

## Strangulated umbilical hernia after esophagogastroduodenoscopy in a patient with liver cirrhosis and ascites

Umbilical hernias are present in up to 20% of patients with long-standing cirrhosis and 40% of those with ascites. There are some case reports of incarcerated umbilical and diaphragmatic hernias following colonoscopy. To our knowledge, this is only the second case of umbilical hernia strangulation following esophagogastroduodenoscopy (EGD) in the literature [1]. A 46-year-old white man with a history of decompensated alcoholic liver disease, esophageal varices, refractory ascites, and umbilical hernia underwent elective outpatient EGD under conscious sedation for variceal surveillance. Band ligation was performed with no complications. The patient tolerated the procedure well and was released on the same day. The next day he presented to the gastroenterology clinic with complaints of abdominal pain, nausea, vomiting, and irreducible painful umbilical hernia. He had neither had a bowel movement nor passed flatus since the procedure. Emergent abdominal radiography (► **Fig. 1**) showed small-bowel obstruction. The patient underwent emergent exploratory laparotomy which revealed a small umbilical defect with a strangulated loop of small bowel, which was resected with primary side-to-side stapled anastomosis along with umbilical hernia repair via conventional fascial technique.



**Fig. 1** Abdominal radiograph showing an umbilical hernia as a well-circumscribed soft tissue mass and small-bowel dilatation.

This case demonstrates hernia incarceration and strangulation as an extremely rare complication following EGD. The probable cause was the increased intra-abdominal pressure secondary to air insufflation during the procedure, which would have led to dilation of small bowel loops, thus precipitating the incarceration. It is very unlikely that the timing of this complication was a coincidence, given the chronological order of events and that the patient had this hernia for a long time with no complications.

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**Competing interests:** None

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