CASE PRESENTATION

A 65-year-old man with a history of colon adenocarcinoma, which underwent surgery in 2017 through subtotal colectomy and ileosigmoid anastomosis, came to the emergency department of our hospital due to abdominal pain which started two days ago, abdominal distension and bilious vomiting. His last deposition was on the previous day.

These findings were suggestive of intestinal obstruction. A simple abdominal x-ray was performed, objectifying dilation of small bowel loops. It was decided to perform a CT scan of the abdomen with IV contrast, where a cluster of proximal jejunal loops dilated in the left flank was observed, showing a sharp caliber change ("peak sign") at two adjacent points.

These bowel loops presented signs of intestinal distress, such as a lower enhancement, increased density of adjacent omental fat and surrounding free fluid. The intestine which was located proximal to this obstruction was dilated, while the distal intestine is collapsed.

Convergence, engorgement and twisting of mesenteric vessels ("swirl sign") that are adjacent to the collapsed ends of the ischemic loop can also be seen, forming a mushroom shape of hernia.

DISCUSSION

These findings are compatible with an obstruction in a closed-loop of distal jejunum, featuring signs of intestinal distress, setting an internal hernia as a possible cause (given all the described findings), although it isn’t possible to discard an adherence. An emergency surgery was performed, detecting a transmesenteric internal hernia, performing a 30 cm resection of necrotic small intestine approximately 100 cm from the angle of Treitz.

Internal hernia is reported to cause approximately 4% of cases of acute small bowel obstruction.

They can be congenital or acquired and the most common manifestation is to strangulate small bowel obstruction, which occurs after a closed-circuit obstruction, being this a surgical emergency due to risk of ischemia and intestinal perforation.

CT plays an essential role in the preoperative diagnosis, existing some specific radiological signs for each type of internal hernia, which are classified according to the type of hernial orifice.
The diagnostic approach to internal hernias at multidetector CT includes detecting an intestinal closed loop, identifying the hernia orifice, and analyzing abnormal displacement of surrounding structures and key vessels around the hernia orifice and hernia sac.

**CONCLUSION**

Internal hernia is an uncommon cause of small-bowel obstruction that can lead to intestinal ischemia and perforation. Detailed knowledge of landmarks in the various types of internal hernias is the key to diagnosis.

![CT images showing internal hernia](image)

CT with contrast and simple abdominal radiography. A) Coronal plane showing the dilated and hypoperfused intestinal closed-loop (white arrow), free liquid in the mesentery (asterisk) and the change of caliber in one of the ends of the loop (red arrow). B) Axial plane showing the engorgement of mesenteric vessels and "Whirl Sign". C) Coronal plane with maximum projection intensity where the convergence of the mesenteric vessels through the hernial orifice (circle) and the mushroom shape of hernia is evidenced. D) Dilatation of small bowel loops of central-abdominal location compatible with intestinal obstruction.

**BIBLIOGRAPHY**
