AMSER Case of the Month: June 2018

11 Year Old Female With Pelvic Pain

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Patient Presentation

• 11 year old female, no significant past medical history, presented to ED with worsening crampy, intermittent abdominal pain over past 3 months

• Physical Exam
  • Lower abdominal tenderness without rebound; no palpable mass; genitourinary exam deferred.
  • VS: T: 97.9 °F, HR: 90, BP: 137/87 mm Hg, RR: 18, SpO2: 98% on room air

• Labs
  • Urinalysis: normal, Alpha Fetal Protein: normal, Beta hCG: negative, CA-125: elevated, 94 U/mL (0-38)
What Imaging Should We Order?
Select the applicable ACR Appropriateness Criteria

<table>
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<th>Clinical Condition: Acute Pelvic Pain in the Reproductive Age Group</th>
<th>Variant 2: Gynecological etiology suspected, serum β-hCG negative.</th>
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<tr>
<td>Radiologic Procedure</td>
<td>Rating</td>
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<tr>
<td>US pelvis transvaginal</td>
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<td>US pelvis transabdominal</td>
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<td>US duplex Doppler pelvis</td>
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<td>MRI pelvis without and with IV contrast</td>
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<td>MRI abdomen and pelvis without and with IV contrast</td>
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<td>MRI pelvis without IV contrast</td>
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<tr>
<td>MRI abdomen and pelvis without IV contrast</td>
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<tr>
<td>CT abdomen and pelvis with IV contrast</td>
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</table>

This imaging modality was ordered by the emergency department physician.
Findings (unlabeled)
Findings (labeled)

- Distended, debris-filled vagina
- Distended, debris-filled uterus
- Bladder
- Cervix
- Rectum
- Pelvis Sag Right-Left

AREA OF UTERUS Trans
Findings (labeled)

Echogenic material within distended uterus showing absent vascular flow most consistent with layering blood

*left and right ovaries (not shown) were normal
Final Diagnosis:

Hematometrocolpos
Case Discussion

Hematometrocolpos: menstrual blood filled distention of vagina and uterus due to mechanical outlet obstruction

- About 60% of cases a result of imperforate hymen
- Other etiologies: transverse vaginal septum, vaginal stenosis, vaginal atresia

US Findings: Anechoic cystic-like masses/compartments in pelvic midline with variable echo-texture representing stages of blood clotting
Case Discussion

Complications: Retrograde flow into the fallopian tubes (hematosalpinx) and peritoneal cavity (hematoperitoneum), obstructive hydronephrosis, and infertility.

The anatomy leading to obstruction can have associations with Mullerian and urological tract malformations: a renal US should be preformed to rule out for the presence of these abnormalities.
References


