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CHORIOCARCINOMA – A RARE TUMOR IN A 15 YEAR FEMALE

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ABSTRACT
Choriocarcinoma of the ovary is a rare, highly malignant ovarian tumor which is characterized pathologically by the presence of trophoblastic malignant cells, and biochemically by the production of the pregnancy hormone human chorionic gonadotrophin (hCG) in the absence of an ongoing pregnancy. This disease is classified two types in origin, gestational choriocarcinoma and nongestational germ cell tumor. Here, we present a case of ovarianchoriocarcinoma in an unmarried15-year-old female who presented with complaints of lower abdominal pain, a tender lump below umbilicus and 2months amenorrhea. Her urine pregnancy test was positive with beta HCG >400IU/ml, Ca125-170U/ml, AFP-1.02(normal) and S.LDH-627U/L. CT Abdomen was suggestive of vascular malignant tumor, possibility of ovarian malignant teratoma. Her on OT table Frozen section report was: Malignant Germ Cell Tumor-most probably-Choriocarcinoma which was followed by Exploratory Laprotomy with total hysterectomy with bilateral salpingo-ophorectomy and partial omentectomy. Finally diagnosis of Choriocarcinoma of right ovary with metastasis to lateral and posterior walls of uterus, cervix and left ovary was given with TNM-$T_{2a}N_XMx$-Stage IIA, FIGO-Stage IIA.

INTRODUCTION

Choriocarcinoma of the ovary is a rare, highly malignant ovarian tumor which is characterized pathologically by the presence of trophoblastic malignant cells, and biochemically by the production of the pregnancy hormone human chorionic gonadotrophin (hCG) in the absence of an ongoing pregnancy. This disease is classified in two types on origin, gestational choriocarcinoma and nongestational germ cell tumour.

CASE REPORT

A15-year-old unmarried female presented with complaints of lower abdominal pain and tender lump below umbilicus since 15 days and also complaint of low grade fever since 5 day. She had 2 months of amenorrhea and history of 1 episode of hemoptysis.

General Examination

- Pallor: present+++
- Per abdomen examination: 24 week size tender mass below the umbilicus, globular in shape, non mobile and cystic to firm in consistency.

Investigations

- HB:7.8gm%
- Urine pregnancy test: Positive with Beta HCG >400IU/ml
- ca125:170U/ml
- Alpha Feto Protein: 1.02ng/ml (normal)
- S.LDH:627U/L.
- All other biochemical investigations are within normal limits
- CTSCAN Abdomen: suggestive of vascular malignant pelvic tumor, possibility of ovarian malignant teratoma.
- CTSCAN Thorax: Normal

- Frozen section: The section shows scattered and loose clusters of large polyhydral and irregular tumour cells with abundant, clear/ amphophilic cytoplasm and vesicular nuclei with prominent nucleoli. Some of the cells are multinucleated with areas of extensive haemorrhage and necrosis. Features are in favour of Malignant Germ Cell Tumor most probably- Choriocarcinoma.

HISTOPATHOLOGY

Gross

3 specimens received. Specimen I: Received grayish brown irregular, well encapsulated, friable soft tissue bits aggregating 15x14x10 cms. Nodular at places, weight approximately 600gms. On cut section areas of necrosis and hemorrhage are seen. Specimen II: Received uterus with cervix with unilateral adnexa with adherent brownish mass attached to the fundus, posterior wall and lateral wall of uterus measuring 12x10x6 cms and also attached to the ovary. Uterus with cervix measuring 8x5x3 cm. Fallopian tube 4 cm long, 0.5 cm in diameter. Adherent mass measuring 10x8x5 cms. On cut section endomyo thickness is 1 cms. Specimen III: Received yellowish brown soft tissue mass measuring 20x2x1 cm. Composed of fibro muscular and fatty tissue. No lymph node identified.

