Externally both the ovaries were smooth, greyish white in colour and on cut section the masses were solid, soft, greyish-white, with areas of necrosis. The lymph node received was 4cmX3cmX2cm in size, which on cut-section showed solid, greyish-white areas.

Microscopically both the ovaries showed the picture of Dysgerminoma with involvement of the left tube. The cells were arranged in sheets, polygonal in shape with abundant granular, eosinophilic to clear cytoplasm, intersected by fibrous septa containing lymphocytes. The individual cells had medium sized nuclei with vesicular chromatin and prominent nucleoli. The section from the lymph node too revealed infiltration by malignant cells. However the Cytological evaluation of the Ascitic fluid did not reveal any neoplastic cells.

DISCUSSION:

Germ cell tumours account for approximately 30% of all ovarian tumours. Ninety-five percent of them are mature cystic teratomas (dermoid cysts) and most of the remainder is malignant. Malignant germ cell tumours account for approximately 3% of all ovarian cancers in Western countries. However, the frequency is as high as 15% in countries whose populations are largely Oriental or black, and in whom surface epithelial carcinomas are relatively uncommon (5).

Dysgerminoma is a primitive germ cell tumour composed of cells showing no specific pattern of differentiation. Though, it is the most common malignant primitive germ cell tumour of the ovary, it only comprises 1-2% of all malignant ovarian tumours (4).

As mentioned above, dysgerminoma is grossly bilateral in approximately 10% of cases, and in another 10%, microscopic tumour foci are present in a grossly normal contralateral ovary. Though rare, tubal metastasis can occur in case of dysgerminoma. This case of dysgerminoma with tubal metastasis has been reported here in view of its rarity.

Most subtypes of malignant germ cell tumours occur in pure form, but approximately 8% are composed of two or more subtypes. It is essential, therefore, to sample all areas that differ in gross appearance. The relative amount of each component should be recorded if two or more components are present (5).

Eighty percent of dysgerminomas develop in women younger than 30 (mean, 22) years of age, being extremely rare older than 50 and younger than 5 years. Our case too belonged to this category (age 20 years).

Like most dysgerminoma patients our case too presented with signs or symptoms related to an abdominal mass.

Approximately 65% of dysgerminomas are FIGO stage IA at presentation. At higher stages, the contralateral ovary, pelvic, and para-aortic lymph nodes and/or the peritoneum are typically involved. In our case ipsilateral fallopian tube, contralateral ovary and para-aortic lymph nodes were involved. So, it would belong to FIGO Stage IIIA1 category.

The overall survival for optimally treated patients with dysgerminoma is greater than 90%. Stage and size (<10cm) are the most important prognostic factors (4). In our case, both tumour size (14cm in greatest dimension) and stage (stage IIIA1) are not in favour of good prognosis.

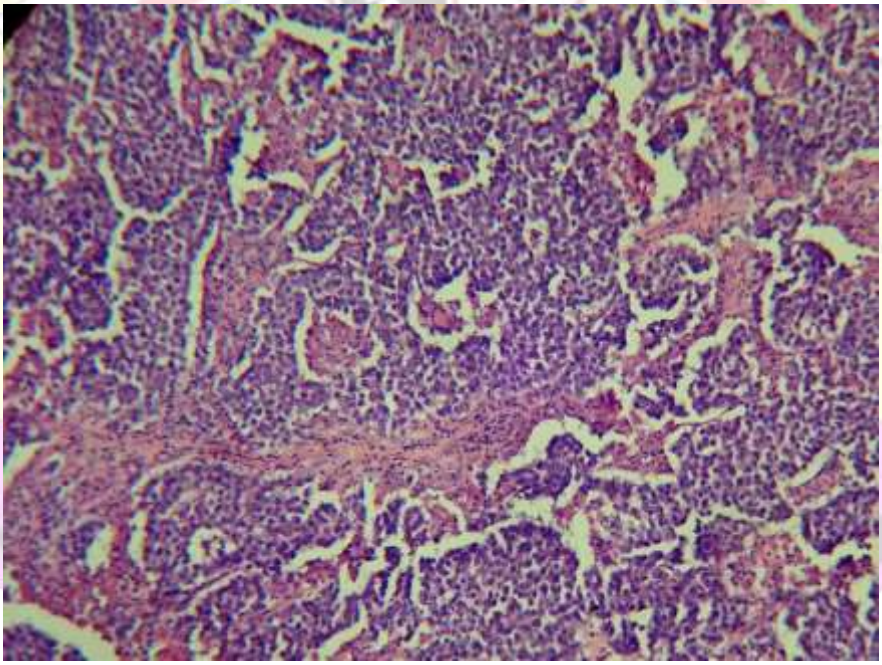

Figure 2a: showing sheets of cells with intervening fibrous septa (10X)

