

Lost and Found: Hybrid Laparoscopic–Assisted Endoscopic Retrieval of Migrated Stent in a Malignant Hostile Abdomen

Noah Belkhayat, DO¹, Olajide Olatidoye, MD², Carlos Anciano, MD²

¹Digestive Disease and Surgery Institute, Cleveland Clinic Foundation

²Department of Cardiovascular Disease, Brody School of Medicine, East Carolina University

Introduction

- Esophageal stent migration is a known albeit uncommon complication of endoluminal stenting and often requires operative intervention.
- Conventional management often involves enterotomy, bowel resection, or laparotomy.
- Hybrid minimally invasive retrieval strategies are not well described in hostile abdominal anatomy.
- We present a hybrid laparoscopic-assisted endoscopic retrieval of a migrated esophageal stent without bowel resection or enterotomy in an immunosuppressed patient.

Objective and Purpose

- Highlight utility of hybrid minimally invasive approaches in managing complex thoracoabdominal complications traditionally requiring open surgery or bowel resection in the setting of prior abdominal surgery and immunosuppression.

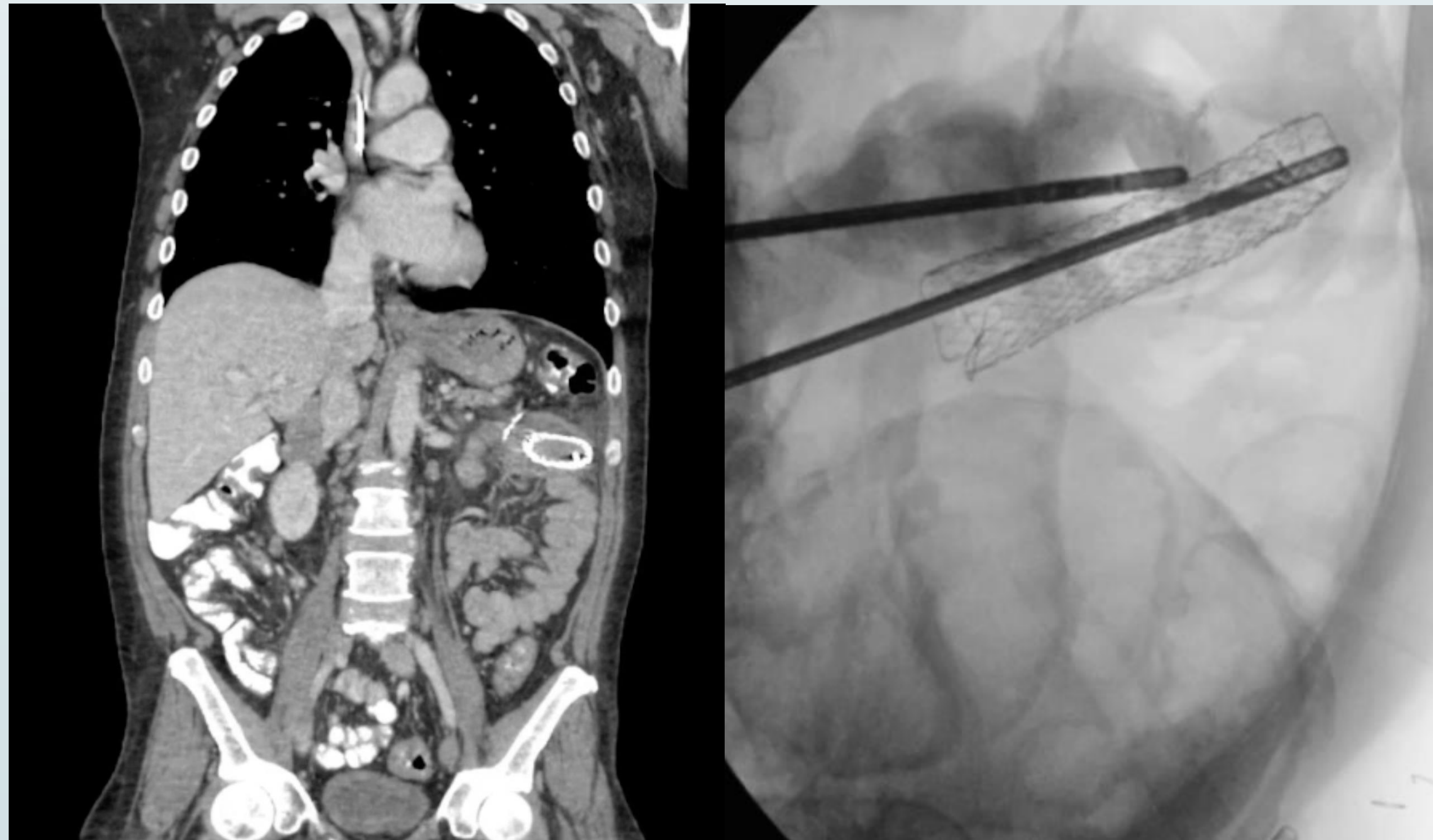


Figure 1: Preoperative CT demonstrating migrated esophageal stent within the proximal small bowel (left). Intraoperative fluoroscopic localization of stent in proximal small bowel (right).

