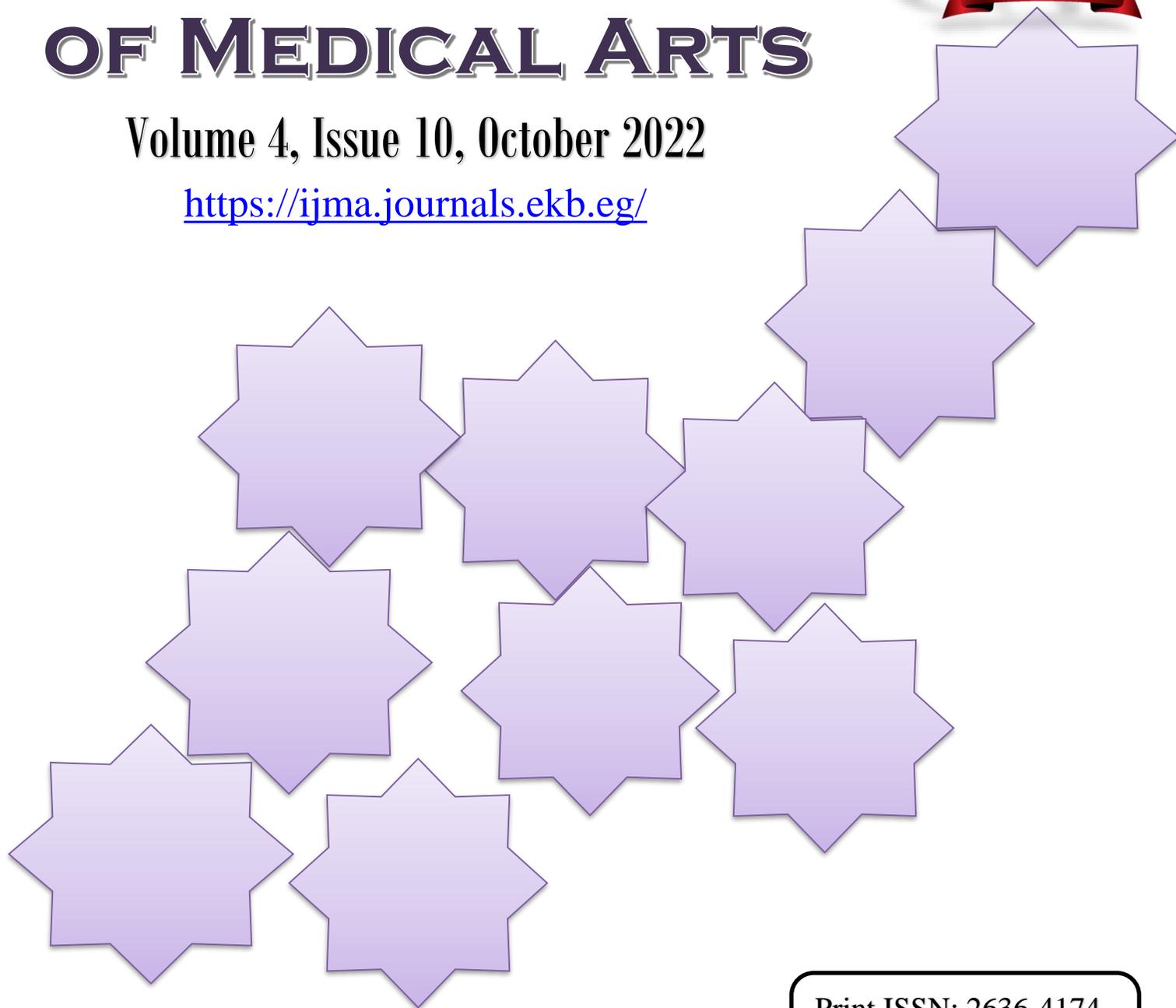


# INTERNATIONAL JOURNAL OF MEDICAL ARTS

Volume 4, Issue 10, October 2022

<https://ijma.journals.ekb.eg/>



Print ISSN: 2636-4174

Online ISSN: 2682-3780





Available online at Journal Website  
<https://ijma.journals.ekb.eg/>  
 Main Subject [Surgery]



