Whirl Sign in Small Bowel Volvulus

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Clinical Presentation

A 87-year-old woman presented with abdominal distention and pain for two days at emergency department. She had the medical history of end stage renal disease and coronary artery disease, but she denied any previous abdominal operation. Initial vital signs were body temperature 36.2°C, pulse rate 136 beats/min, respiratory rate 15/min, and blood pressure 113/74 mm Hg. Physical examinations were unremarkable except the examinations of the abdomen indicated distension and tenderness with rebounding pain. Laboratory data revealed that the white blood cell count of 9300/mm³, hemoglobin of 9.9 g/dL, and platelet of 231000/mm³. Contrast-enhanced computed tomography (CT) of abdomen showed typical whirl sign (arrows) – twist of mesentery which indicated volvulus (Fig. 1). Emergent exploratory laparotomy confirmed the diagnosis of small bowel volvulus and reduction of volvulus was done. The post-operation course was smooth and she was uneventfully discharged on postoperative day 20.

Small bowel volvulus is one possible etiology of intestinal obstruction, and it can cause acute abdomen. It is not easy to diagnose only by history-taking and physical examination. Fortunately, abdominal image: contrast-enhanced provide useful information for the diagnosis. “Whirl sign” is a characteristic feature of volvulus, and it can be shown by the enhanced mesenteric vessel when the bowel rotates around its own mesentery¹². As our case, “whirl sign” results in prompt diagnosis and further indicates the surgical reduction.

Fig. 1 Contrast-enhanced computed tomography of abdomen showed typical whirl sign (arrows): twist of mesentery which indicated volvulus.
References