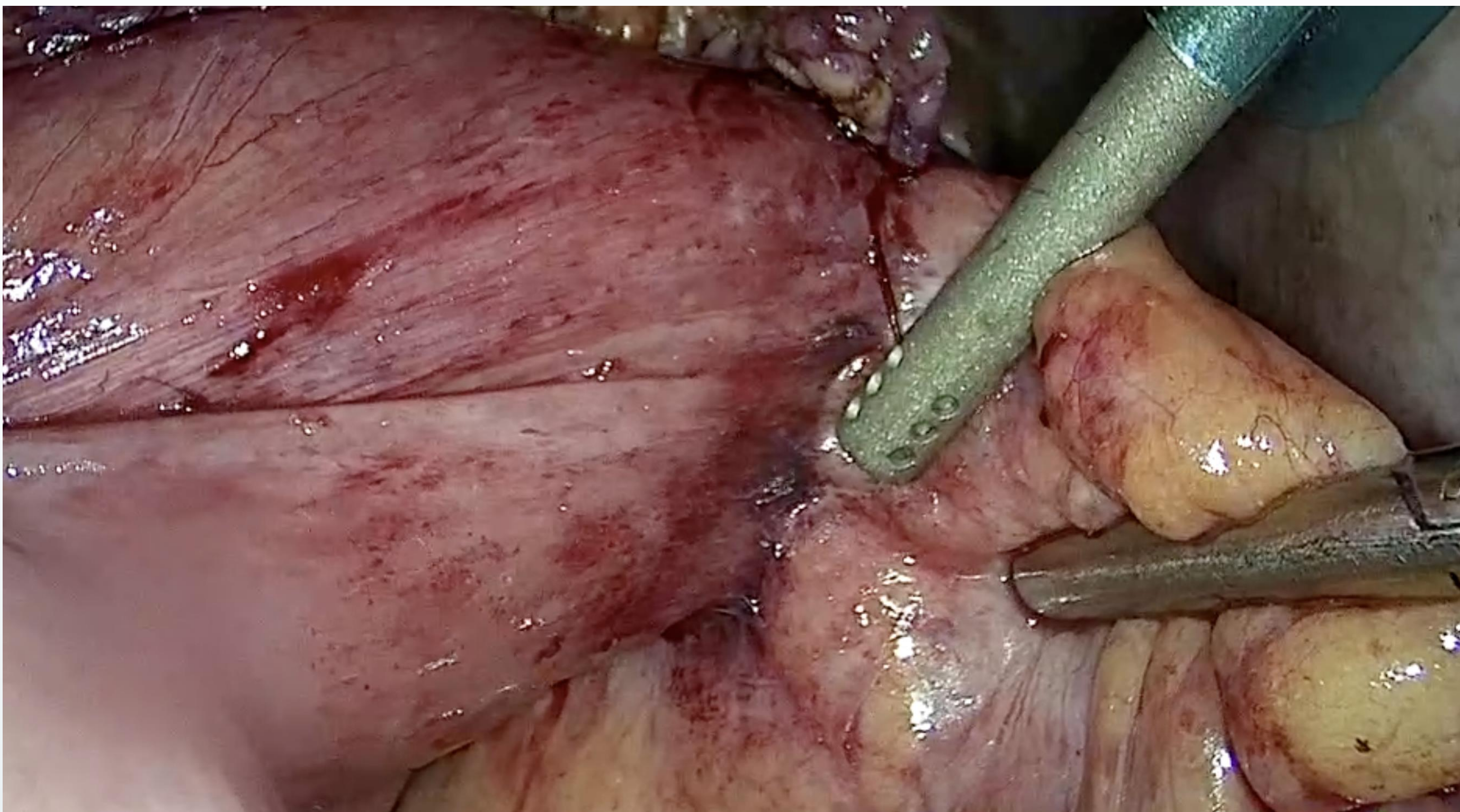


Figure 2: Evidence of extensive carcinomatosis and adhesive disease between loop of jejunum (left side of image) and colon (right side with epiploica visbile) representing choke point for stent migration

