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Case Report

Gestational choriocarcinoma: Report of two cases

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ABSTRACT

Choriocarcinoma is a uncommon malignant genital neoplasm, which is classified as either gestational choriocarcinoma or nongestational choriocarcinoma. Gestational trophoblastic diseases were first described in 400 BC by Hippocrates. It is a rare and aggressive neoplasm. Choriocarcinoma have very different biological behavior, prognosis and metastasis. The aim of this case reports was to examine the clinical characteristics, Radiological and histopathological features of gestational choriocarcinoma patients with treatment of this rare disease.

1. Introduction

Choriocarcinoma is a uncommon malignant neoplasm, which is classified as either gestational choriocarcinoma or nongestational choriocarcinoma.[1] Gestational trophoblastic tumors include 3 distinct entities: gestational choriocarcinoma, placental site trophoblastic tumor, and epithelioid trophoblastic tumor. Accurate diagnosis is important for clinical management of the patient.[2] Choriocarcinoma is a rare highly vascular, aggressive and malignant trophoblastic tumor. Choriocarcinoma is one of the most cancerous diseases displaying tissue necrosis, the inner layer of the trophoblasts, hyperplastic and anaplastic outer syncytioblasts, absence of chorionic villi, and acute bleeding. Choriocarcinoma could be spread through directly exceeding vascular channels and the middle layer of the uterine wall and would involve distant sites such as the vagina, adnexa, lungs, spleen, intestines, kidney, and liver. Few choriocarcinoma cases would happen after non-molar pregnancy instead of an invasive mole.[3]

2. Case 1

30 year female presented with pervaginal bleeding since 2 day and amenorrhoea from 4 month. Patient had history of early molar pregnancy and incomplete abortion. Serum beta-hCG 3,565 mIU/ml. USG findings showed a large hypoechoic mass measuring 4.6x4.8cm in size in the centre of body of uterus (Figure 1a). Both ovaries also showed red hemorrhagic and necrotic areas.

USG Guided fine needle aspiration cytology was performed and smears showed clusters of cytotrophoblasts displaying polygonal cells with single nucleus, prominent nucleoli and Syncytiotrophoblasts displaying multinucleated, hyperchromatic nuclei with dense eosinophilic cytoplasm in the background of hemorrhage and necrosis (Figure 1c-Inset).

Gross examination showed soft dark red hemorrhagic mass in endometrial cavity and myometrium with areas of necrosis (Figure 1b). Histopathological examination of panhysterectomy specimen composed of hemorrhagic mass in uterus and sections showed tumor cells composed of sheets of cytotrophoblasts separated by dense eosinophilic cytoplasm containing multinucleated cells Syncytiotrophoblasts invading deeply to myometrium along with areas of hemorrhage and necrosis (Figure 1c,d). Bilateral ovaries also showed similar tumor deposit

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of choriocarcinoma. There was absence of chorionic villi. Cervix was normal on histological examination. A confirmed diagnosis of Choriocarcinoma-uterus and metastatic deposits in both ovaries was made.

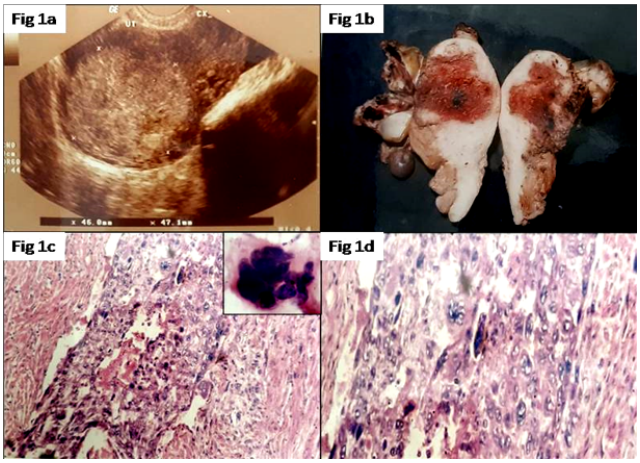

Fig. 1: a:USG findings showed a large hypoechoic mass measuring 4.6x4.8cm in size in the centre of body of uterus, **1b:** Gross examination showed soft dark red hemorrhagic mass in endometrial cavity and myometrium with areas of necrosis,**1c** (Cytology smear in **Inset):** USG Guided FNA Cytology smears and histopathology section showed clusters of cytotrophoblasts displaying polygonal cells with single nucleus, prominent nucleoli and Syncytiotrophoblasts displaying multinucleated, hyperchromatic nuclei with dense eosinophilic cytoplasm in areas of hemorrhage asnd necrosis (h&e,x200 magnification), **1d:** Section showed tumor cells composed of sheets of cytotrophoblasts separated by dense eosinophilic cytoplasm containing multinucleated cells of Syncytiotrophoblasts invading deeply to myometrium (h&e,x400 magnification).