## Case Report

### Stump Appendicitis: Laparoscopic Management Case Presentation

Ayman Alkhalegy<sup>1\*</sup>, Ahmed Aly El-Kassas<sup>2</sup>

<sup>1</sup> Department of Surgery, Alsahel Teaching Hospital, Ministry of Health, Cairo, Egypt

<sup>2</sup> Department of Radiology, Alsahel Teaching Hospital, Ministry of Health, Cairo, Egypt

## ABSTRACT

#### Article information

Received: 09-12-2022

Accepted: 28-01-2023

DOI: 10.21608/IJMA.2023.282668

\*Corresponding author

Email: [aymanalkhalegy@gmail.com](mailto:aymanalkhalegy@gmail.com)

**Citation:** Alkhalegy A, El-Kassas AA. Stump Appendicitis: Laparoscopic Management Case Presentation. IJMA 2022 October; 4 [10]: 2763-2766. doi: 10.21608/IJMA.2023.282668.

**Background:** Appendectomy is the treatment of choice for acute appendicitis. Leaving too much part of the appendiceal stump during an appendectomy operation predisposes the patient to stump appendicitis, which is a rare complication and of difficult diagnosis that needs a highly suspicious physician.

**Case presentation:** A 28 years male patient presented to the emergency department [ED] with a history of severe, generalized abdominal pain that shifted to the right iliac fossa one day before admission. He had a history of appendectomy 3 years ago. Computed tomography [CT] abdomen and pelvis with contrast showed a picture suggesting an inflammatory process in the right iliac fossa. The patient was diagnosed as stump appendicitis, laparoscopic appendectomy was done. The patient was improved and discharged 3 days post-operative.

**Conclusion:** It is important to put in mind the possibility of stump appendicitis, to achieve an early diagnosis and quick treatment and prevent late complications.

**Keywords:** Appendicitis; Appendectomy; Stump Appendicitis



This is an open-access article registered under the Creative Commons, ShareAlike 4.0 International license [CC BY-SA 4.0] [<https://creativecommons.org/licenses/by-sa/4.0/legalcode>].

## INTRODUCTION

Acute abdomen is a condition that demands urgent treatment. There are many causes for acute abdomen. The most common one is acute appendicitis [1]. The incidence of acute appendicitis is 233 per 100,000 people. Appendectomy is the treatment of choice for acute appendicitis. Post-appendectomy complications include hematoma, abscess, wound complications, and stump appendicitis. Stump appendicitis occurred if too much of the appendiceal stump is left post-appendectomy [2]. Stump appendicitis is a rare complication that was first reported by Rose in 1945 [3,4].

Surgeons and other medical professionals shouldn't automatically rule out the possibility of recurring or stump appendicitis just because a patient has had an appendectomy in the past. Late diagnosis of such cases may lead to multiple complications as abscess formation and perforation. In this case, we reported a 28-year-old male presented with stump appendicitis, 3 years following an appendectomy.

### Case Report

A 28 years male patient presented to the surgical emergency department [ED] with a

history of severe, worsening, generalized abdominal pain that shifted to the right iliac fossa one day before admission, associated with anorexia, and nausea but no vomiting. He had a history of appendectomy 3 years ago. On examination, the patient was in pain, and dehydrated. He was conscious with a Glasgow Coma Scale [GCS] of 15/15. His vital signs were normal [heart rate = 80 beats per minute, blood pressure = 120/80 mmHg, respiratory rate = 18 breaths per minute, and body temperature = 37.5 °C]. Abdominal examination revealed the right lower paramedian scar of the previous appendectomy and tender right iliac fossa with muscle guard. Initial laboratory investigations revealed a white blood cell count of  $15 \times 10^9/L$ , hemoglobin of 13 g/dl, CRP of 45 mg/dL, and creatinine of 0.9 mg/dl. Ultrasound and Computed tomography [CT] abdomen and pelvis with contrast showed a picture suggesting an inflammatory process in the right iliac fossa. Our provisional diagnosis was stump appendicitis. The patient was admitted and a Diagnostic laparoscopy was done which, showed an inflamed remnant of the appendix [figure 1] at the site of the previous appendectomy. A laparoscopic appendectomy was done [figure 2], and the pathological finding confirmed stump appendicitis. The postoperative period was smooth, the patient was discharged in the 3<sup>rd</sup> day post-operative.

