Case Report

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Journal of KIST Medical College

Stump Appendicitis: A case report with review of literature

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ABSTRACT

Stump appendicitis is a rare and delayed complication of appendectomy. The clinical symptoms and signs are similar to appendicitis. A 30-year-old man presented with complaint of pain in umbilical region and shifting to right lower abdomen for one day. Patient had undergone open appendectomy seven years back. Computed Tomography scan of abdomen and pelvis showed stump appendicitis. Operative finding revealed stump appendicitis supported by post-operative histo-pathological examination. **Keywords:** Acute appendicitis; Appendectomy; Case Report; Stump Appendicitis

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Source of support: None
Conflict of interest: None
Article info
Received: 22 December,2020
Accepted: 1 July,2021
Published: 31 July,2021

INTRODUCTION

Stump appendicitis is an infection or inflammation of residual stump of appendix after appendectomy. As its incidence is very low, clinician may not think of it when a patient presents with similar clinical features of appendicitis in post appendectomy patient. The treatment may be delayed and patient may land up with complication like perforation, peritonitis and sepsis or abscess formation. We present a case of 30-year-old man who presented in emergency with features of acute appendicitis after seven years of appendectomy which turned out to be stump appendicitis.

CASE REPORT

A 30-year-old male patient presented with complaints of pain in periumbilical region and shifting to right lower quadrant of abdomen for one day. The pain was acute on onset, continuous, severe, no aggravating or relieving factors and not associated with fever, loss of appetite, altered bowel habit or urinary symptoms. Patient had undergone open appendectomy seven years back ,and recovery was uneventful .On clinical examination ,the general condition of patient was ill with tenderness at right iliac fossa (RIF). The leucocytes count and urine analysis were within normal limit. The ultrasonography of abdomen and pelvis showed echogenic omentum with free fluid at RIF. Patient was planned for conservative management in ward with diagnosis in dilemma. Next day symptoms became more prominent and Computed Tomography scan of abdomen and pelvis was done which showed tubular structure at the base of cecum measuring about 18 mm in length and 7.1mm in maximum diameter with extensive peri-appendiceal fat stranding and minimum fluid tracking seen around the cecum. Patient was shifted to operation theatre for diagnostic laparoscopy after written consent.

Diagnostic laparoscopy revealed clumping of omentum at right iliac fossa.Due to dense adhesions, laparoscopy was converted to open with grid-iron incision at RIF, the adherent omentum was separated and residual stump of appendix about 2 cm was noted with inflammation as shown in Figure 1. Appendectomy was done. Rest of the bowel was normal. Postoperative period remained uneventful. Patient was discharged on the 3rd postoperative day. The histopathological report showed acutely inflamed appendix.

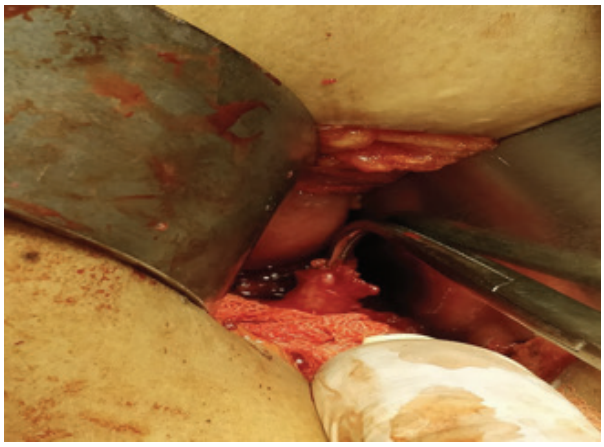

Figure 1. Intraoperative Stump appendicitis

DISCUSSION

Appendicitis is the most common disease encountered by surgeons and appendectomy is the most common operation done worldwide (38.9 %).[1,2] Amyand was credited with first to perform appendectomy in 1735. Reginald Fitz first described clinical features and abnormalities of appendicitis in 1886. The first case of stump appendicitis in a post appendectomy patient was described by Rose in 1945.[1,2]

The postoperative complications after appendectomy include wound infection, pelvic abscess, portal pyemia, hemorrhage, intestinal, peritonitis, perforation.[3,4] and adhesion[5,6,7] and Stump appendicitis is a rare and delayed complication of appendectomy. The lifelong probability of developing acute appendicitis is estimated at 7%, but the probability of developing stump appendicitis is much lower (1/50,000).[11] Early diagnosis and treatment are essential to prevent the complication.

