



Figure 1. CT of the abdomen and pelvis with intravenous contrast (coronal view) showing a dilated cecum (asterisk).



Figure 2. CT of the abdomen and pelvis with intravenous contrast (coronal view) showing a whirl sign (arrow).

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A 43-year-old woman presented to the emergency department, complaining of severe, sharp lower abdominal pain with associated nausea and vomiting, which began in the setting of training for a marathon. She denied any other complaints. She had no medical history and no previous abdominal surgeries. On physical examination, she had diffuse abdominal tenderness without focal rigidity or guarding. Laboratory results were within normal limits. Given the degree of tenderness, intravenous contrast-enhanced computed tomography (CT) of the abdomen and pelvis was performed (Figures 1 and 2).

For the diagnosis and teaching points, see page 508.

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DIAGNOSIS:

Cecal volvulus. The CT findings demonstrated grossly dilated bowel (Figure 1) and a “whirl” sign (Figure 2) consistent with cecal volvulus. The whirl sign has a sensitivity of 73% and specificity of 100% for cecal volvulus.¹ It corresponds to the area in which loops of bowel and mesenteric vessels have undergone torsion. Colonic volvulus is the third leading cause of intestinal obstruction worldwide, with cecal volvulus preferentially affecting younger women.² Long-distance running is a known risk for cecal volvulus. The repetitive vertical displacement of the colon during long-distance running is thought to cause permanent elongation of colonic tissue, creating independent risk for cecal volvulus.³ Emergency physicians should consider eliciting this social history from patients presenting with complaints of concerning abdominal pain because early diagnosis and surgical intervention of cecal volvulus are vital to decreasing mortality, which increases to 30% to 40% when strangulation results in gangrenous bowel.⁴

The patient underwent reduction of the volvulus and right hemicolectomy with primary ileocolostomy and recovered well.

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