

Cecal Volvulus after Left Lung Lobectomy and Completion Lingulectomy : A Case Report

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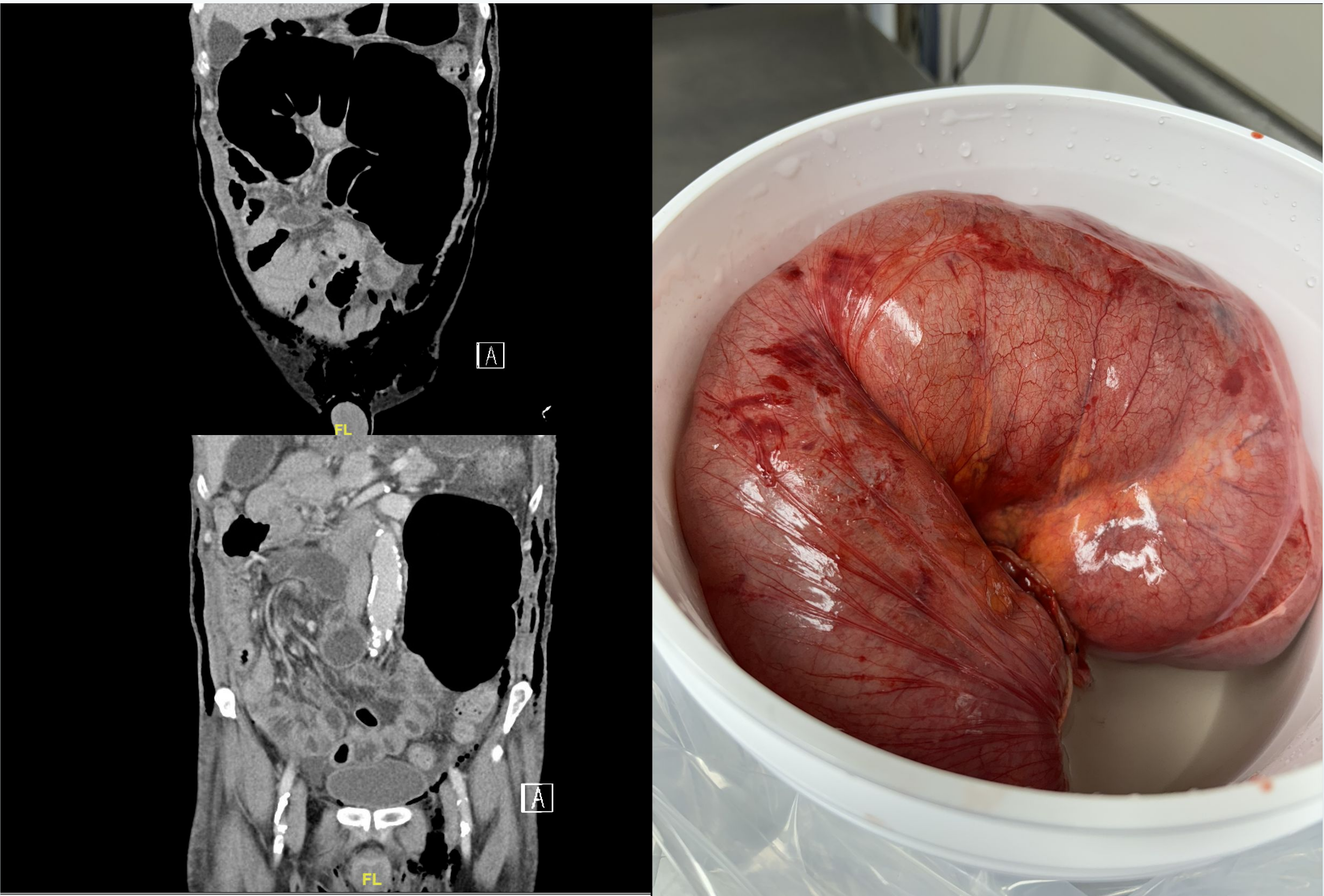


Introduction

- Cecal volvulus is a torsion of the bowel around its mesentery, often resulting in a closed-loop bowel obstruction.
- Cecal volvulus occurs in 11-25% of the population and is due to tethering of the bowel to a fixed point serving as an axis of rotation.
- Intra-abdominal adhesions, masses, or cicatrization from calcified lymph nodes all represent potential points of volvulus¹.
- In individuals undergoing cardiothoracic operations, gastrointestinal complications are seen in only 1% of patients².
- While ileus and intestinal pseudo-obstruction represent the majority of these cases, cecal volvulus following thoracic surgery is exceedingly rare.

Case Description

We report the case of a 66-year-old male with a past medical history of non-insulin dependent diabetes mellitus, hyperlipidemia, tobacco use, and a prior T1cN0M0 left lung mucinous adenocarcinoma status post left lower lobectomy who was noted on surveillance chest computed tomography (CT) to have an enlarging left upper lung nodule. Evaluation with CT positron emission tomography (PET) demonstrated fluorodeoxyglucose avidity concerning for malignancy without evidence of metastasis. Percutaneous CT guided biopsy yielded primary adenocarcinoma for which the patient underwent a robot-assisted video-assisted thoracoscopic surgery (VATS) with a left upper lobe wedge resection, completion lingulectomy, and lymph node sampling. Histopathologic analysis of the surgical specimen yielded a negative resection margin with no lymph nodes involved. Intraoperatively, the patient demonstrated diffuse capillary hemorrhage necessitating platelet transfusion.



Coronal view of CT scan of the abdomen and pelvis with contrast demonstrating Cecal Volvulus with mesenteric swirling

Ileocecectomy Specimen demonstrating Cecal Volvulus

Case Description

Post resection ventilator tracings indicated adequate ventilation of the patient’s remaining lung parenchyma. The patient was therefore extubated and admitted to the intensive care unit postoperatively.

The patient’s immediate postoperative course was complicated by the development of hemorrhagic shock recalcitrant to aggressive blood product resuscitation necessitating a return to the operating room on the second postoperative day (POD) for control of hemorrhage. Following hematoma evacuation, persistent capillary hemorrhage was noted along the anterior chest wall and peri-hilar lung. Following hemostasis, The patient was again extubated and admitted to the ICU, where he later developed severe agitation necessitating the institution of a dexmedetomidine drip.

On the third postoperative day, the patient demonstrated new tachycardia, tachypnea, leukocytosis and abdominal distension without peritonitis raising concerns for an intraabdominal source of sepsis.

Case Description

CT of the abdomen and pelvis demonstrated cecal distension to 12cm with twisting of the cecal mesentery consistent with a cecal volvulus. The patient was therefore urgently taken to the operating room for an exploratory laparotomy which confirmed a cecal volvulus which was treated with an ileocecectomy and a stapled enterocolostomy. Though the patient tolerated this surgery well, his postoperative course was complicated by the development of transfusion related acute lung injury (TRALI) necessitating the brief institution of veno-venous extracorporeal membrane oxygenation (VV - ECMO). The patient ultimately achieved lung rescue and was later discharged to a skilled nursing facility for further rehabilitation.

Discussion

- The incidence of cecal volvulus after thoracic surgery is exceedingly rare. Mortality from cecal volvulus exceeds 40%.
- Timely diagnosis and prompt intervention are crucial to ensuring patient rescue.⁴
- Isolated instances of colonic pseudo-obstruction following dexmedetomidine use have been demonstrated ⁵, though no reports of cecal volvulus exist to our knowledge. We therefore report the first case of cecal volvulus under such circumstances.

References

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