Stump appendicitis may lead to diagnostic dilemma to unfamiliar physician with this rare entity. Stump appendicitis clinically presents with similar symptoms and signs as acute appendicitis in the post appendectomy patient. Generally, stump appendicitis can be prevented by adequate visualization of appendix base[8] and ileocecal junction and leaving stump <5mm long.[10]

The common condition that leads to stump appendicitis are inadequate visualization of appendicular and caecal base, sub-serosal appendix, retrocecal appendix, extensive local inflammation, local ulceration due to fecolith and difficult dissection.

Pre- operative diagnosis with USG is difficult. It needs a high level of suspicion and expertise, but USG can rule out other abdominal causes. CT scan of abdomen is more specific for diagnosis of stump appendicitis. The CT scan findings are similar to acute appendicitis, like in our case. Laparoscopy is another method to make diagnosis in case of confusion with radiological diagnosis. Completion appendectomy either open or laparoscopy is necessary to treat stump appendicitis.

CONCLUSION

Stump appendicitis is a rare and delayed complication of appendectomy. It presents with a similar symptoms and signs of acute appendicitis. Being a rare entity, it is very difficult to diagnose. Diagnosis is based on strong clinical suspicion in post appendectomy patient with radiological evidence. Intra-operative clear-cut dissection and visualization of appendix base and leaving less than 5mm of stump can prevent the incidence of stump appendicitis.

REFERENCES

1. Niska R, Bhuiya F, Xu J. National Hospital Ambulatory Medical Care Survey: 2007 Emergency Department Summary. PsycEXTRA Dataset. 2010.
2. Burbano D, García AF, Chica Yantén J, Salazar C, Toro JS, Bravo JC. Stump appendicitis, a case report and a review of the literature. Is it as uncommon as it is thought? International Journal of Surgery Case Reports. 2020;68:88–91.
3. Buckius MT, McGrath B, Monk J, Grim R, Bell T, Ahuja V. Changing Epidemiology of Acute Appendicitis in the United States: Study Period 1993–2008. Journal of Surgical Research. 2012;175(2):185–90.
4. Goldthorn JF. Acute appendicitis: Prospective trial concerning diagnostic accuracy and complications. Journal of Pediatric Surgery. 1981;16(4):530.
5. Ransom HK. Complications associated with appendicitis. The American Journal of Surgery. 1942;56(1):102–17.
6. Ponka Josephl, Gilfillan Norris, Brush Brocke. Complications Following Appendectomy For Acute Appendicitis In The Aged. Journal of the American Geriatrics Society. 1962;10(8):691–700.
7. Rose TF.Recurrent appendiceal abscess. Medical Journal of Australia. 1945;1(26):659–62.
8. Subramanian A, Liang MK. A 60-year literature review of stump appendicitis: the need for a critical view. The American Journal of Surgery. 2012;203(4):503–7.
9. Stump Appendicitis and the Critical View of Safety. Journal of Surgery. 2019;7(1):01–2.
10. Humes DJ, Simpson J. Acute appendicitis. BMJ. 2006;333(7567):530–4.
11. Liang MK, Lo HG, Marks JL. Stump Appendicitis: A Comprehensive Review of Literature. The American Surgeon. 2006;72(2):162–6.
12. Strobel S, Hookman P, Barkin J. C. difficile Appendicitis (CDA): An Overlooked Entity? American Journal of Gastroenterology. 2012;107.
13. Roberts KE, Starker LF, Duffy AJ, Bell RL, Bokhari J. Stump Appendicitis: A Surgeon's Dilemma. JSLS : Journal of the Society of Laparoendoscopic Surgeons. 2011;15(3):373–8.
14. Sharma A, Khullar R, Soni V, Baijal M, Chowbey PK, Kumar A. Stump appendicitis: A rare clinical entity. Journal of Minimal Access Surgery. 2013;9(4):173.
15. Dikicier E, Altintoprak F, Ozdemir K, Gundogdu K, Uzunoglu MY, Cakmak G, et al. Stump appendicitis: a retrospective review of 3130 consecutive appendectomy cases. World Journal of Emergency Surgery. 2018;13(1)
16. Shah T, Gupta RK, Karkee RJ, Agarwal CS. Recurrent pain abdomen following appendectomy: Stump Appendicitis, a surgeon's dilemma. Clinical Case Reports. 2017;5(3):215–7.