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Recurrent Perforated Appendicitis: A Case Presentation and Review of Literature

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Abstract

Stump appendicitis is a rare complication of appendectomy. It remains both a diagnostic dilemma and management challenge for clinicians dealing with this entity. We present a case of 58-year-old gentleman man with a history of laparoscopic appendectomy presented with symptoms and signs of intestinal obstruction. Assessment with CT abdomen identified pericecal inflammation with pneumoperitoneum and multiple intraabdominal collections, however it did not diagnose stump appendicitis. He underwent surgery with intraoperative diagnosis of perforated stump appendicitis and completion appendectomy performed. We review the literature regarding the challenge in diagnosis and treatment strategy for stump appendicitis.

Keyword: Stump appendicitis, appendectomy, perforation

Introduction

Acute appendicitis is a very common surgical pathology and appendectomy is the widely accepted gold standard for treatment. It is the commonest surgical procedure in an emergency setting worldwide.¹⁻³ Luminal obstruction of appendiceal orifice by fecolith or lymphoid hyperplasia,

and occasion appendiceal tumor best describes the pathophysiology of this appendicitis.¹

Stump appendicitis is relatively rare.^{1,2} It is defined as repeated inflammation of residual tissue post appendectomy.³ It was first described in 1945 by Rose.¹ Diagnosis is difficult or often delayed due to low index of suspicion. Like in primary appendicitis, delayed recognition predisposes patients to perforation and its' sequelae.

Literature about stump appendicitis is limited and this case report will expand the body of literature about stump appendicitis.

Case Presentation

A 58-year-old gentleman who had undergone laparoscopic appendectomy for perforated appendix in 2021 presented with acute intestinal obstruction. He complained of right iliac fossa pain for three days duration associated with vomiting, abdominal distention and obstipation. Physical examination revealed distended abdomen with tenderness over lower quadrants. Blood parameters revealed leukocytosis with presence of metabolic acidosis. Other investigative parameters were relatively normal. Our initial impression was perforated diverticulitis which was the prime reason for proceeding

with contrast enhanced computed tomography of abdomen. Images were suggestive of pneumoperitoneum with multiple intraabdominal collections and thickened cecal wall.

He underwent laparotomy and intra-operative findings revealed appendiceal stump perforation at tip with pus collection at right paracolic gutter, pelvis and multiple interloop abscesses. Base of the appendix was healthy. Completion appendectomy was performed, and he was discharged well on post operative day three. His postoperative recovery was rather uneventful. The histopathological examination confirmed presence of stump appendicitis with concurrent perforation with no evidence of granuloma or malignancy.

Discussion

In 1735, Claudius Amyand was the first author to describe appendectomy.¹ In 1945, Rose described occurrence of stump appendicitis in patients who had undergone previous appendectomy.^{3,4} Till date, it remains a challenge among clinicians in diagnosing stump appendicitis. Appendiceal stumps range from 0.5cm to 5.0cm in size.² Timing of clinical presentation of stump appendicitis

varies between 2 months to 50 years following initial appendectomy.³ In our case, it occurred three years after the initial appendectomy. Incidence is poorly documented in the literature hence leading to an underestimation of its true occurrence.

Failure to resect appendix at the base is believed to be the etiology for the recurrent inflammation that attributes to stump appendicitis.⁵ Authors have described higher incidence among initial laparoscopic management in comparison to open approach and this could be explained by the lack of tactile feedback and narrow field of vision associated with laparoscopic approach.^{2,4,6} It is also very unusual to encounter perforation twice in the same patient. Literature review found only one prior case published by Pueya Rashid Nashidengo, et al in Pan African Medical Journal in the year 2022.⁸

Imaging might be helpful in some cases. CT scan of the abdomen and pelvis is not specific for stump appendicitis. In the patient with history of appendicitis, should raise the index of suspicion of recurrent acute appendicitis, that is stump appendicitis.²

Completion appendectomy is the mainstay of the treatment.^{4,6,7} There is often a debate when it comes to surgical



Diagram 1: Arrow showing air locules with adjacent fat streakiness at cecum, ascending colon

approach. Choice of surgical approach is dictated by the preemptive diagnosis and the clinical condition of the patients.⁶ Literature states that an extensive surgery such as hemicolectomy should not be performed if the appendix stump can be well delineated till its base and secured.^{6,7}

Conclusion

In conclusion, stump appendicitis is a rare complication of appendectomy. Incidence and prevalence had been reported to be increasing with adaptation of laparoscopic approach.^{2,4,6} Imaging could be helpful in the diagnosis. Prompt recognition is extremely vital to avoid potential complications. History of previous appendectomy does not rule out the occurrence of stump appendicitis.

CONFLICT OF INTEREST

All authors declare no conflict of interest.

References

1. Roberts KE, Starker LF, Duffy AJ. Stump appendicitis: a surgeon's dilemma. *JSLS*. (2011)15:373–378.

2. Shin LK, Halpern D, Weston SR. Prospective CT diagnosis of stump appendicitis. *AJR Am J Roentgenol*. 2005;184(3):954–956.

3. Alemayehu A, Woyesa E, Fekadu D. Stump appendicitis: challenging diagnosis with serious complication: a case report. *J Surg Case Rep*. 2023;2023(4). doi:10.1093/jscr/rjad043

4. Keller CA, Dudley RM, Huycke EM, Chow RB, Ali A. Stump appendicitis. *Radiol Case Rep*. 2022;17(7):2534–2536. doi:10.1016/j.radcr.2022.04.034

5. Soh CL, Shetty S, Abdalla S, Soggiu F. Case series 'Stumped' by stump appendicitis—a case report and literature review. *J Surg Case Rep*. 2024;2024(9):rjae573. doi:10.1093/jscr/rjae573

6. Hadrach Z, Mroua B, Zribi S, Bouassida M, Touinssi H. Stump appendicitis, a rare but serious complication of appendectomy: a case report. *Clin Case Rep*. 2021;9:e04871.

7. Mejri A, Arfaoui K, Aloui B. Stump appendicitis: a myth that can become reality. *Pan Afr Med J*. 2020;36:274. doi:10.11604/pamj.2020.36.274.24690

8. Nashidengo PR, Quayson FW, Abebrese JT, et al. Twice perforated stump appendicitis: a case report. *Pan Afr Med J*. 2022;43:43. doi:10.11604/pamj.2022.43.43.37149