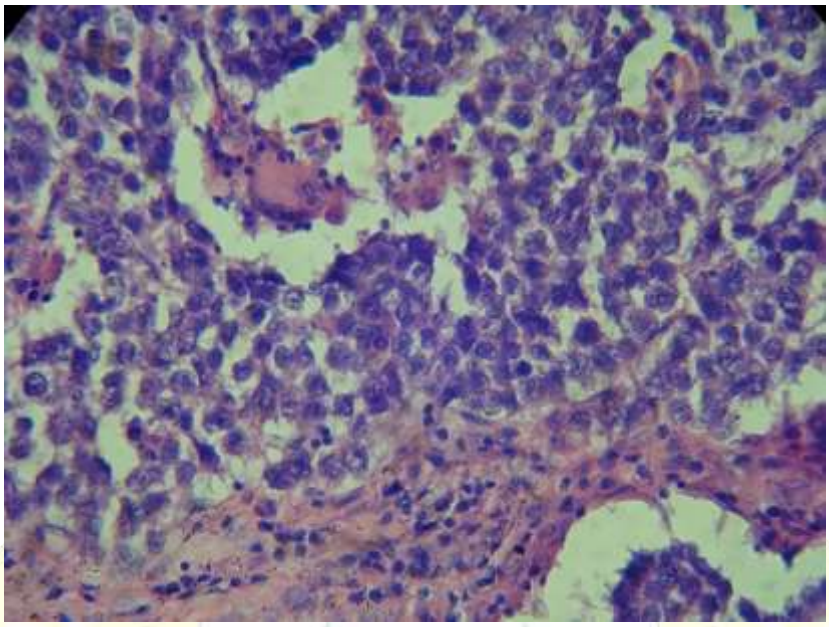

Figure 2b: showing polygonal cells with clear cytoplasm (40X)

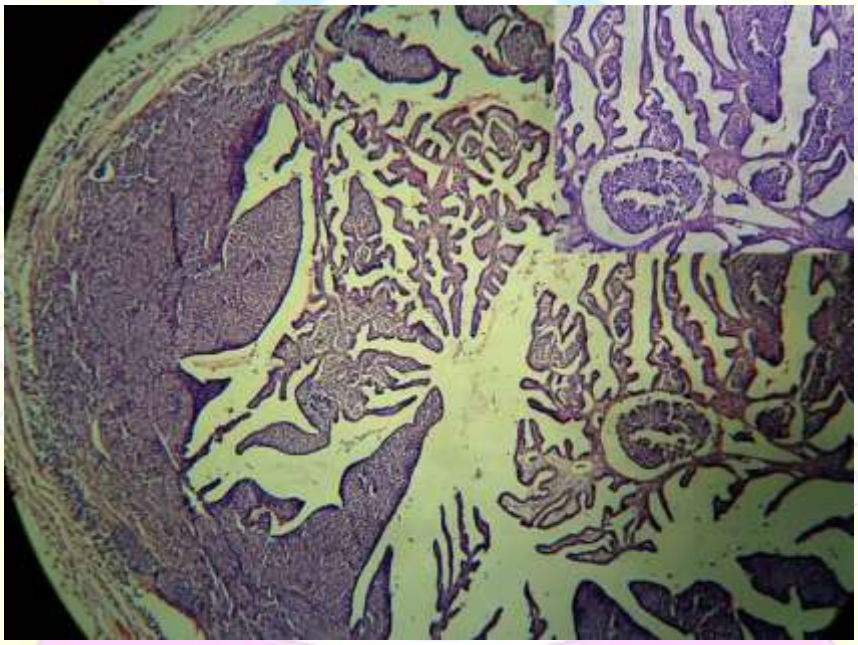

Figure 3a: showing Tubal metastasis (4X), inset (10X)