Microscopy

The sections show presence of cytotrophoblastic, intermediate trophoblastic and syncytiotrophoblastic cells in intermixed plexiform pattern. Cytotrophoblastic cells show well defined cell borders with abundant clear cytoplasm and irregular vesicular nuclei and prominent macronuclei. Intermediate trophoblastic cells are seen as large polygonal mononuclear cells with abundant amphophilic cytoplasm and vesicular nuclei with prominent nucleoli. Syncytiotrophoblastic giant cells show multiple hyperchromatic nuclei and abundant amphophilic vacuolated cytoplasm in the background of extensive necrosis, hemorrhage and severe chronic inflammatory infiltrate. Overall features are that of Choriocarcinoma of Right Ovary.

Final Diagnosis

Choriocarcinoma of right ovary with metastasis to lateral and posterior walls of uterus, cervix and left ovary staging: TNM- pT2aNxMx- Stage IIA FIGO-Stage IIA.

Fig 1. Frozen section (H & E, 4x)

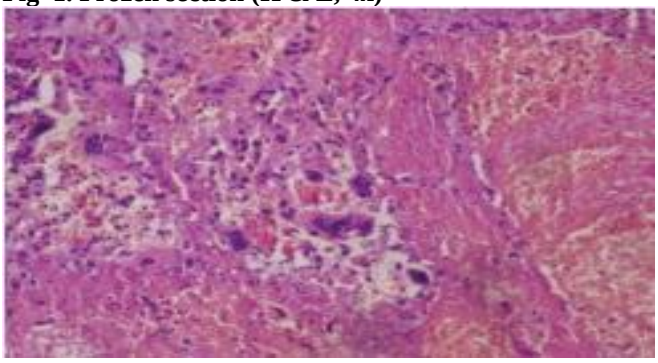


Fig 2. Photomicrograph shows presence of cytotrophoblastic, intermediate trophoblastic and syncytiotrophoblastic cells in intermixed plexiform pattern in the background of necrosis and hemorrhage. (H & E, 4X)

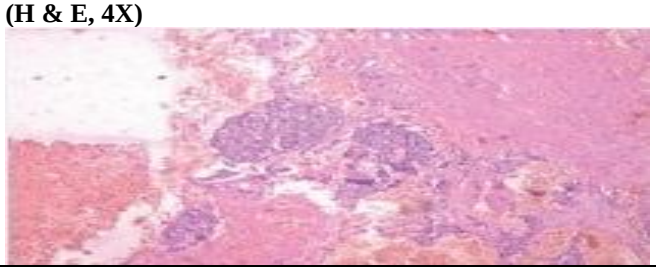


Fig 3. Photomicrograph shows invasion of tumor in the myometrium (H & E, 4X)

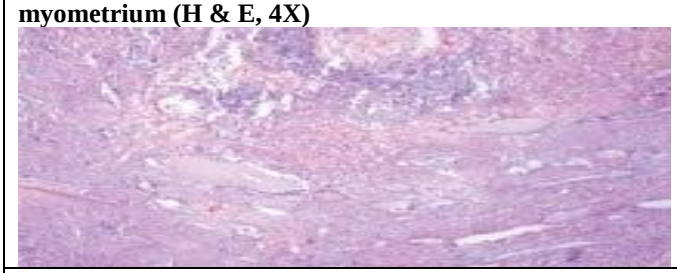


Fig 4. Cytotrophoblastic cells show well defined cell borders with abundant clear cytoplasm (H & E, 10X)

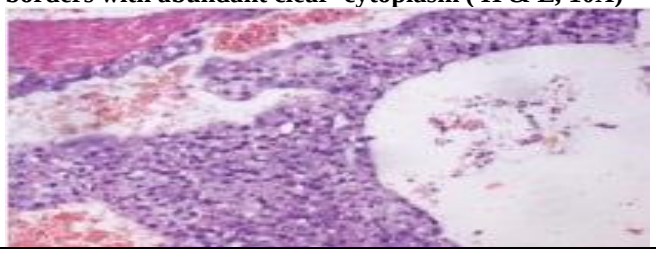


Fig 5. Irregular vesicular nuclei and prominent macronuclei. (H & E, 60X)

