>> EMERGENCY IMAGING

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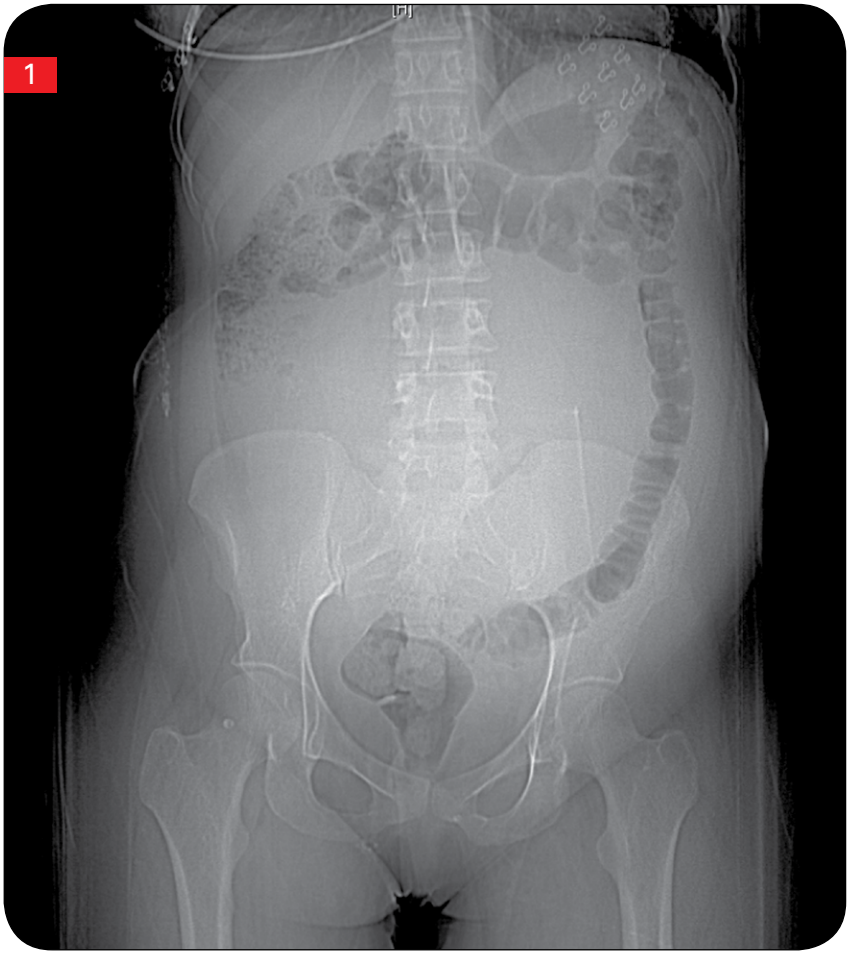
PROBLEM

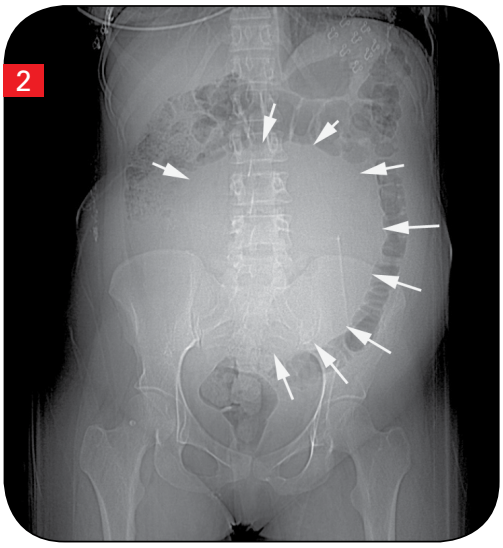


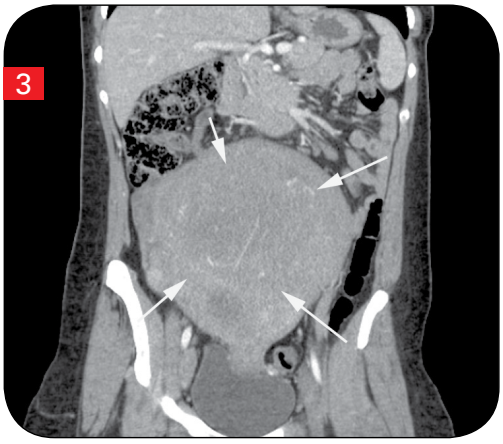
>> A 31-year-old woman presents to the ED with abdominal pain and left lower extremity swelling. Figure 1 is a scout film from a CT study of the abdomen and pelvis.