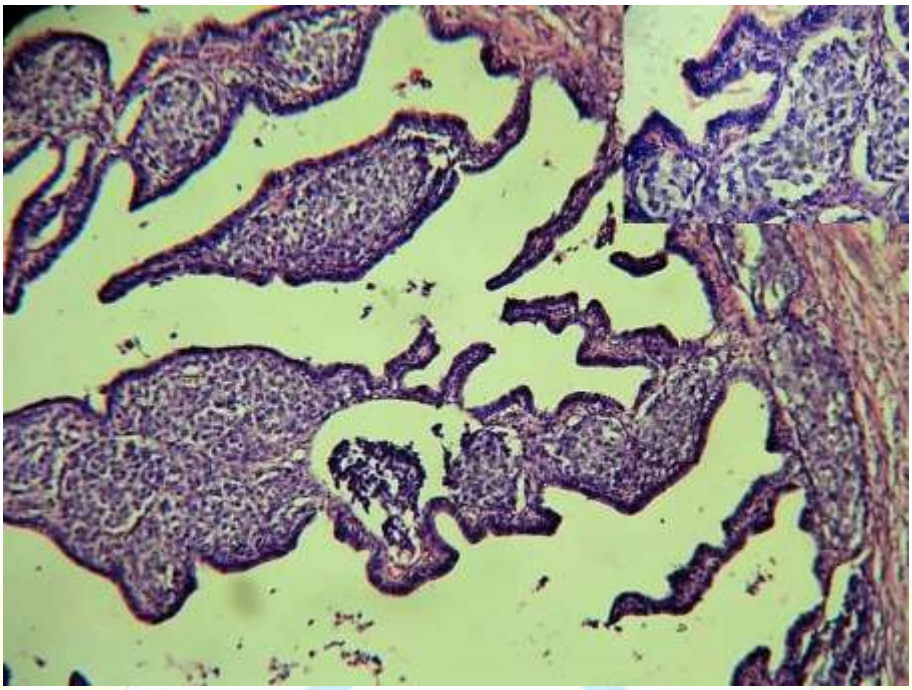

Figure 3b: showing Tubal metastasis (10X), inset (40X)

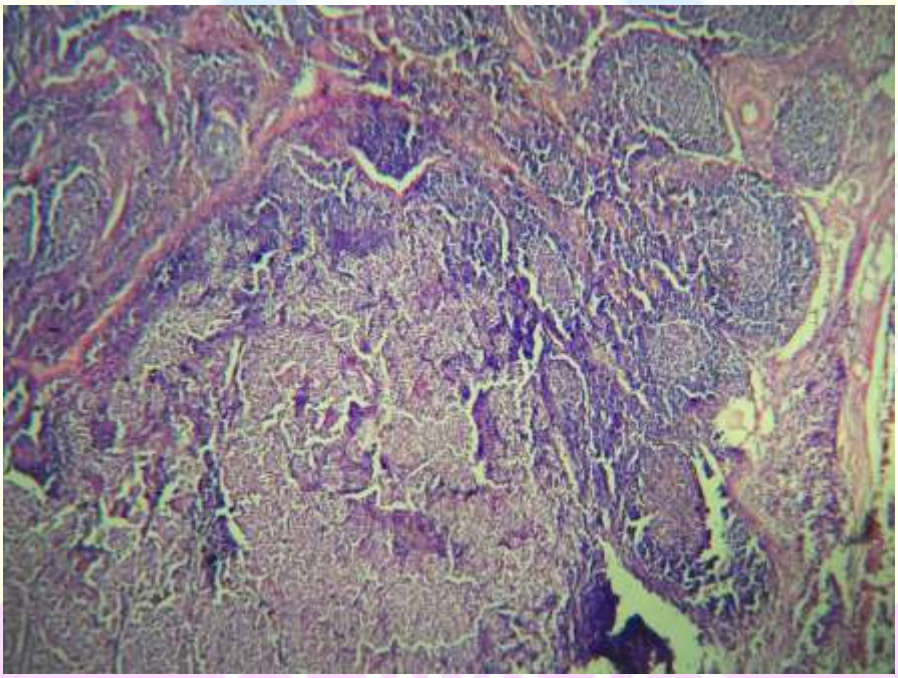

Figure 4: showing lymph nodal involvement (10X)