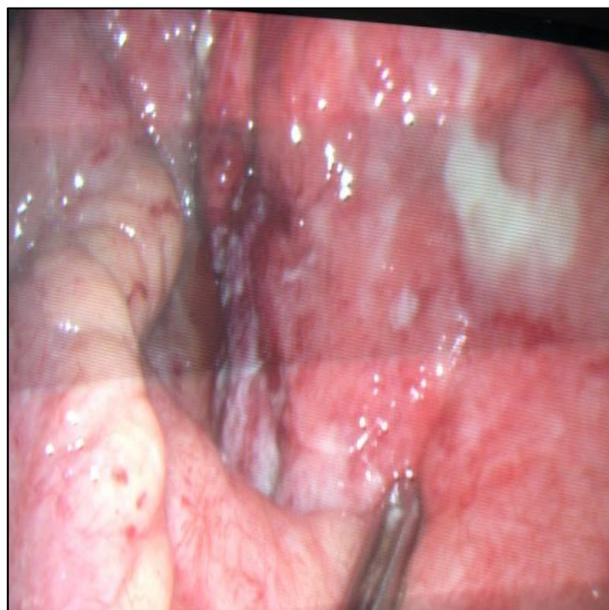


Fig. 1: Inflamed stump of the appendix.



Fig. 2: Appendicular stump remnant

## DISCUSSION

Early diagnosis of stump appendicitis is difficult, challenging, and of low suspicion index due to the previous appendectomy [5]. Clinically, patients complained of symptoms similar to that of acute appendicitis, however, they also had a history of appendectomy with the presence of an appendectomy scar [6]. Stump appendicitis usually appears after years of appendectomy [4].

The causes of stump appendicitis are usually due to factors related to the previous appendectomy [7]. The surgical technique may be a risk factor, some authors suggested that the laparoscopic technique is a major risk factor due to the absence of both 3D vision and tactile feedback [8]. This opinion agreed with Subramanian and Liang, [7] who reported that the incidence of stump appendicitis is lower in laparoscopic appendectomy than in open appendectomy. However, this opinion disagreed with us as our case had done open appendectomy not laparoscopic. One of the most important surgical risk factors for stump appendicitis is the presence of inflammation at the base of the appendix during appendectomy, in which the surgeon will leave a big stump due to difficult dissection and fear of intestinal perforation [9]. Also, the site of the appendix such as retrocausal or subserous is

considered a risk factor for leaving a long stump during the appendectomy [4].

An appendicular stump longer than 25 mm represents a possible reservoir for fecolith and inflammation [10], i.e. recommended stump length was less than 5 mm but recently less than 3 mm [8,11].

Contrast-enhanced CT scanning is useful in diagnosing stump appendicitis because it rules out other causes of acute abdomen, as well as identifying remnants of the appendiceal lumen, pericecal inflammation and abscess formation, fluid in the right paracolic gutter, cecal wall thickening [12]. Diagnostic laparoscopy is the following diagnostic and therapeutic step in case of clinical suspicion of stump appendicitis [10,12].

The treatment of choice for stump appendicitis is a completed appendectomy even if perforated. Ileocectomy may be necessary if there is severe inflammation with abscesses [12,13]. A laparoscopic approach can be used for the management of stump appendicitis even if perforated [14].

**In conclusion,** Stump appendicitis is a rare complication post appendectomy and it should be considered as one of the possible etiologic causes of right lower abdominal pain in patients

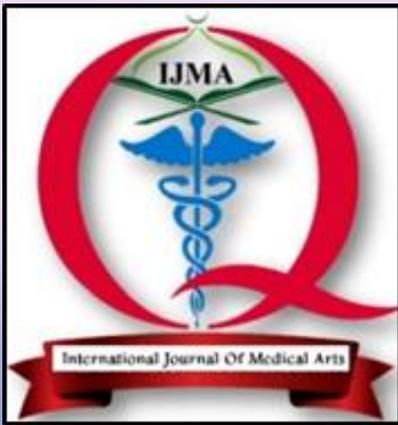
undergone an appendectomy. Symptoms seem to be very similar to the primary episode of acute appendicitis, patients can present vague and nonspecific symptoms of abdominal pain, nausea, and vomiting. A high index of suspicion combined with imaging study [CT better than ultrasound] and sometimes diagnostic laparoscopy is necessary to establish the diagnosis.

