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Successful Full-Term Pregnancies Following Fertility-Sparing Surgery for Placental Site Trophoblastic Tumor: Two Cases Demonstrating Favorable Long-Term Oncologic and Reproductive Outcomes

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INTRODUCTION

Gestational trophoblastic disease (GTD) includes potentially neoplastic conditions, the two types of hydatidiform mole (HM), and gestational trophoblastic neoplasia (GTN). GTN comprises invasive HM, choriocarcinoma, placental site trophoblastic tumor (PSTT), and epithelioid trophoblastic tumor (ETT). PSTT may follow a term pregnancy, non-molar miscarriage, or complete or partial HM. It is rare, accounting for 0.2%–2% of all GTD. Their serum levels of human chorionic gonadotropin (hCG) are usually low and they are relatively insensitive to chemotherapy. Surgery is the recommended treatment, either hysterectomy or conservative surgery in selected patients who wish to preserve fertility.

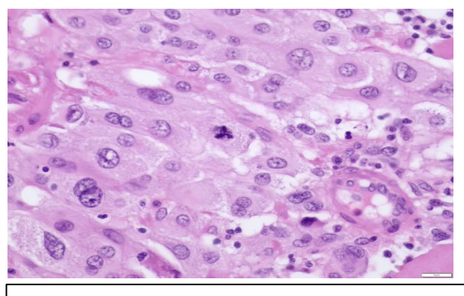
CASE 1

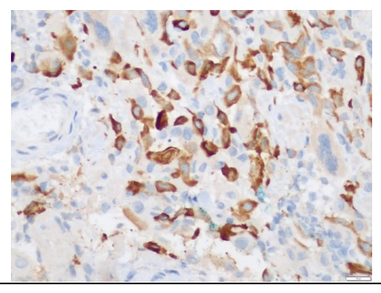
A 23-year-old woman, G1P1(cesarean in Jun 2019) , was submitted to 2 uterine curettage due to placental remnants on TV-US , in Nov 2020 . The second HP result was compatible with partial HM and/or invasive HM.

At RC admission, in Nov 2020, her hCG level varied between 194 and 482 mIU/mL Review of the paraffin block and immunohistochemistry (IHC) showed an atypical proliferative trophoblastic lesion, without distinction between PSTT and an exaggerated placental implantation site. TV-US with color Doppler + contrast-enhanced MRI showed a proliferative trophoblastic lesion with signs of myometrial invasion with 3.4 x3.0 x 2.2 cm on the posterior and fundal uterine wall. .

With a PSTT diagnostic hypothesis (non-metastatic GTN) , and to preserve fertility, she was inittially treated with two cycles of dactinomycin, without response. So, we decided to carry out local excision of the uterine lesion in March 2021. HP+IHC findings were compatible with PSTT.

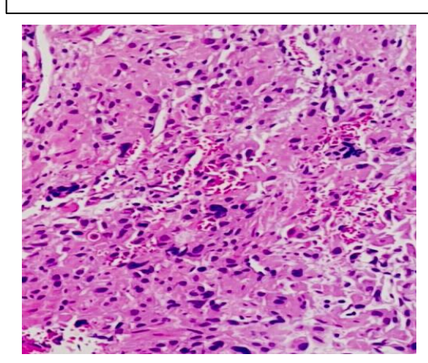
Serum hCG levels rapidly normalized. At 3 months after surgery, TV-US with color Doppler and pelvic MRI showed no uterine residual lesion. Monthly hCG monitoring remained normal for two years.. In March 2024 she conceived and had an uneventful pregnancy, and cesarean delivery without complications. After 2 months postpartum, hCG levels and TV-US with color Doppler remained normal. At 30 months of postpartum follow-up, she is fine and had no GTN recurrence.

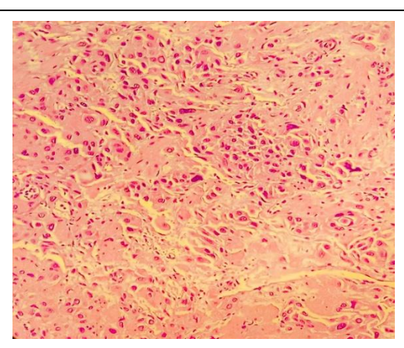




CASE 1

Magnification: 40×. Atypical trophoblastic cells infiltrating muscle fibers of the uterine wall.
IHC positive for human placental lactogen.





CASE 2

CASE 2

A 23-year-old woman, G2P0, underwent uterine aspiration at the GTDC in Jan 2018, with a diagnosis of partial HM. In March 2018 she developed low-risk GTN (FIGO stage I:3) . She was treated with 6 + 3 cycles of Methotrexate/folinic acid and achieved remission in July 2018.

GTN recurred 13 months after remission in Aug 2019, with rising but low hCG levels (<30 mIUI/mL) .TV-US with color Doppler and pelvic MRI revealed a small avascular and echogenic lesion in the posterior uterine wall (2.1 × 1.4 × 1.1 cm) . PET-CT was normal.

With suspect of PSTT, the patient and ther RC team opted for conservative surgery, by laparotomy for local tumor excision in Dec 2019. The HP+ HC exams confirmed PSTT. Soon after surgery, persistent serum hCG elevation and a minor persistent uterine lesion required multiagent chemotherapy with TP/TE (3 + 3 cycles). The second GTN remission ocurred in Apr 2020.

One year after her second GTN remission, she was cleared to conceive and subsequently delivered a healthy newborn in Aug 2022..

Two months postpartum, serum hCG remained normal and TV-US with color Doppler showed no uterine lesion. The patient refused to undergo a histerectomy.

At this moment, after 52 months of follow-up, she is fine and had no evidence of GTN recurrence.

DISCUSSION

Few reports describe successful conservative surgery for PSTT.
Because the disease is very rare, therapeutic recommendations remain limited to young women who wish to conceive.
These two successful cases of conservative surgery, together with 2 years of follow-up and normal serum hCG levels,
offer hope to other young patients who wish to preserve fertility.