

Interesting Case Presentation: Placental Site Trophoblastic Tumor

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CASE STUDY

A 26 year-old female (G3P1) had a D&E in March, 2010 for a blighted ovum. The diagnosis on the uterine contents at an outside institution was placental site trophoblastic tumor. No follow up care was obtained. Four months later (July, 2010), the patient presented to her OB-GYN stating that she had missed a period and had a positive home pregnancy test. An ultrasound examination failed to identify a fetus, and the patient was referred to TJUH.

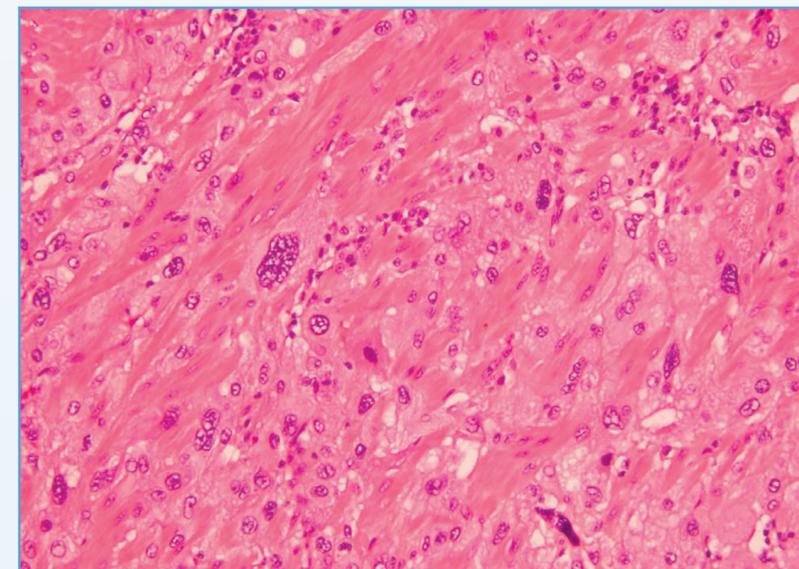
At Jefferson an MRI showed a poorly defined uterine mass that extended into the myometrium. The slides from the original D & E were reviewed by the Pathology Department at Jefferson, and the diagnosis of placental site trophoblastic tumor was confirmed. A total abdominal hysterectomy was then performed.



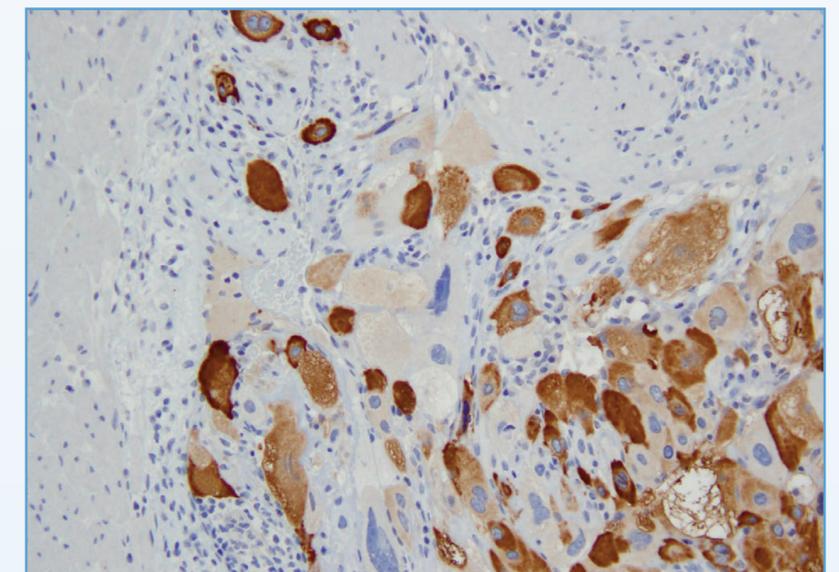
Histologic examination showed both masses to be a placental site trophoblastic tumor with areas of polygonal intermediate type trophoblastic cells and many scattered enlarged multi-nucleated cells. The tumor infiltrated deeply into the myometrium of the left wall of the lower uterine segment (essentially transmural infiltration).



There is a prominent mass in the uterine fundus (MRI; sagittal view)



Tumor cells invading the myometrium (H&E; 20x)



Staining of cytoplasm for human placental lactogen (20x)

(September, 2010) The specimen was received in surgical pathology for frozen section consultation. Opening of the uterus revealed two distinct lesions, a 4.0 x 3.5 x 2.5 cm mass in the posterior wall of the lower uterine segment and a 6.5 x 5.3 x 4.0 cm mass in the anterior myometrium. Sectioning of each mass revealed variegated, tan-yellow, and focally hemorrhagic cut surfaces.

The neoplastic trophoblastic cells showed diffuse cytoplasmic staining for human placental lactogen and scattered cytoplasmic staining for human chorionic gonadotrophin. The tumor cells were negative for PLAP. Ki-67 positivity was present in 30% of the tumor cells.

Placental site trophoblastic tumors are rare, slow growing malignant tumors derived from the intermediate cytotrophoblast cells of the placenta.¹ They account for <0.2% of all gestational trophoblastic disease. Metastases are present at the time of initial diagnosis in 30-53% of cases. Common sites of metastasis include the lungs, pelvis and lymph nodes. Less common sites include the CNS, kidney and liver. EMA-EP (etoposide, methotrexate and actinomycin D alternating with etoposide and cisplatin) is the preferred adjuvant chemotherapy.

1. Christopher P.Crum, Kenneth R. Lee, *Diagnostic Gynecologic and Obstetric Pathology*, pp 1033-1036, Elsevier, 2006