AMSER Rad Path
Case of the Month:

Case: 22 year old female with vaginal bleeding and 5 weeks after LMP

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Patient Presentation

Clinical history: Patient is a 22 female presenting to the ED with bloating, nausea, and vaginal bleeding with a LMP 5 weeks prior.

Pertinent social history: SVD 2 years ago, h/o chlamydia.

Pertinent physical exam findings: patient in no acute distress, abdomen soft and non-tender.
## Variant 4: Premenopausal Vaginal Bleeding. First Study.

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
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<tbody>
<tr>
<td>US pelvis transvaginal</td>
<td>9</td>
<td>3-D imaging may be a useful adjunct to 2-D imaging to better characterize an intracavitary abnormality.</td>
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<td>US pelvis transabdominal</td>
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<td>US duplex Doppler pelvis</td>
<td>5</td>
<td>This procedure may be useful to better characterize a focal or diffuse endometrial abnormality.</td>
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<td>US saline infusion sonohysterography</td>
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<td>3-D imaging may be a useful adjunct to standard 2-D imaging if intracavitary abnormality is suspected.</td>
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<td>CT pelvis with IV contrast</td>
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<td>MRI pelvis without and with IV contrast</td>
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<td>CT pelvis without IV contrast</td>
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**Rating Scale:** 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

*Relative Radiation Level*
Transvaginal US of Pelvis (unlabeled)
Transvaginal US of Pelvis (labeled)

- Uterus
- Cervical Canal
- Mixed cystic components in EMC
DDX

- Retained products of conception
- Non-visualized ectopic pregnancy
- Early pregnancy
- Gestational trophoblastic neoplasm
  - invasive hydatidiform mole - complete or partial
  - choriocarcinoma
  - placental site trophoblastic tumor
  - epithelioid trophoblastic tumor
Patient discharged from ED and instructed to see GYN the following day for evaluation of presumed molar pregnancy

15 days later patient returns for pre-op ultrasound and lab work

Day of first US 52,000 mIU/ml
Day of pre-op US 289,000 mIU/ml
Follow up ultrasound 15 days later
Follow up ultrasound 15 days later

Heterogenous tissue distending endometrial canal with anechoic cystic spaces
Follow up ultrasound 15 days later
Arterial vascularity within tissue distending endometrial canal on color and spectral doppler.
Micro Path

Trophoblastic hyperplasia adjacent to villous cistern

Villous enlargement with circumferential trophoblastic hyperplasia and cistern formation
Final Dx:

Complete Hydatidiform Mole
Case Discussion

- Mole is an error in normal fertilization
  - 80% of cases of complete moles are 46XX where maternal chromosomal material is lost with the duplication of the chromosome within the male sperm
  - Partial moles are triploid, 69XXX/XXY/XYY usually involving a single egg and two sperm
- Incidence: 66-121 per 100,000 pregnancies
- Risk factors:
  - prior molar pregnancy
  - extremes of maternal age (less than 15, greater than 35)
  - Possible dietary role - higher rates in areas with vit A def
Case Discussion

- Presentation: signs of early pregnancy (positive pregnancy test, nausea and emesis, growing uterus)
  - Additionally pelvic pain, vaginal bleeding, and uterine size greater than expected
- Diagnosis based on lab tests and imaging, but may be made clinically if ultrasound inconclusive
  - hCG levels much higher than expected for LMP >100,000 mIU/ml
  - **US findings:** absent fetal parts and amnionc fluid, heterogeneous “snowstorm” appearance with anechoic cystic spaces
Case Discussion

• Treatment is dilatation and curettage
• Trend hCG until reached zero then for an additional 6 months to monitor possibility of neoplasm
• Neoplasm develops after complete mole in 15-20% of women
• Monitor for local invasion and neoplasm
References:
