Post-operative Appendix Retention Presenting as Bowel Obstruction

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Introduction

Appendicitis is a common surgical emergency with over 270,000 appendectomies performed in the United States each year.[1] There are many post-operative complications from laparoscopic surgery that emergency physicians may be prone to dismiss due to the prevalence and less invasive nature of the procedure.

This unique case highlights the importance of keeping the possibility of infection of remnants as well as the rarer occurrence of retained surgical specimens in the differentials for abdominal pain patients.

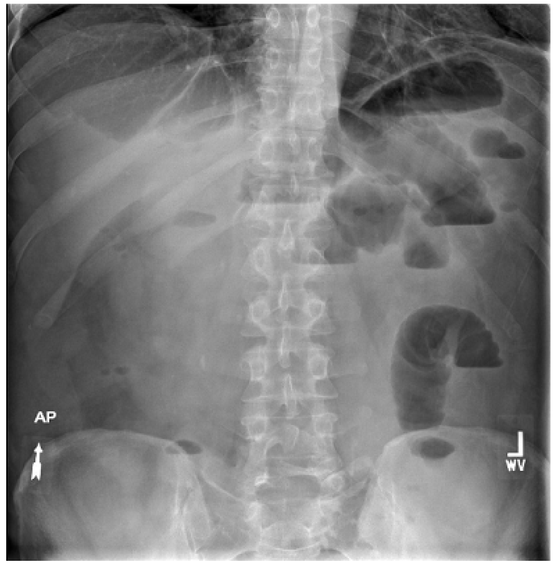

Figure 1. Acute abdominal series demonstrating numerous dilated small bowel loops with air fluid levels suggestive of small bowel obstruction.

Case Report

A 50 year old male with a past medical history of ulcerative colitis on azathioprine and mesalamine, clostridium difficile colitis, and hernia repair presented to the emergency department with an outpatient abdominal series concerning for small bowel obstruction one-week status post laparoscopic appendectomy at an out of state hospital (Figure 1).

Physical Exam

- Afebrile, uncomfortable appearing male
- Abdominal distension with decreased bowel sounds with generalized tenderness to palpation with no guarding or rigidity

Course

- Blood work and initial vitals unremarkable
- NG tube placed with 200mL bilious output
- General Surgery consulted and requested CT scan for suspected abdominal abscess
- CT scan with a small tubular density in the left lower abdomen concerning for a retained appendix in addition to a small bowel obstruction and intraabdominal abscess (Figure 2)
- Diagnostic laparoscopy performed with removal of a necrotic appendix containing an appendicolith with a staple line across the base (Figure 3)

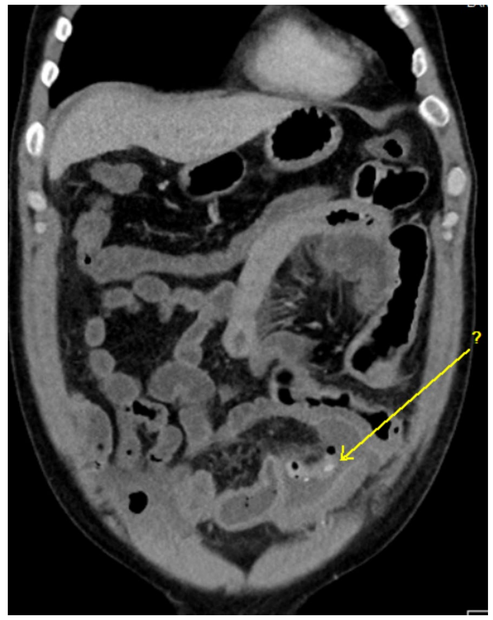

Figure 2. CT scan of the abdomen and pelvis demonstrated a mildly distended small bowel loop in the left anterior abdomen with an adjacent surgical staple line contiguous with a small tubular density filled with air and a single calcification.

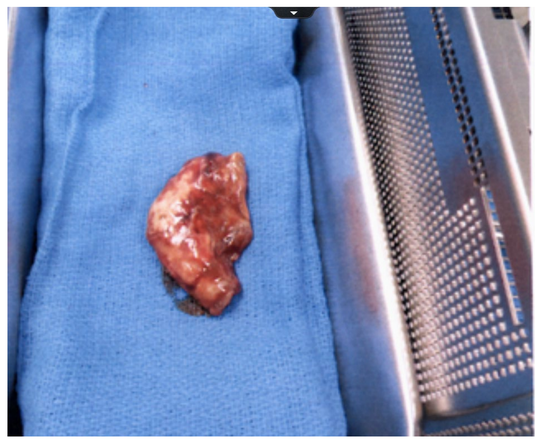

Figure 3. Specimen removed at surgery. A necrotic appendix with a staple line across the base of the appendix containing an appendicolith.

Discussion

Two rare complications of appendectomy are stump appendicitis and retained appendicoliths. Patients may present hours to years after surgery. Stump appendicitis is caused by a retained appendicular stump and presents similar to appendicitis, although is not usually considered in the differential diagnosis as patients report a history of a prior appendectomy.[2] Treatment requires surgery to remove the remnant of the appendiceal base. An appendicolith is a collection of fecal debris and calcium salts residing in the appendix that can lead to acute appendicitis. Appendicoliths can be retained secondary to rupture of the appendix prior to surgery or from failure of their removal during surgery[3]. Management of retained fecaliths requires drainage of the abscess and surgical removal.

Conclusion

As emergency physicians, it is crucial to include these rare surgical complications in the differentials, alongside the more common pathologies when approaching and treating the patients with abdominal pain.

References:

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