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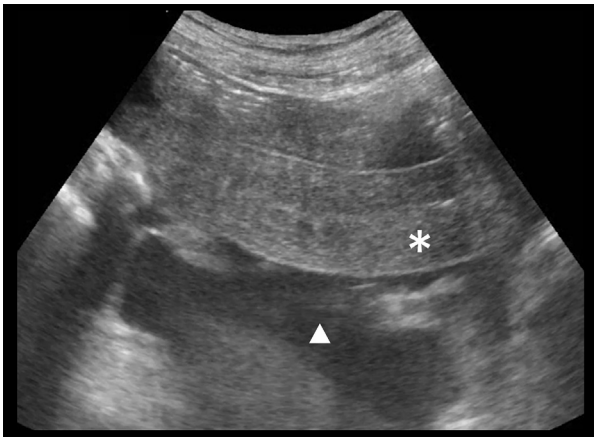

Figure 1. A segment of small bowel showing narrowing of the lumen with attached linear mucosa, as well as echogenic submucosa consisting of the majority of the intestinal wall (asterisk), with surrounding ascites (arrowhead).

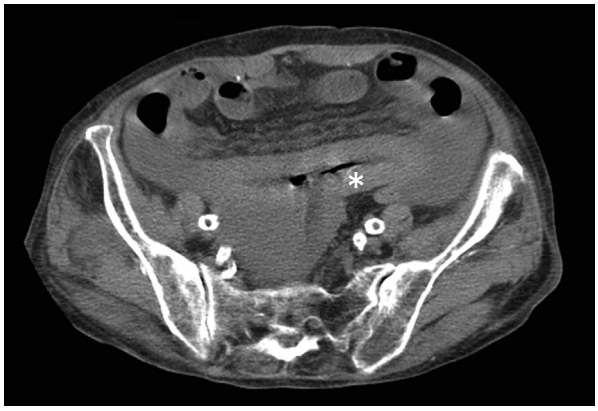

Figure 3. Nonenhanced CT scan with the small intestine showing circumferential wall thickening, luminal narrowing, and hyperdensity of the intestinal wall at approximately 60 Hounsfield units (asterisk).

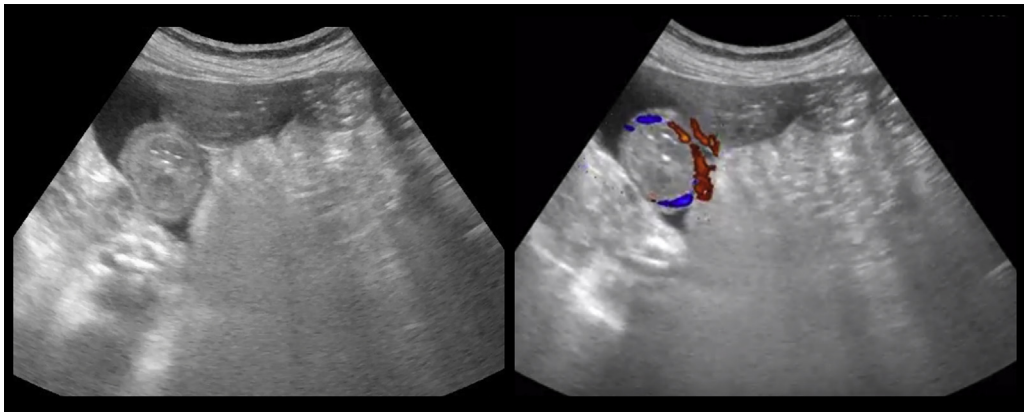

Figure 2. Transverse view of the small intestine (left panel). Identical view in Doppler mode with a ring of fire indicating hyperemia of the bowel wall (right panel).

[Ann Emerg Med. 2019;74:e7-e8.]

A 73-year-old woman receiving warfarin presented to the emergency department with vague abdominal pain, 4 episodes of bilious vomiting, and melena stool. Physical examination showed diffuse abdominal tenderness without peritoneal signs. Blood testing demonstrated an international normalized ratio of 17.4 and a serum creatinine level of 2.79 mg/dL. The emergency physician performed bedside ultrasonography (Figures 1 and 2, Video) and confirmed with computed tomography (CT) (Figure 3).

For the diagnosis and teaching points, see page e8.
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IMAGES IN EMERGENCY MEDICINE

(continued from p. e7)

DIAGNOSIS:

Intramural hematoma of the small intestine. Ultrasonography showed perihepatic free fluid and small bowel wall thickening with luminal narrowing of the small bowel; the submucosal layer was thickened and hyperechoic, with a "ring of fire" noted on color Doppler, indicating hyperemia of the bowel wall.

Intramural hematoma results from slow hemorrhage from submucosal terminal arteries. Although greater than 90% of instances occur as a result of blunt abdominal trauma, in this case the likely cause was inappropriate anticoagulation.[1] The typical triad of small bowel intramural hematoma consists of excessive anticoagulation, circumferential thickening of the small bowel wall, and intestinal obstruction, although not all features may be present.[2]

The patient underwent anticoagulation reversal.[3] She was discharged after 1 week after a normal follow-up abdominal ultrasonographic result.

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