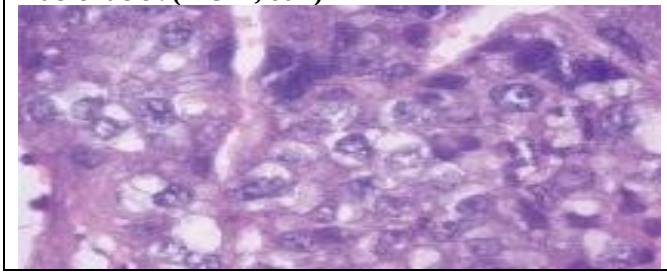


Fig 6. Syncytiotrophoblastic giant cells show multiple hyperchromatic nuclei and abundant amphophilic vacuolated cytoplasm (H & E, 60X)

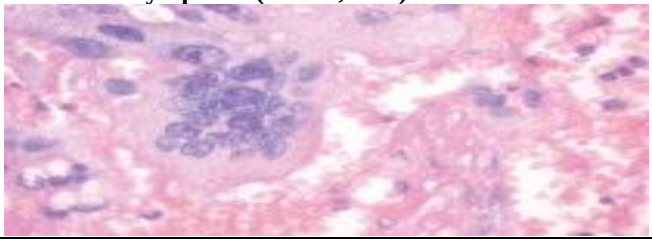
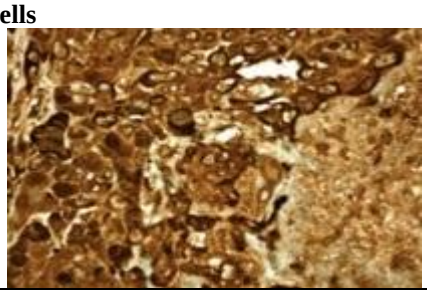


Fig 7. Immunohistochemistry stain for beta HCG of the choriocarcinoma component. Note the Strong cytoplasmic staining on both types of trophoblastic cells



DISCUSSION AND CONCLUSION

Choriocarcinoma is a highly malignant epithelial tumour arising from the trophoblastic tissue of any gestational event, most often a hydatidiform mole. Choriocarcinoma is suspected when there is abnormal uterine bleeding following an abortion or hydatidiform mole. This is one of the most frequent presentations of choriocarcinoma. Metastases occur most commonly in the lung, brain, liver, kidney, and bowel. Rare cases of extragenital primary choriocarcinoma are also reported in abdomen, urinary bladder, stomach and lung. Histopathological diagnosis is based on the absence of chorionic villi. High (β-hCG serum levels and Immunohistochemically, choriocarcinoma cells are positive for hCG and keratin. There may also be reactivity for hPL, SP1, and CEA [1, 2]. There can be a minor component of intermediate trophoblastic cells immunoreactive for hPL, CD146 (Mel-CAM), HLA-G, and inhibin. Choriocarcinoma is considered the most curable gynecological cancer, even in the presence of metastatic disease, with overall survival rates of 82-100% . When treated by surgery alone, the cure rate was only 40% for tumors apparently restricted to the uterus and less than 20% for those accompanied by metastases. With the use of the chemotherapeutic agents methotrexate, actinomycin D, and chlorambucil, the survival rate is close to 100% for cases restricted to the uterus and approximately 83% for patients with metastatic disease [3]. Death frequently occurs by haemorrhage and/or respiratory failure. Hemorrhage is mainly located within CNS and lungs, but can also be intraperitoneal or gastrointestinal [4]. Thus, awareness of choriocarcinoma as a cause of uterine bleedings, together with appropriate histopathology and immunohistochemistry examinations can lead to timely and accurate diagnosis. It probably is the first step towards curing this malignant disease, as very effective chemotherapy regimens are well-established [5].

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