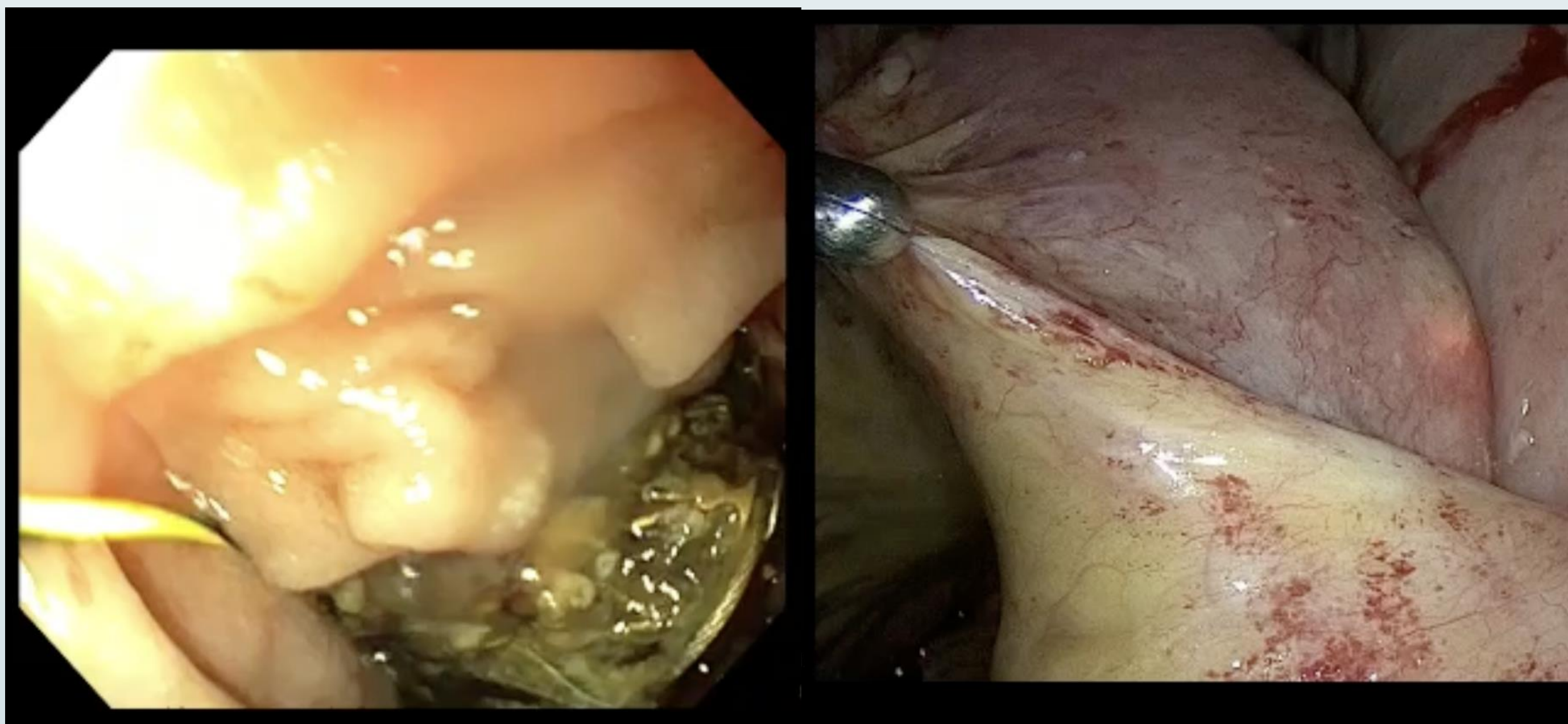


Figure 3: Hybrid laparoscopic-assisted endoscopic localization of migrated esophageal stent within the proximal jejunum (left). Note sock over foot technique to advance bowel over endoscope to reach target anatomy (right).

Case Presentation

- 62-year-old male with prior jejunal resection and anastomosis following GSW, later diagnosed with poorly differentiated esophageal adenocarcinoma treated with systemic chemotherapy and esophageal stent placement for obstructive symptoms
- 8 months later migration of esophageal stent into the small bowel identified on surveillance imaging
- Imaging demonstrated retained migrated stent without evidence of frank perforation (Fig. 1)
- Given disease burden and surgical history, we elected to proceed with a minimally invasive approach via laparoscopy

Intraoperative:

- Diagnostic laparoscopy: left upper quadrant adhesive disease with interloop inflammation and carcinomatosis causing sharp bowel transit angles (Fig. 2)
- Fluoro used to identify stent position within bowel (Fig.1)
- Jejunoscope was advanced to the stent **via sock over foot technique** with laparoscopic assistance (Fig. 3)
- Stent identified and grabbed with endoscopic grasper and retrieved through the mouth (Fig. 4)