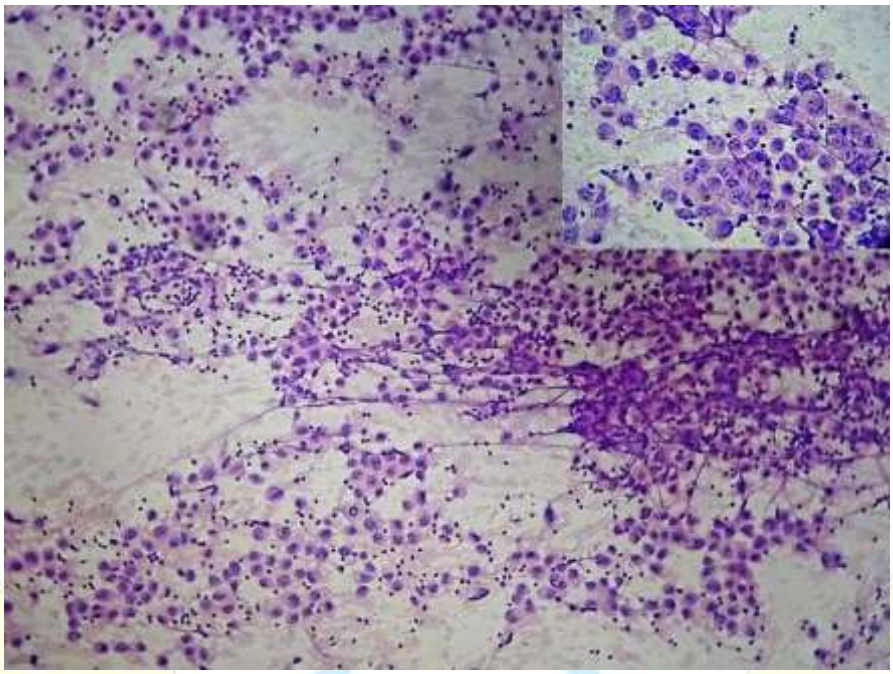

Figure 5: showing picture of cells in imprint cytology (10X), inset (40X)

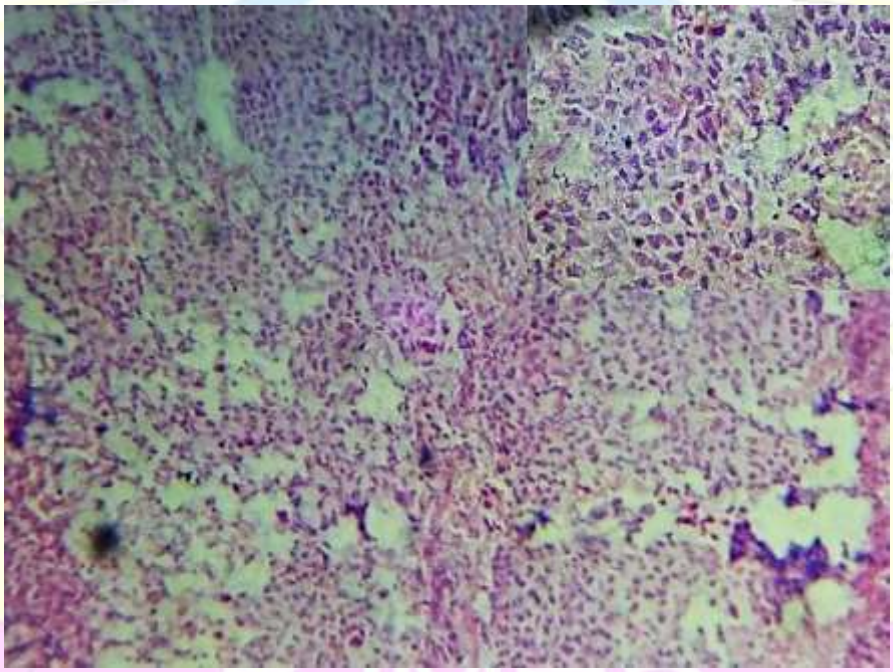

Figure 6: showing picture of cells in frozen section (10X), inset (40X)

CONCLUSION:

Ovarian dysgerminomas, like their male counterpart the seminoma, are extremely radio- and chemosensitive, therefore an excellent prognosis is usually expected. But, the prognosis for the mixed cases is less favourable than for pure dysgerminoma. Therefore, thorough sampling of the tumour should be done and in case of suspicion, IHC or serum marker study should be done for confirmation.

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