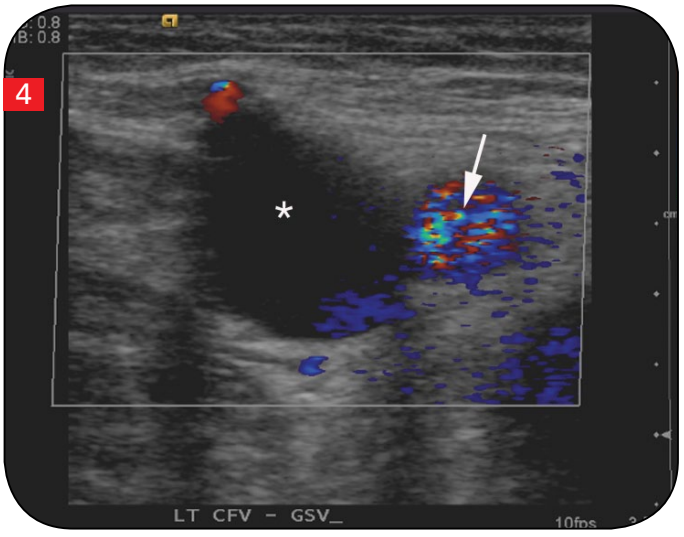
What is your diagnosis?

Turn page for answer >>

ANSWER







>>The patient has a mass in the central abdomen/pelvis that displaces the bowel loops peripherally (white arrows, Figure 2). Note the absence of bowel gas in the center of the abdomen. While the radiographic image demonstrates the presence of a soft tissue mass, CT is necessary for further characterization. The differential diagnosis based on this image would include a soft tissue mass, a large cyst/pseudocyst, or even a markedly distended bladder.

Figure 3 is a coronal reformat of a contrast-enhanced CT examination showing the mass to be an enlarged heterogeneous uterus. The enlargement is the result of multiple fibroids and is causing the uterus to extend into the upper abdomen and, as the radiographic image (Figure 2) demonstrates, the enlarged fibroid uterus (white arrows, Figure 3) displaces the bowel. One should always examine the bowel gas pattern for evidence of displacement, as this may be the only clue to an intra-abdominal mass lesion.

Leiomyomas, also known as uterine myomas or fibroids, are benign tumors occurring in 20% to 50% of women older than 30.[1] They are classified as intramural (the most common subtype), submucosal, or subserosal, depending on their relationship to the myometrium. Myomas are asymptomatic in most cases, but treatment is needed in 10% to 20% of patients.[1] The most common symptoms include menorrhagia, pressure-related symptoms (bloating, urinary frequency or retention, constipation), pain (dysmenorrhea, dyspareunia), and reproductive difficulties (infertility, miscarriage).

Large uterine leiomyomas are a potential cause of lower extremity venous system compression, stasis, and resulting thrombosis.[2,3] Therefore, evaluation of the lower extremity veins is necessary. In a young patient, sonography is the preferred method of assessing the lower extremity venous system,

ANSWER

as it is a relatively low-cost examination and there is no ionizing radiation. Figure 4, a color Doppler ultrasound image, demonstrates flow in the common femoral artery (white arrow) but no flow in the common femoral vein (white asterisk).

This patient was admitted and treated for the deep vein thrombosis with an inferior vena cava filter. She also underwent total hysterectomy and subsequent anticoagulation therapy. Of note, her uterus was so large that it compressed the ureters, resulting in hydronephrosis, which necessitated the placement of ureteral stents.

References

1. Thomason P. Leiomyoma, uterus (fibroid). eMedicine. http://emedicine.medscape.com/article/405676-overview. Updated May 6, 2008. Accessed March 10, 2010.
2. Stanko CM, Severson MA 2nd, Molpus KL. Deep venous thrombosis associated with large leiomyomata uteri. A case report. *J Reprod Med.* 2001;46(4):405-407.
3. Bekhit MT, Hassanaien M, Thomas E, Cockburn J. A large fibroid uterus presenting with bilateral DVT, treated with IVC filter and hysterectomy, a case report. *Eur J Obstet Gynecol Reprod Biol.* 2007;134(1):135-136.

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