

## The unexpected twist in the plot: incarcerated diaphragmatic hernia complicating colonoscopy

A 76-year-old woman was referred for surveillance colonoscopy. She had a history of a large sliding hiatal hernia, confirmed by both chest radiography and upper endoscopy. She had no history of trauma and 6 years ago she underwent a full colonoscopy and polypectomy uneventfully. The colonoscope was advanced 50cm to the splenic flexure, at which point a very tight angle could not be passed and the lumen was obscured. After a few unsuccessful attempts to advance were made, the scope was withdrawn and the examination was terminated. In the recovery room, the patient complained of worsening abdominal pain and vomiting. She was transferred to the emergency room for further evaluation. Abdominal radiography showed a large-bowel loop in the left hemithorax with a distended right colon (▶ Fig. 1). Abdominal computed tomography (CT) revealed that the whole stomach, part of the duodenum, and a large segment of transverse colon were all in the chest (▶ Fig. 2). The proximal transverse colon, ascending colon, and cecum were severely dilated. An urgent explorative laparotomy revealed an incarcerated loop of transverse colon, which has herniated through the diaphragm. An ileostomy and right extended hemicolectomy was carried out. In the past, a few case reports have described strangulation of intestinal contents during colonoscopy as a result of the exacerbation of transdiaphragmatic hernias [1–4], but there have been no previous reports of deterioration and incarceration of a preexisting large sliding hiatal hernia during colonoscopy. Although a past history of a large sliding hiatal hernia was known in our patient, no special precautions were executed. Air insufflation in combination with increased abdominal pressure may protrude abdominal contents through a weakened diaphragm. Trapping of the endoscope and extreme angulation causes the lumen to seem ob-

scured. In light of the present case, endoscopists should be aware of this phenomenon.

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### References

- 1 Sodhi SS, Zech LA Jr, Batura V et al. Diaphragmatic hernia with strangulated loop of bowel presenting after colonoscopy: case report. *Int Arch Med* 2009; 2: 38
- 2 Baumann UA, Mettler M. Diagnosis and hazards of unexpected diaphragmatic hernias during colonoscopy: report of two cases. *Endoscopy* 1999; 31: 274–276
- 3 Dobres C, Fan J, Schattner M et al. Transdiaphragmatic hernia and hypoxemia during colonoscopy. *Anesthesiology* 2004; 101: 811
- 4 Chae HS, Kim SS, Han SW et al. Herniation of the large bowel through a posttraumatic diaphragmatic defect during colonoscopy: report of a case. *Dis Colon Rectum* 2002; 45: 1261–1262

### Bibliography

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**Fig. 1** Plain abdominal radiograph performed shortly after colonoscopy in a 76-year-old woman with a history of a large sliding hiatal hernia. Dilated cecum and proximal colon are seen.



**Fig. 2** Coronal abdominal computed tomography (CT) shows long loop of transverse colon, stomach, and part of duodenum in the chest. A very large hiatal hernia can be seen.