

Case	(616) Mesenteric torsion due to diaphragmatic hernia
Authors	I. Navas Fernandez-silgado, R. Gonzalez Tovar, L. Ibañez Sanz, I. Rios Gomez, L. Hernandez Martinez, R. Sanz Lucas.
Centre	Hospital Universitario De 12 Octubre.

CASE PRESENTATION

A 87-year-old woman came to the emergency department because of acute lower abdominal pain and anemia. She was nauseated and had fecaloid vomiting.

Her past surgical history included recent supracondylar fracture with surgical repair. Physical examination showed pronounced abdominal distension with diffuse pain on palpation and decreased peristalsis.

Initial abdominal CT scan showed the whirlpool sign in the left flank but with no distended bowel, and a large right anterior diaphragmatic hernia containing transverse colon.

One day later the CT was repeated, revealing a small bowel obstruction, with a clump of loops on the left which were different from the rest, coinciding with the whirlpool sign (grouped small bowel loops with marked edema of the mesentery due to venous congestion) and findings of vascular compromise (pneumatosis, gas in porta and mesenteric veins, and ascites). These findings were consistent with mesenteric torsion due to mesenteric traction secondary to diaphragmatic hernia.

Our patient immediately underwent a laparotomy with detorsion of the affected bowel loop. The bowel appeared mildly ischemic but viable, with full resolution of abdominal pain.-

DISCUSSION

Intestinal volvulus or mesenteric torsion is a torsion of bowel around its mesentery with a predominant occurrence during the first year of life. Torsion results in narrowing of the lumen at the point of rotation and compromise of the vessels that supply the tormented gut. It is a rare disease in adults and can be classified as primary or secondary according to the cause:

-Primary: no evident underlying cause

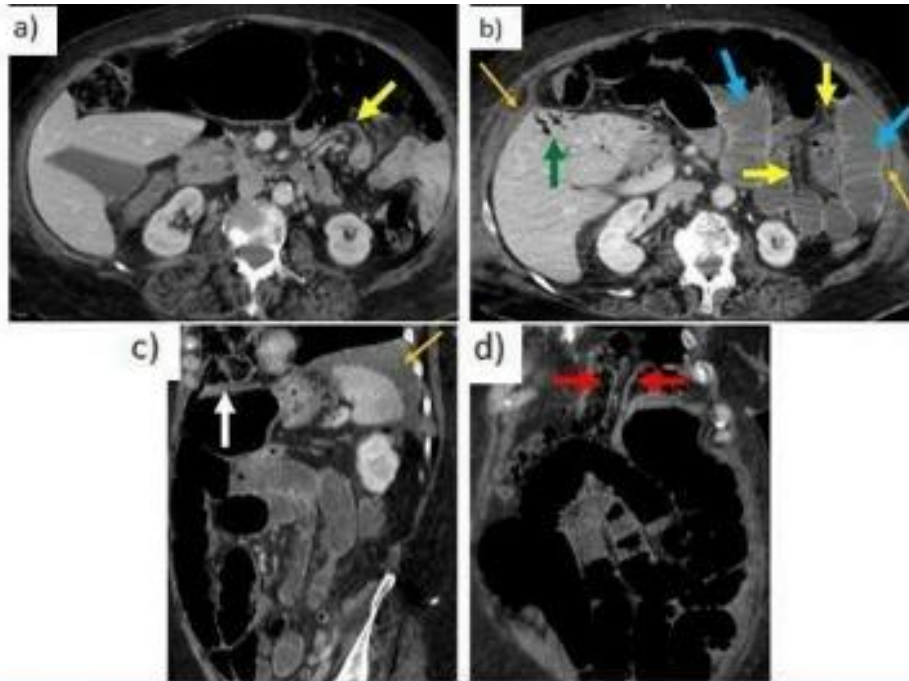
-Secondary: congenital malrotation, anatomic abnormality, bands, postoperative adhesions, tumors, diverticulum, pregnancy, hernia... Very few cases have been described due to diaphragmatic hernia.

CT findings include: whirlpool sign of twisted mesentery, bowel obstruction, and sometimes a malrotated bowel configuration.

Early diagnosis and prompt operation are essential to prevent gangrene in the small intestine, and for this reason, a CT scan must be performed in suspected cases of SBV, allowing early identification of potentially fatal complications (such as ischemia and perforation).-

CONCLUSION

CT scan must be performed in suspected cases of intestinal volvulus since a delay in diagnosis can lead to disastrous results. The characteristic whirlpool sign and a small bowel obstruction in abdominal CT scan may provide the best diagnostic indicators.-



87-year-old woman with mesenteric torsion secondary to diaphragmatic hernia.
a) Initial CT (axial): whirlpool sign in the left flank (yellow arrow) but with no distended bowel. **b)** One day later CT (axial): dilation of small bowel (blue arrows). Grouped small bowel loops with marked edema of the mesentery in the left flank (yellow arrows). Gas in porta (green arrow) and ascites (orange arrows). **c)** On sagittal: large right anterior diaphragmatic hernia containing transverse colon (white arrow). Ascites (orange arrow). **d)** On coronal: mesenteric traction secondary to diaphragmatic hernia (red arrows).

BIBLIOGRAPHY

- Li X, Zhang J, Li B, Yi D, Zhang C, Sun N, et al. Diagnosis, treatment and prognosis of small bowel volvulus in adults: a monocentric summary of a rare small intestinal obstruction. PLoS ONE 2017; 12(4): e0175866.
- Bozlar U, Ugurel MS, Ustunsoz B, Coskun U. CT Angiographic Demonstration of a Mesenteric Vessel "Whirlpool" in Intestinal Malrotation and Midgut Volvulus: a Case Report. Korean J Radiol 2008; 9(5): 466–469.