Case Report

A Highly Aggressive Choriocarcinoma of Tubo-Ovarian Mass: A Rare Case Report

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Abstract

Background: Choriocarcinoma is a rare and highly aggressive tumor of trophoblastic origin. The most common location of choriocarcinoma is intrauterine; however, rare sites include the fallopian tube, ovary, and elsewhere in the abdomen and pelvis.

Case details: A 46-year-old woman, with a gestational history of G5P5Sb5, presented to the gynecology OPD with complaints of abdominal pain for four to six (4–6) months and a history of irregular menstrual periods. CECT chest and abdomen revealed a large left adnexal mass, moderate ascites, and pleural effusion. Serial beta-HCG levels were elevated. Specimens of the uterus, right salpingo-oophorectomy, and left adnexal mass were received for histopathological examination. On gross examination, there was a grayish, irregular left adnexal tissue mass measuring 20 × 14 × 9.0 cm. On cut section, multiple necrotic, hemorrhagic, and cystic areas were noted. No gross abnormalities were seen in the uterus, right fallopian tube, and right ovary. Multiple sections studied from the en masse tissue showed sheets of atypical syncytiotrophoblast and cytotrophoblast with two to three (2–3) mitotic figures per ten (10) high-power fields. The tumor showed an infiltrative and destructive pattern with an extensive necrotic and hemorrhagic background.

Conclusion: Choriocarcinoma is a rare but highly aggressive tumor. It usually presents with symptoms resulting from metastasis to the lungs, central nervous system, or alimentary tract. In our case, considering the significant clinical history, high levels of beta-HCG, and histopathological findings, it was diagnosed as a case of choriocarcinoma of the left tubo-ovarian mass.

Keywords:

Choriocarcinoma, Gestational, Non-gestational, Tubo-ovarian mass

Introduction

Choriocarcinoma is a highly malignant tumor of trophoblastic origin, composed of syncytiotrophoblast, cytotrophoblast, and intermediate trophoblast [1]. It is a very rare neoplasm with varied incidence worldwide. In Asia, rates have been reported as high as 5 to 200 per 100,000 pregnancies. The most common site is the uterus, while less common sites include the fallopian tube and ovary. There are two forms of choriocarcinoma: gestational and non-gestational. The former arises following a hydatidiform mole, normal pregnancy, or, most commonly, spontaneous abortion. In contrast, non-gestational choriocarcinoma arises from pluripotent germ cells [2].

Case Report

A 45-year-old female presented to the gynecology department at CIMS Bilaspur with complaints of abdominal pain, abdominal distension, and irregular menses for four to six (4–6) months. She had an obstetric history of five (5) stillbirths. Her serum beta-HCG (>13,000 mIU/ml), lactate dehydrogenase (750 IU/L), and Cancer Antigen 125 (545.2 U/ML) levels were elevated, while her serum alpha-fetoprotein level was normal. Ascitic fluid cytology was negative for malignant cells. Ultrasonography and CECT of the abdomen revealed a malignant lesion in the left tubo-ovarian mass.

She underwent an operative procedure. During surgery, a large left adnexal mass was found to be adhered to surrounding structures. The mass was removed and sent for histopathological examination. Gross examination revealed a mass measuring 20 x 14 x 9 cm. The outer surface was grayish, irregular, and lobulated, with a friable cut surface showing variable cystic changes, hemorrhage, and extensive necrosis [Figure 1].

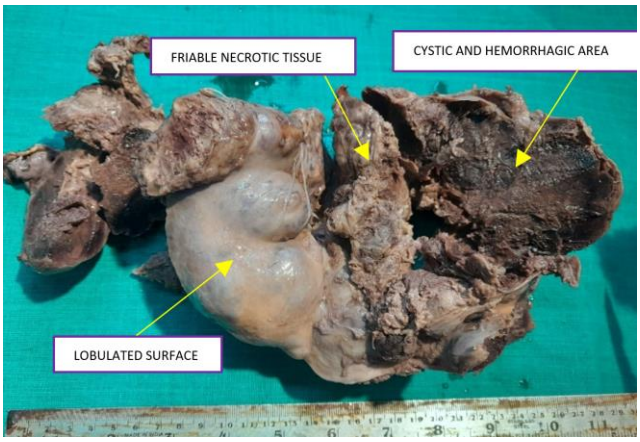

Figure 1: A large irregular, lobulated tissue mass

Histopathological examination of the tissue revealed biphasic growth with groups of cytotrophoblast and syncytiotrophoblast cells. These cells exhibited abundant, deeply basophilic cytoplasm, multiple large, irregular, hyperchromatic nuclei, and clear cytoplasm in cytotrophoblast cells. The latter also showed large, atypical, vesicular nuclei with clumped chromatin and prominent nucleoli. Prominent hemorrhage and extensive necrosis were noted [Figures 2 and 3]. Immunohistochemistry was positive for beta-HCG and Cytokeratin 7 [Figure 4].