Postoperative:

- Post operative day 1 barium swallow was negative for leak
- Post operative day 3 discharged tolerating regular diet

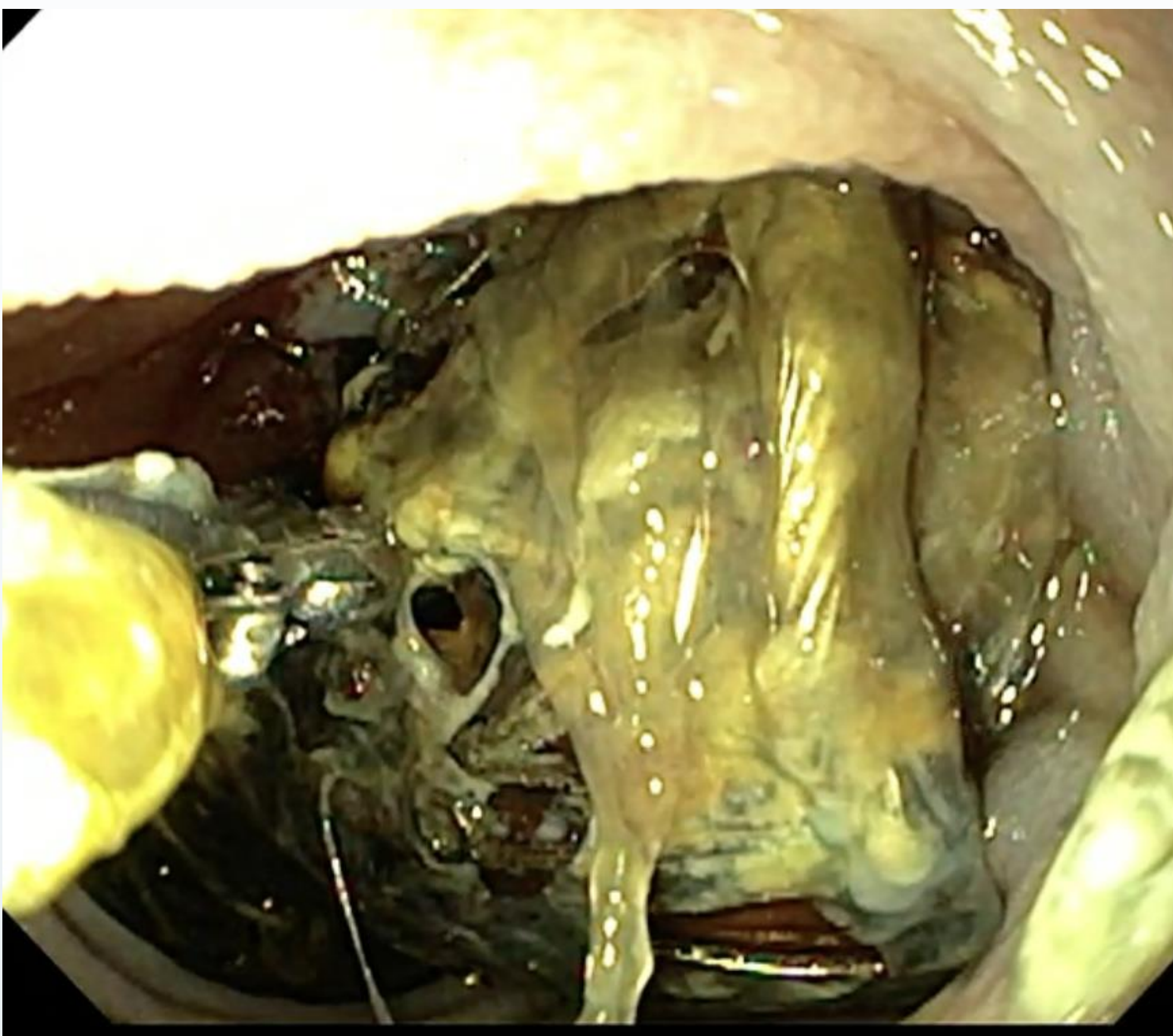


Figure 4: Stent retrieval from jejunum via endoscopic grasper pulled proximally through the small bowel, stomach and esophagus

Discussion

- Esophageal stent migration is a rare but potentially life-threatening complication
- Often stent placement is in the setting of advanced malignancy and thus frailty
- Combined with hostile abdominal anatomy retrieval strategies are limited
- A hybrid laparoscopic and endoscopic approach represents a minimally invasive and reasonable alternative to conventional laparotomy and bowel resection avoiding associated morbidity and mortality