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# Malignancies Presenting with Incarcerated Umbilical Hernia: A Case Report

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## Citation

E Bender, S Schmidt. *Malignancies Presenting with Incarcerated Umbilical Hernia: A Case Report*. The Internet Journal of Surgery. 2001 Volume 3 Number 2.

## Abstract

General surgeons frequently evaluate and treat adult patients with umbilical hernias. These hernias may be complicated by incarceration and, occasionally, strangulation. Recently, we have had two patients with underlying intraabdominal malignancies present with incarcerated umbilical hernias. Both patients had a three to five year history of umbilical hernia without complications. In patients with longstanding umbilical hernias that suddenly become incarcerated, suspicion of an underlying malignancy must be entertained.

This is a relatively unique condition that is not well documented in the literature. Our literature search revealed only 26 such similar cases in adults. Although rare, with proper history and exam, further complications can be avoided.

## CASE 1

VK is a 53-year-old female who presented to the emergency department with an incarcerated umbilical hernia. The hernia had been incarcerated for 24 hours. History revealed that the patient had the hernia for three years without complications. Physical exam revealed an obese abdomen with tenderness and overlying skin necrosis at the umbilical hernia site. She denied nausea, vomiting, or recent constipation.

Initial laboratory studies, chest x-ray, and EKG were unremarkable. The patient was taken to surgery where a 6 x 6 cm segment of necrotic omentum with omental implants was resected. Intraabdominal palpation via the hernia defect revealed omental implants throughout the abdomen with a high concentration of implants on the peritoneal surface of the anterior abdominal wall, the serosal surface of the sigmoid colon, and the left lateral pelvic side wall. The hernia defect was closed and the overlying necrotic skin was resected.

The pathology report revealed a moderately differentiated adenocarcinoma with staining characteristics compatible with that of ovarian origin with keratin CK-7 positive and CK-20 negative. The patient's CA-125 was 505.6 and her CEA was 6.6. The patient subsequently underwent a debulking procedure for her ovarian cancer and is presently receiving chemotherapy.

## CASE 2

TS is a 69-year-old male who presented to the emergency department with an incarcerated umbilical hernia of 10 hours duration. He complained of nausea, vomiting, and constipation, which had worsened over the past 18 months. History revealed that the patient had had the hernia for 5 years without incarceration. Physical exam revealed a distended abdomen, tender to palpation without overlying erythema at the hernia site. Rectal exam was heme positive and initial laboratory studies were significant for elevated white blood count (WBC) of 13,000 and microcytic anemia with a hemoglobin (Hgb) of 8.5mg/dl. Abdominal films revealed distension of the small bowel, right colon, and transverse colon.

TS was taken to surgery for herniorrhaphy where viable omentum was found in the hernia sac. An exploratory laparotomy was then performed and revealed a large obstructing left colonic tumor. A loop of small bowel was adherent to the colonic mass causing concomitant small bowel obstruction. No visible or palpable hepatic metastases were found. A left hemicolectomy with en-bloc resection of the overlying loop of small bowel was performed with creation of a colostomy, Hartmann's pouch, and a side-to-side ileoileal anastomosis.

## DISCUSSION

General surgeons frequently evaluate and treat patients with umbilical hernias. Fewer than ten percent of these patients give a history of hernia from childhood so the majority appear to be acquired defects <sup>1</sup>. 'True' umbilical hernias are found in children or in adults with conditions that produce a chronic increase in intra-abdominal pressure (ascites, polycystic renal disease, ovarian cysts) <sup>2</sup>. Paraumbilical hernias tend to occur in the elderly patient in whom there is a connective tissue degeneration and in patients with respiratory disorders causing a chronic cough.

Umbilical hernias occur in only 8-12% of all abdominal wall hernias <sup>3, 4</sup> and malignancies associated with umbilical hernias are even more uncommon. Our literature search revealed only 26 such similar cases <sup>5, 6, 7, 8</sup>. Estimates of <0.1% of all hernias are associated with malignancies <sup>7</sup>.

In addition to being uncomfortable and disfiguring, umbilical hernias may be complicated by hernia sac perforation, skin necrosis, incarceration, and strangulation. In patients with longstanding umbilical hernias that suddenly become incarcerated, suspicion of an underlying malignancy must be entertained. A complete history, physical exam, careful review of preoperative studies and a visual and digital examination of the intraabdominal contents will aid in the detection of malignancies.

## CORRESPONDENCE TO

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