3. Case 2

45 year female presented with pervaginal bleeding since 10 day and amenorrhoea from 6 month. Patient had history of molar pregnancy and incomplete abortion. Serum beta-hCG was 3868 mIU/ml. Gross examination showed dark hemorrhagic and necrotic mass in cervix (Figure 2a). Imprint cytology smears showed cytotrophoblasts displaying polygonal cells with single nucleus, prominent nucleoli and Syncytiotrophoblasts displaying multinucleated, hyperchromatic nuclei with dense eosinophilic cytoplasm in the background of few inflammatory cells, hemorrhage and necrosis (Figure 2b). Histopathological examination of total hysterectomy specimen showed tumor cells composed of sheets of cytotrophoblasts separated by dense eosinophilic cytoplasm containing multinucleated cells of Syncytiotrophoblasts invading deeply to cervix along with areas of hemorrhage and necrosis (Figure 2c,d). Normal endocervical glands (Arrow) are also seen adjacent to the tumour. There was absence of chorionic villi. A confirmed diagnosis of Choriocarcinoma-cervix was made.

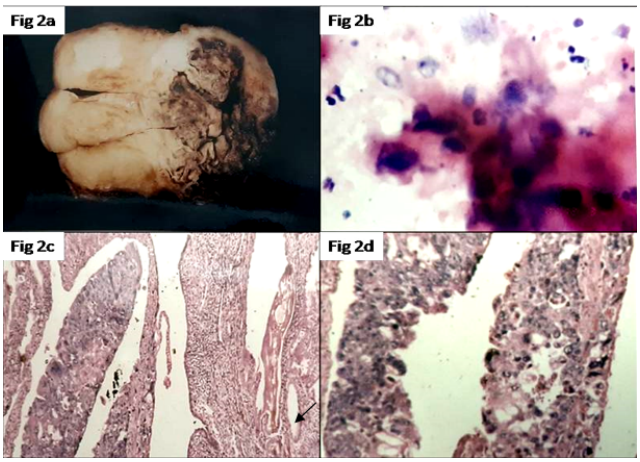

Fig. 2: a: Gross examination showed dark hemorrhagic and necrotic mass in cervix 2**b:** Imprint cytology smears showed cytotrophoblasts displaying polygonal cells and Syncytiotrophoblasts displaying multinucleated, hyperchromatic nuclei with dense eosinophilic cytoplasm in the background of few inflammatory cells, hemorrhage and necrosis (h&e,x400 magnification), **2c:** Histopathology of total hysterectomy specimen showed tumor composed of cytotrophoblasts and Syncytiotrophoblasts invading deeply to cervix along with areas of hemorrhage and necrosis, normal endocervical glands **(Arrow)** are also seen adjacent to the tumour, there is absence of chorionic villi, (h&e,x200 magnification) **2d:** Section showed clusters of cytotrophoblasts displaying polygonal cells with single nucleus, prominent nucleoli and Syncytiotrophoblasts displaying multinucleated, hyperchromatic nuclei with dense eosinophilic cytoplasm (h&e,x400 magnification)

4. Discussion

Choriocarcinoma involves a proliferation of the biphasic trophoblastic tissue composed of cytotrophoiblasts and syncytiotrophoblastic cells with absence of formation of chorionic villi[4] Gestational choriocarcinoma is rare and the most common gestational trophoblastic tumor. PSTT produces significantly lower serum levels of hPL and serum β-hCG than does Choriocarcinoma. There is a wide range in patient age at presentation, but it mainly occurs in the reproductive years, with a mean age of 30 years. The tumor may arise from any type of gestational event: 50% after term pregnancy, 25% after molar gestation, and 25% after other types of gestation.[5] The risk of developing choriocarcinoma following complete moles is approximately 2% to 3%. There is a rather low but finite risk (0.1%–0.5%) of developing choriocarcinoma after partial moles.[6] Uterine bleeding is the most common symptom, but extrauterine hemorrhagic events may be the first presentation in a patient with extrauterine spread:

lung, liver, central nervous system, and gastrointestinal tract.[7] High levels of serum human chorionic gonadotropin (hCG) are invariably present in all patients. The diagnosis of postmolar choriocarcinoma is made in an average of 13 months (range, 1–48 months) after the evacuation of hydatidiform mole. In most patients with choriocarcinoma following term delivery, the pathologic diagnosis is made 1 to 3 months after delivery.[8] Both the patients received chemotherapy after surgery.

5. Source of Funding

None.

6. Conflicts of interest

None.

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