Robotic approach for posterior rectus sheath disruption after robotic eTEP ventral hernia repair

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INTRODUCTION

- Posterior rectus sheath disruption (PRS) is a rare complication of any retrorectus ventral hernia repair
- We report such a case complication after a robotic extended totally extraperitoneal (eTEP) repair
- Open or laparoscopic surgical approach has been the standard of care for incisional hernias with incarcerated bowel leading to obstruction
- This practice may require change due to increasing numbers of robotic eTEP procedures performed nationwide, as the large mesh placed during the repair and consequent decreased abdominal domain may render subsequent open or laparoscopic approach much more technically challenging

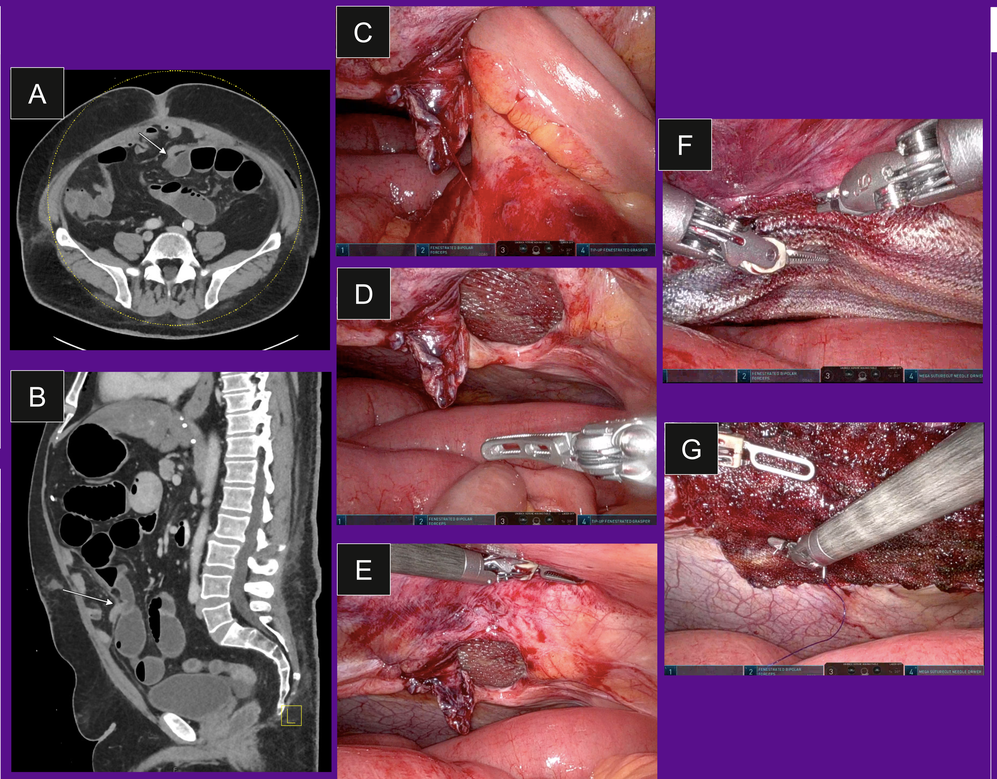
CASE PRESENTATION

Initial Presentation

- 55-year-old man required laparoscopic small bowel resection for small bowel obstruction (SBO) due to recurrent small bowel lymphoma
- 6 months later, he presented with a 7 cm incisional hernia at the periumbilical extraction site. This was electively repaired with a robotic eTEP approach using 17x28 cm retrorectus mesh

Return to Emergency Room

- He returned 4 days later with abdominal distension, nausea, and vomiting with computed tomography demonstrating a high-grade SBO secondary to PRS disruption with interparietal small bowel herniation (Figures A-B)



Key Operative Steps

- Despite limited working space secondary to bowel distension and recent mesh repair, the combined laparoscopic and robotic approach allowed for safe reduction of the obstructed small bowel (Figure C)
- Once the bowel was completely reduced, the posterior sheath disruption was easily visualized with intact mesh seen anteriorly in the retrorectus space (Figures D-E)
- The 3cm x 3cm PRS disruption was repaired with a coated biosynthetic absorbable intraperitoneal onlay mesh (IPOM) and fixated with intracorporeal suturing, made safely feasible with wristed robotic instruments (Figures F-G)

TAKEAWAYS

- With the increased use of robotic surgery across many surgical specialties, it is imperative to understand the complications that can arise from these innovative procedures and how to best address them
- Robotic surgery as an enhanced laparoscopic tool elevates the ability to use minimally invasive surgery as an approach to many daunting problems
- This case demonstrates that the robotic approach for PRS disruption with interparietal herniation is feasible and adds dexterity for mesh positioning