

Amyand's Hernia and the Implications of Mesh Placement with Appendectomy

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Introduction

- Amyand's hernia is a rare form of inguinal hernia in which the vermiform appendix is incarcerated
- Appendix-containing groin hernias: rare, comprise ~1% of all inguinal hernias
- Patients may present with bowel obstruction leading to incidental intraoperative discovery during emergent surgery
 - Necessitates real-time formulation of treatment and management plan
- Current recommendations are poorly defined in terms of appendectomy and mesh placement
 - Appendectomy supported in the case of appendicitis or inflammation, but controversial in cases of uninflamed appendix
 - Mesh placement decreases rate of recurrence at expense of higher infectious risk
- We present a single-surgeon case series of Amyand's hernias
- All with uneventful convalescence and no evidence of recurrence at follow-up

Case Presentations

Case 1

- Previously healthy 64-year-old male with known large right inguinal hernia, presented to emergency department with two days of nausea, vomiting, non-localizing dull abdominal pain
 - CT significant for known large right-sided inguinal hernia containing cecum, appendix and terminal ileum and dilated small bowel and dilated central small bowel with air fluid levels consistent with obstruction
 - Procedure: Robotic assisted diagnostic laparoscopy converted to open with Desarda type tissue repair and appendectomy
- Intraoperatively discovered appendicitis → Tissue-based repair due to the high risk of infection and barriers to healthcare access

Case Presentations

Case 2

- Previously healthy 48-year-old male with history significant for bilateral inguinal hernias status post open repair of incarcerated left hernia repair with mesh placement 6 months prior presented to emergency department with one month of right-sided inguinal swelling and pain
- CT significant for large right-sided inguinoscrotal hernia involving multiple distal small bowel loops, the appendix, and the proximal large bowel
- Procedure: Open repair with appendectomy followed by a Desarda type tissue repair

Incarcerated appendix → Tissue-based repair due to the high risk of infection and patient's known barriers to healthcare access

Case 3

- 71 year-old male with multiple comorbidities including LVAD on warfarin presented to the emergency department with acute onset right lower quadrant abdominal pain
- Emergent management in OR due to positive peritoneal signs and absence of flatus concerning for strangulated hernia
- Found to have incarcerated distal small bowel hernia containing portion of bladder with concern for ischemia of herniated bowel
- Procedure: Lichtenstein repair with absorbable Phasix mesh and ileocecectomy due to concern of bowel ischemia

Incarcerated appendix → Mesh-based repair due to increased risk of hernia recurrence in the setting of extensive structural damage caused by chronic hernia

Clinical Discussion

- Poorly defined recommendations for appendectomy and mesh placement
- Support for appendectomy in the case of appendicitis or inflammation
- Case 1 - Appendectomy was conducted due to intraoperatively discovered appendicitis
- Case 2 and 3 - Appendectomy was conducted due to incarcerated appendix.
- Consideration of patient-specific factors
 - Cases 1 and 2 - Tissue-based repair due to the high risk of infection and barriers to healthcare access
 - Case 3 - Mesh-based repair indicated due to increased risk of hernia recurrence in the setting of extensive structural damage caused by chronic hernia.

Conclusions

Further development of guidelines regarding treatment of Amyand's hernia with appendectomy and mesh placement in clean-contaminated cases may help reduce hernia recurrence rate and prevent post-operative infection, thus improving patient outcome

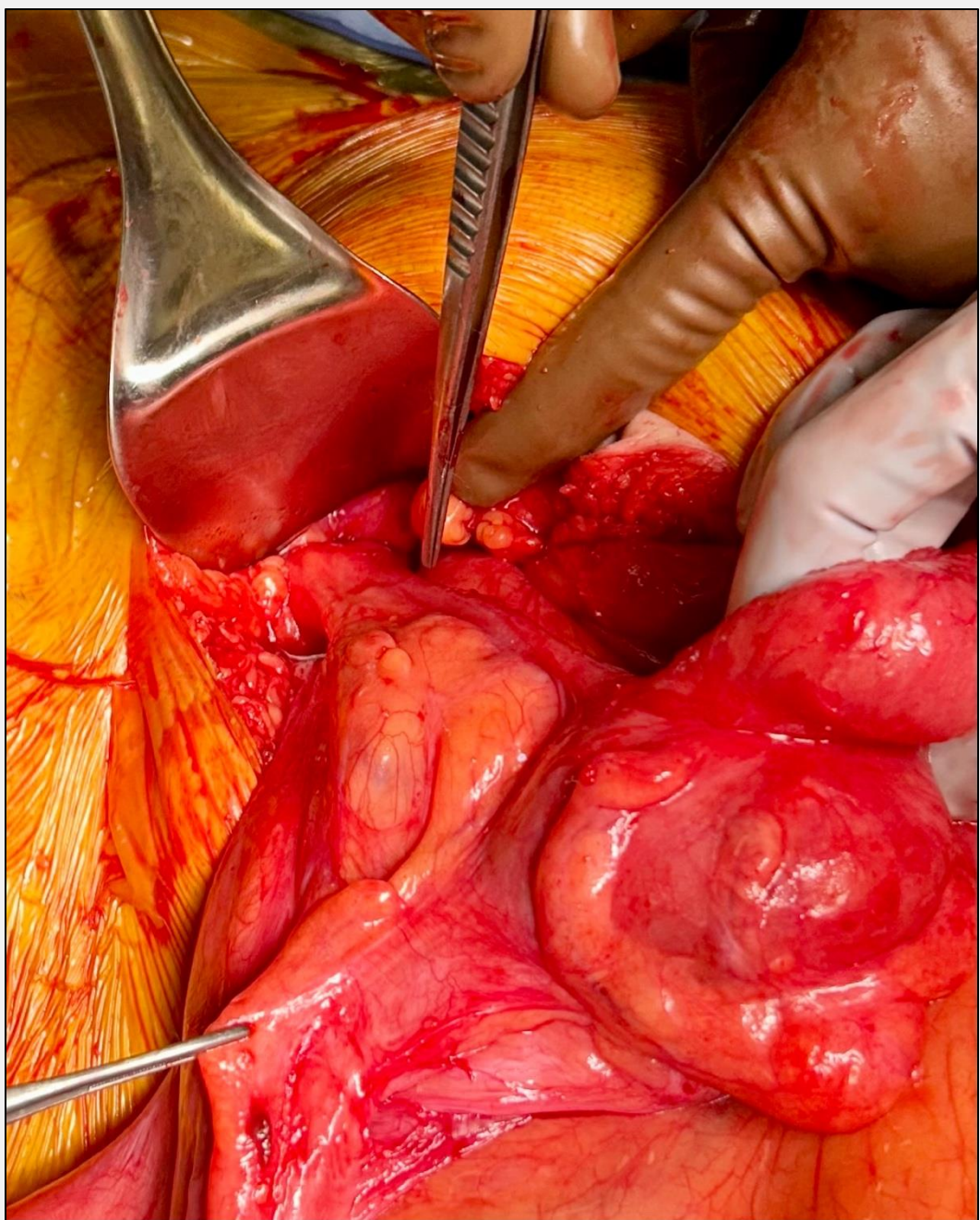


Figure 1. Large right inguinal hernia containing cecum, appendix and terminal ileum from patient in Case 1.