Since the patient succumbed to the advanced stage of the disease, this case report has been written after obtaining written informed consent from her husband. Ethical approval is not applicable in this case.

Discussion

Ovarian choriocarcinoma can be divided into three groups: metastatic gestational choriocarcinoma due to a regressed or occult primary gestational choriocarcinoma in other parts of the genital tract (mostly the uterine corpus); primary gestational choriocarcinoma arising from an ectopic ovarian pregnancy; and non-gestational germ cell tumors differentiating into trophoblastic components [3]. All types secrete beta-HCG; however, beta-HCG levels are usually lower in non-gestational variants compared to gestational types [4]. Pure non-gestational ovarian choriocarcinoma is extremely rare and highly malignant, frequently metastasizing through the lymphatics with intra-abdominal spread [5].

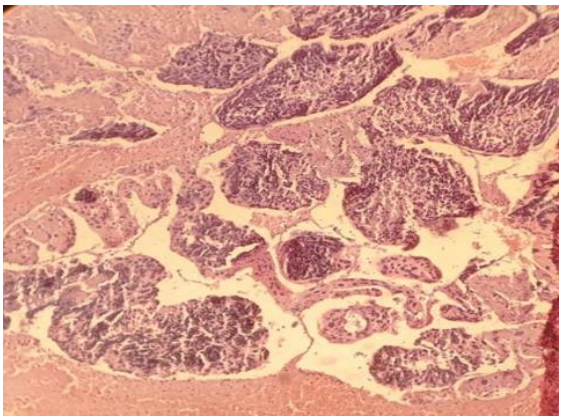

Figure 2: Trophoblastic cells under low power(4x)

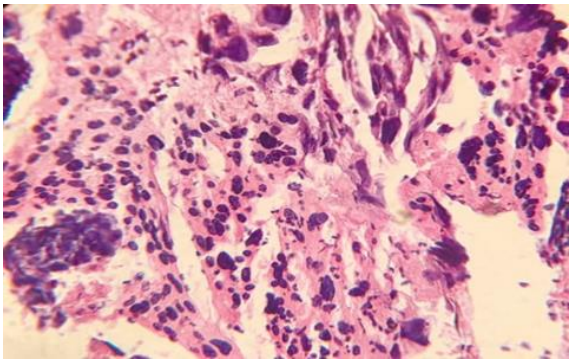

Figure 3: Trophoblastic cells under high power (40x)

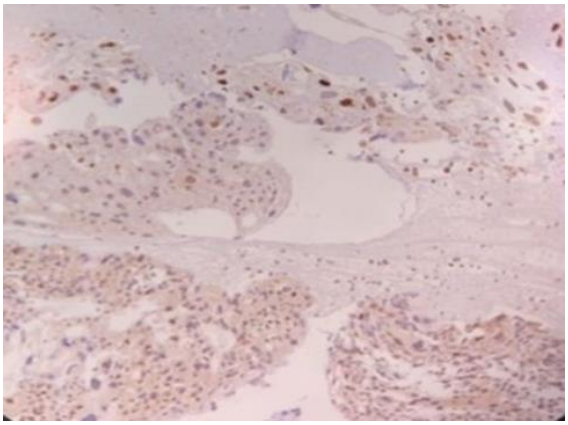

Figure 4: Cells positive for beta HCG

Conclusion

Choriocarcinoma mostly occurs in women of reproductive age, usually following a pregnancy. It typically presents with symptoms resulting from metastasis to the lung, central nervous system, or alimentary tract. In our case, significant clinical history, a high serum beta-HCG level, histopathological findings, and immunohistochemistry positive for beta-HCG and cytokeratin 7 supported the diagnosis of a case of choriocarcinoma of the left tubo-ovarian mass.

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