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Placental Site Trophoblastic Tumour: A Rare Case Report

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ABSTRACT

PSTT is uncommon form of GTD accounting less than 3% cases.The tumour comprises of monomorphic neoplastic implantation site trophoblastic cells and lack the typical biphasic plexiform growth pattern of choriocarcinoma. Interestingly, despite deep myometrial involvement,most PSTT are self limiting which run a benign course and only 10-15%cases are malignant and need intensive chemotherapy.Here we present a case of 41 yrs old female with bleeding per vaginum since 10 months which histologically shows the feature of malignant PSTT invading deep between myometrial muscles and the vessel wall shows fibrinoid material deposition with serum beta HCG<1000mIU/ml.

KEYWORDS : Placental site trophoblastic tumour, Gestational trophoblastic neoplasia, Immunohistochemistry.

INTRODUCTION

Gestational Trophoblastic Neoplasia constitute a diverse group of lesions that according to WHO classified as 1. Malignant(choriocarcinoma, PSTT, Epithelioid trophoblastic tumour) 2. Hydatidiform mole (complete, incomplete, invasive) 3. Benign(Exaggerated placental site tumour, Placental site nodule)[1].The recognition &separation of individual categories of GTD is important as each disease entity has distinctive clinical manifestation and each require different therapeutic approaches. Intermediate trophoblastic cells are of three types: implantation site, villious and chorionic PSTT is distinctive but rare form of neoplastic trophoblastic disease associated with implantation site intermediate trophoblast.

CASE REPORT

A 41yrs female came to our institution with complaint of bleeding per vaginum since10 months after taking pill for terminating pregnancy. The bleeding was profuse, associated with clots and continued on & off for the last 10 months.Lady was severely anaemic. USG shows fibroid uterus of 14weeks size.Chest X-ray shows diffuse patchy opacities. Hysterectomy with bilateral salpingooopherectomy was done.Specimen was received for histopathology. On gross examination uterus is enlarged measuring 8x8x7cm, hard in consistency, uterine cavity filled with mass with no hemorrhagic area(-Fig.1).

Microscopically, the tumour shows sheets of large polygonal cells with abundant cytoplasm, central nucleus and bizarre trophoblastic cells infiltrating myometrium(Fig.2a). Areas of haemorrhage and necrosis seen at places. Mitotic count is >5per10HPF. No intact chorionic villi or fetal parts seen. Invasion of blood vessel by trophoblastic cell and characteristically fibrinoid change in vessel wall which is diagnostic of PSTT present. Serum beta HCG is <1000 mIU/ml.

DISCUSSION

PSTT is rare form of GTD accounting <3% cases formerly described as atypical choriocarcinoma and trophoblastic pseudotumour[2,3]. PSTT develop as result of neoplastic transformation of cytotrophoblastic cells:these transformed cells exhibit implantation site intermediate trophoblastic differentiation[4].These differentiated cells characteristically invade spiral arteries replacing smooth muscle of vessel wall and often associated with deposition of fibrinoid material (Fig.2b). Most PSTT follow normal pregnancy after long time but few cases of spontaneous abortion and hydatidiform mole have preceded the diagnosis[5]. Paternally derived X chromosome and absence of Y chromosome may be necessary for its formation. Present with amenorrhea or with abnormal bleeding or rarely virilisation or unique form of renal disease associated with nephrotic syndrome[6].

Malignant PSTT account for 10-15% cases and some patient die despite intensive multiagent chemotherapy.They have greater depth of invasion, high mitotic count ,disseminated metastasis resembling choriocarcinoma & metastasis in lung, liver, abdominal cavity, brain had been seen. Serum beta HCG level usually ranges between 1000-2000mIU/ml. Despite low level of serum beta HCG, it is best available marker to monitor the course of disease[7] and those patient with undetectable or very low level, percentage(%) of HCG free beta subunit is reliable serum marker of PSTT which rule out other beta HCG producing trophoblastic & nontrophoblastic tumour[8]. Immunohistochemically they show usually focal positivity for beta HCG, diffuse positivity for hPL, CD146 (Mel-CAM), HLA-G, CD10 and mucin-4 that are expressed in normal implantation site trophoblastic cell[9].The treatment of choice for patient whose disease confined to uterus is hysterectomy. For patient with more extensive or metastatic disease, chemotherapy with surgery is indicated.

Poor Prognostic factors- High FIGO stage, metastatic involvement, long interval from antecedent pregnancy, age>35yr, serumH-CG>1000mIU/ml, depth of invasion, high mitotic count[10].

CONCLUSION

Placental site trophoblastic tumour is rare type of GTD which despite deep myometrial invasion usually run self-limited course.Treatment of choice for tumour confined to uterus is hysterectomy. 10-15% of PSTT are clinically malignant that may present with disseminated metastasis and also have chances of reccurences. These cases have poor response to chemotherapy.

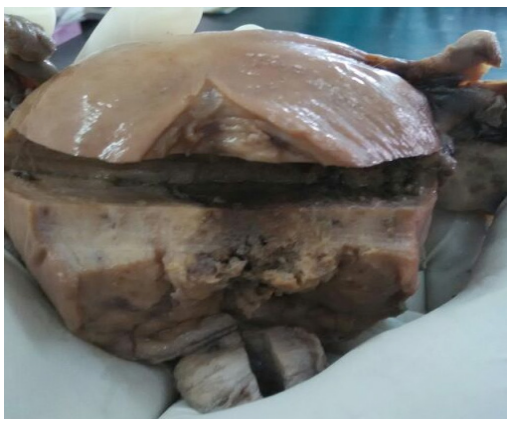

Fig 1: Grossly enlarged uterus with no areas of haemorrhage and necrosis.

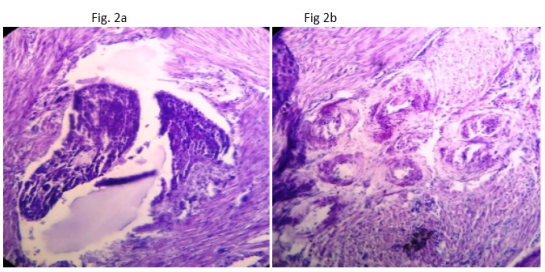

Fig: H&E Staining showing 2a: Myometrial invasion by trophoblastic cells, 2b: Fibrinoid change in vessel wall.

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