

A Mole on the Move: A Case Report of an Invasive Molar Pregnancy

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INTRODUCTION

GESTATIONAL TROPHOBLASTIC DISEASE (GTD)

- Spectrum of diseases/cancers resulting from complications of pregnancy⁸
 - Most common form affecting up to 3 of every 10000 pregnancies in North America⁸
- Arise from trophoblast cells⁸
 - Formation of placenta, production of hCG⁹
- Risk factors include age at becoming pregnant (<21y/o, >40y/o) and prior history of GTD^{5,6}
- Multiple benign (ex. hydatidiform moles) and malignant forms (including invasive moles)⁸
 - Clinical follow-up periods and improvements in therapy have greatly increased cure rates, with future pregnancies possible for treated women⁶

INVASIVE MOLAR PREGNANCY

- Malignant invasion of villi through endometrium and into myometrium of the uterus¹
 - Usually localized⁷
 - Can potentially perforate the serosa⁴
- Risk factors include age at becoming pregnant and prior history/treatment of a benign hydatidiform mole^{4,7}
- Signs and symptoms include continued elevated beta-hCG levels and persistent vaginal bleeding **after treatment** for a molar pregnancy⁴

MATERIALS AND METHODS

CLINICAL HISTORY

- 27 year-old female with prior treatment for a complete hydatidiform mole
 - Presented with rising beta-hCG levels 12 days after treatment for benign mole; suspicious for invasion
- Ultrasound revealed an infiltrative mass growing within the fundus and left lateral side of the uterus
 - Chest x-ray was negative for metastases

GROSS EXAMINATION

- Uterus and cervix with attached bilateral fallopian tubes were received
- Aligning with mass seen in ultrasound, uterus was opened to reveal a mass (9.3 cm SI x 6.0 cm AP x 4.5 cm RL) of grape-like clusters growing within the myometrium
 - Mass came within 0.1cm of the endometrium and abutted the serosa

MATERIALS AND METHODS (CONT'D)



FIG. 1A: Uterus opened to reveal mass of grape-like clusters growing within myometrium.

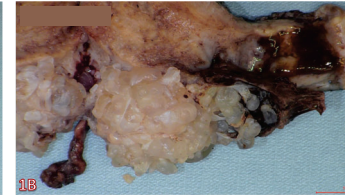


FIG. 1B: Close-up view of mass demonstrating fluid-filled vesicles creating the grape-like clusters.

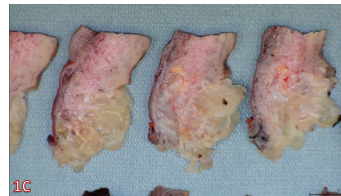


FIG. 1C: Uterus serially sectioned to reveal mass invading into the myometrium and abutting the serosa.

RESULTS

HISTOLOGY

- Microscopic examination revealed molar villi invading deeply into the myometrium of the uterus
 - The tumor invaded into the outer 1/3 of the myometrium and came within 0.4mm of the serosa
 - Villi were invading into lymphovascular channels
- Fetal tissue and fetal red blood cells were absent
- The cervix, uterine serosa, and both fallopian tubes were negative for tumor

DIAGNOSIS

- The gross and microscopic findings were consistent with an invasive mole, with the mole (primary tumor, PT) being classified as Stage 1 under the FIGO classification

DISCUSSION

- In order to accurately diagnose invasive moles, blood work, diagnostic imaging, and biopsies are crucial²
 - Blood work to monitor patient's beta-hCG levels²
 - Blood levels should drop following treatment of a benign molar pregnancy²
 - Imaging to confirm presence of mass within uterus, as well as to check for metastases in other parts of the body (ex. lungs)²
 - Biopsies to assess extent of invasion into uterus³
- Thorough gross examination and sampling of hysterectomy specimen by a pathologists' assistant is key for accurate FIGO staging of the mole³
 - Location of the mole is important (size is *not* considered)³
 - For example, tumor found to be within the uterus and a fallopian tube would raise stage from FIGO Stage I to Stage II³
- Treatment options include surgery and chemotherapy²
 - A hysterectomy should be performed if concerned about perforation of the uterus²
 - Most low-risk diseases can be treated with a single chemotherapy drug¹
 - Ideal for women who still wish to have children¹

CONCLUSION

- Invasive moles are one of the malignant forms of gestational trophoblastic disease (GTD)
- In order to render an accurate diagnosis, it is important to consider a woman's previous reproductive history, diagnostic imaging, as well as lab results for hormone levels
- The PA plays a key role in staging of an invasive mole, as invasion into the uterus and/or adnexa affects cancer stage
 - Careful examination and sampling of uterus and surrounding reproductive organs in order to determine extent of tumour dissemination
- This case highlights the importance of various arms of medicine working together in order to make an accurate diagnosis and therefore enhance patient care

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