

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Medical Imaging Quiz – Case 35

A 28-years-old female patient, HIV positive, was referred to the emergency department complaining of diffuse acute abdominal pain. Clinical examination revealed acute abdomen with abdominal tenderness and rebound. There was no fever or other symptoms of infection. Laboratory findings showed a significant drop in the hemoglobin levels (7 mg/mL) and mild leukocytosis. Internal bleeding was suspected and a computed tomography (CT) scan was urgently requested in order to confirm and find the source of potential bleeding. Given the urgent situation, neither human chorionic gonadotropin (HCG) test nor US scan were performed prior to the CT exam.

The CT scan was performed under the hemorrhage protocol, precontrast, arterial and venous post iv contrast images were obtained. CT demonstrated high density fluid (>30 HU) within the abdomen and pelvis consistent with hemoperitoneum (figures 1, 2). In the anatomical space of the right adnexa a low density thick walled mass was revealed which showed intense peripheral enhancement post contrast (figures 1–4). There was

loss of continuity in the enhancing wall of this mass posteriorly (figures 1, 4), while active extravasation of iv contrast in that area was highly suspected (figures 5, 6). Additional findings were hepatosplenomegaly which was explained by the HIV infection. No other sources of bleeding were identified.

The CT findings are in keeping with hemoperitoneum and active bleeding secondary to an acute gynecologic condition. Differential diagnosis included rupture of ectopic pregnancy and rupture of an ovarian cyst (corpus luteal), although HCG levels were not evaluated.

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2014, 31(2):246–247

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Figure 1



Figure 2

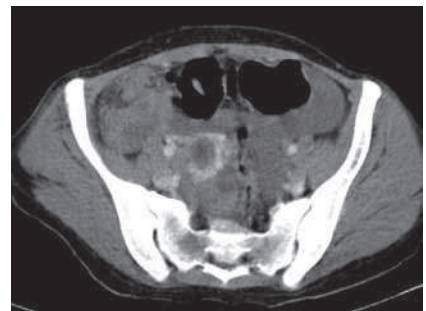


Figure 3



Figure 4

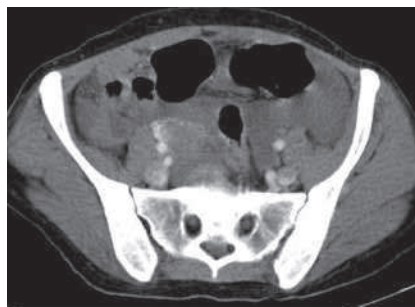


Figure 5

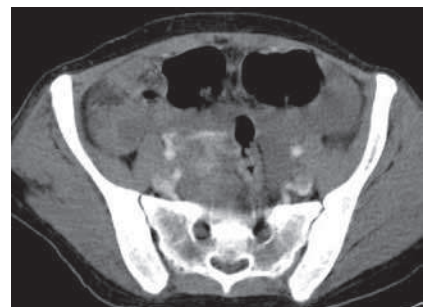


Figure 6

The imaging findings were confirmed intraoperatively.

Comment

The primary imaging modality used for the assessment of gynecologic conditions is US. Nonetheless, CT is frequently requested if the clinical findings are nonspecific or when bleeding is suspected. The reproductive tract is the most common source of spontaneous hemoperitoneum in women of childbearing age. In general, ectopic pregnancy and ruptured ovarian cyst are the most common gynecologic sources of bleeding. Hemoperitoneum is also noted in the setting of endometriosis and uterine rupture, quite uncommonly though.

In particular, ectopic pregnancy may be associated with life-threatening bleeding and therefore must be considered in every woman of childbearing age who presents with abdominal or pelvic pain and signs of hemorrhage. Ectopic pregnancy accounts for up to 1% of pregnancies, with 97% of occurrences located in either the ampullary (most common) or the isthmic portion of the Fallopian tube. Risk factors include previous ectopic pregnancy, pelvic inflam-

matory disease, in vitro fertilization, use of an intrauterine device, and tubal surgery. A positive human chorionic gonadotropin with levels of more than 2,000 IU/L and no intrauterine pregnancy in addition to the finding of an extraovarian mass is highly suggestive of an ectopic pregnancy.

References

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2. DELLA-GIUSTINA D, DENNY M. Ectopic pregnancy. *Emerg Med Clin North Am* 2003, 21:565–584

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