It is important to put in mind the possibility of stump appendicitis, to achieve an early diagnosis and quick treatment and prevent late complications.

**Conflict of Interest and Financial Disclosure:** None

### REFERENCES

1. Al Ali M, Jabbour S, Alrajaby S. ACUTE ABDOMEN systemic sonographic approach to acute abdomen in emergency department: a case series. *Ultrasound J*. 2019 Sep 23;11[1]:22. doi: 10.1186/s13089-019-0136-5.
2. Jones MW, Lopez RA, Deppen JG. Appendicitis. 2022 Oct 24. In: StatPearls [Internet]. Treasure Island [FL]: StatPearls Publishing; 2022 Jan-. PMID: 29630245.
3. Rose TF. Recurrent appendiceal abscess. *Med J Australia*. 1945 Jun;1[26]:659-62. doi: 10.5694/j.1326-5377.1945.tb55065.x.
4. Kumar A, Sharma A, Khullar R, Soni V, Baijal M, Chowbey PK. Stump appendicitis: A rare clinical entity. *J Minim Access Surg*. 2013 Oct;9[4]:173-6. doi: 10.4103/0972-9941.118835.
5. Burt BM, Javid PJ, Ferzoco SJ. Stump appendicitis in a patient with prior appendectomy. *Dig Dis Sci*. 2005 Nov;50[11]:2163-4. doi: 10.1007/s10620-005-3025-7.
6. Truty MJ, Stulak JM, Utter PA, Solberg JJ, Degen AC. Appendicitis after appendectomy. *Arch Surg*. 2008 Apr;143[4]:413-5. doi: 10.1001/archsurg.143.4.413.
7. Subramanian A, Liang MK. A 60-year literature review of stump appendicitis: the need for a critical view. *Am J Surg*. 2012 Apr;203[4]:503-7. doi: 10.1016/j.amjsurg.2011.04.009.
8. Roberts KE, Starker LF, Duffy AJ, Bell RL, Bokhari J. Stump appendicitis: a surgeon's dilemma. *JSLs*. 2011 Jul-Sep;15[3]:373-8. doi: 10.4293/108680811X13125733356954.
9. Mangi AA, Berger DL. Stump appendicitis. *Am Surg*. 2000 Aug;66[8]:739-41. PMID: 10966030.
10. Hendaheba R, Shekhar A, Ratnayake S. The dilemma of stump appendicitis - A case report and literature review. *Int J Surg Case Rep*. 2015;14:101-3. doi: 10.1016/j.ijscr.2015.07.017.
11. Humes DJ, Simpson J. Acute appendicitis. *BMJ*. 2006 Sep 9;333[7567]:530-4. doi: 10.1136/bmj.38940.664363.AE.
12. Papi S, Pecchini F, Gelmini R. Stump appendicitis: a rare and unusual complication after appendectomy. Case report and review of the literature. *Ann Ital Chir*. 2014 Apr 7;85[ePub]:S2239253X14022270. PMID: 25027013.
13. Ismail I, Iusco D, Jannaci M, Navarra GG, Grassi A, Bonomi S, Parpanesi R, Giombi A, Virzì S. Prompt recognition of stump appendicitis is important to avoid serious complications: a case report. *Cases J*. 2009 Jul 9;2:7415. doi: 10.4076/1757-1626-2-7415.
14. Wei B, Qi CL, Chen TF, Zheng ZH, Huang JL, Hu BG, Wei HB. Laparoscopic versus open appendectomy for acute appendicitis: a metaanalysis. *Surg Endosc*. 2011 Apr;25[4]:1199-208. doi: 10.1007/s00464-010-1344-z.



# International Journal

<https://ijma.journals.ekb.eg/>

Print ISSN: 2636-4174

Online ISSN: 2682-3780

# of Medical Arts