

## Incarcerated Spigelian hernia mimicking obstructing colon carcinoma

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**Abstract** Spigelian hernia is a ventral abdominal hernia that only rarely causes incarceration or strangulation of the bowel. There are few reports in the surgical literature of colonic obstruction secondary to incarcerated Spigelian hernia. In this paper, we present a patient with an incarcerated sigmoid colon in a Spigelian hernia sac, mimicking on contrast enema an obstructing carcinoma. Accurate diagnosis was made pre-operatively by computed tomography (CT), and the hernia was repaired by polypropylene mesh in a tension-free manner.

**Keywords** Spigelian hernia · Incarceration · Colonic obstruction · Carcinoma of the colon

### Introduction

Incarceration of Spigelian hernia is quite rare and usually involves the small bowel [1]. Whereas the presence of large bowel loop in a Spigelian hernia sac has been previously reported, there are only a few reports of colonic obstruction secondary to incarcerated Spigelian hernia [2].

We report a case of incarceration of the sigmoid colon in a Spigelian hernia with clinical and radiological presentation mimicking obstructing carcinoma.

### Case report

The patient was a 57-year-old white male who presented to the Emergency Department with a several days history of

left lower quadrant pain, abdominal distention, and progressive constipation. He noted a 40-lb weight loss over the past year.

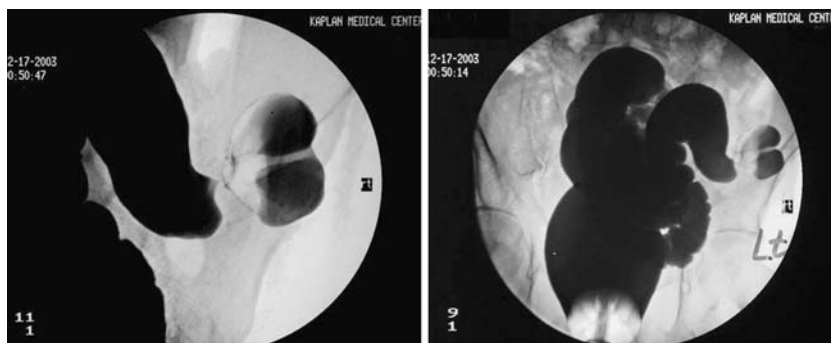
On physical examination, his abdomen was distended with hyperactive bowel sounds. An 8-cm non-tender mass was palpable in the left lower quadrant. In addition, there were epigastric, umbilical, and bilateral inguinal hernias, with no signs of incarceration. The white blood count was 14,500/ $\mu$ L. Other laboratory tests were within normal limits. Abdominal X-rays were consistent with left colonic obstruction. An emergency liquid contrast enema study revealed a partially obstructing “apple-core” lesion in the proximal sigmoid colon (Fig. 1). An abdominal computed tomography (CT) scan showed the mass to be the left colon incarcerated within a Spigelian hernia sac (Fig. 2).

The patient was taken immediately to the operating room. A peri-operative prophylactic single dose of Ceftriaxone 1 g was used. Since the patient had no fever, no signs of peritonitis, and there were no tissue edema or fluid in the hernia sac, there was no need to suspect bacterial translocation and to continue antibiotic treatment. A longitudinal incision was placed directly over the mass. Upon entering the hernial sac, an incarcerated loop of the sigmoid colon was found and released, not requiring resection. The hernial defect measured about 2 cm. The hernia was repaired in the inlay manner using polypropylene mesh (Prolene, Ethicon, Somerville, NJ) positioned over the closed peritoneum in a tension-free method and fixed by Prolene 0 interrupted sutures.

The patient recovered uneventfully. At day 4, he was released to go home. He had colonoscopy with no findings and regained his weight. About 4 months later, he was operated on for bilateral inguinal hernias and is now also planned to have epigastric and umbilical hernias repaired.

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**Fig. 1** Water-soluble contrast enema, revealing an obstructing “apple-core” lesion in the proximal sigmoid colon



**Fig. 2** A spiral computed tomography (CT) scan of the abdomen showing an incarcerated segment of the sigmoid in the Spigelian hernia

## Discussion

Spigelian hernia is a rare lateral ventral hernia. Adrian van der Spiegel, an anatomist from Brussels, was the first to describe the semilunar line. In 1764, Klinklosch first reported hernias through this area and named them “Spigelian line hernias.” These hernias constitute from 0.12% to 2% of abdominal wall hernias. Their apparent incidence has been increasing probably because they are more easily recognized by modern imaging [3]. Since Klinklosch’s original description, more than 1,000 cases have been reported in the literature.

Virtually any part of the intestine may be found within a Spigelian hernia sac, whereas incarceration is rare and involves mostly the small bowel [3]. Spigelian hernia containing large intestine is quite uncommon [2, 4–6]. Colonic obstruction secondary to incarcerated Spigelian hernia is, nevertheless, a very rarely observed condition, with only four reported cases in the English-speaking literature since 1960 [2, 4, 7, 8]. The intra-mural location of these hernias makes the diagnosis difficult, and when the incarcerated

colon presents in the left side, the clinical picture may mimic inflammatory diverticular mass [9] or carcinoma, as in our patient. Spiral CT scanning may be very useful in the differential diagnosis of incomplete colonic obstruction in contrast enema study. In the case presented, the spiral CT scan showed the herniated colon through the fascial defect and, thus, prevented unnecessary laparotomy, allowing a direct approach to the hernial sac.

Repair of Spigelian hernia can be done through a direct anterior approach or laparoscopically [5, 10–13]. However, in the case of bowel incarceration, and specifically when the viability of the bowel is uncertain, we believe that the anterior open approach is safer. Provided that the bowel is viable and there is no necrotic tissue in the sac, the preferred repair of the hernia defect is by pre-peritoneal placement of mesh fixed with non-absorbable suture in a tension-free manner.

In conclusion, the presentation of a lateral lower abdominal wall mass should raise the possibility of incarcerated Spigelian hernia. The preoperative workup should include abdominal CT scanning to facilitate a correct operative approach.

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