



Stump Appendicitis: Result of an Incomplete Surgery

Dear Editor,

A 56-year-old male was admitted to the emergency room with vomiting and right lower quadrant abdominal pain for 4 days. He had undergone appendectomy a year ago in a different hospital. Pathological examination of appendix had reported as benign. Patient denied any constipation, diarrhea, rectal bleeding or any history associated with inflammatory bowel disease, or familial Mediterranean fever. On performing a physical examination, a right paramedian incision scar due to having undergone appendectomy was observed. The patient had muscular guarding in his right lower quadrant. His fever was 38.1°C. Urinalysis results were normal. His white blood cell count was 13000/mm³ with 73% neutrophils, and his C-reactive protein level was 8.38 mg/dL. His abdominal and chest X-ray and ultrasound findings were unremarkable. Abdominal computed tomography (CT) revealed pericecal inflammation and a residual appendiceal stump (Figure 1) in his right iliac fossa.

Intravenous fluid, parenteral antibiotics, and analgesic treatment were started before the operation. The patient underwent laparotomy through McBurney's incision. During the operation, it was found that the appendiceal stump was 3.5 cm long and that it was inflamed due to fecalith (Figure 2). The residual stump was ligated and resected, and abdominal wall layers were closed.

Oral nutrition was started on post-operative day 1, and the patient tolerated it well. He was discharged on post-operative day 2 with healing. During the one-month follow-up, no complication was observed.

A pathological examination confirmed the existence of a 3.5 cm-long residual appendix with inflammation.

During their lifetime, men have an 8.6% risk of appendicitis and women have a 6.7% risk (1). The appendix is located posteromedial to the caecum, but its location may be different in the presence of subserous parts.



Figure 1. Stump appendicitis on performing computed tomography



Figure 2. Appendiceal stump during the operation

Following the appendiceal artery and tenia coli helps find the base of the appendix (2).

Wound infections, bleeding, and intraabdominal abscess are short-term complications of appendectomy, while incisional hernia, bowel obstruction, and stump appendicitis (SA) are long-term complications (2).

Stump appendicitis is rare. Its incidence has been reported to be 1 in 50,000 cases (3). Diagnosis of SA often delays unless physician suspects. Nowadays, physicians have low awareness of SA in presence of the right lower quadrant abdominal pain and a history of appendectomy (3). Early diagnosis is definitely important to prevent complications such as intraabdominal abscess, bowel perforation, and generalized peritonitis due to a delayed diagnosis (2).

Stump appendicitis may occur following open surgery or laparoscopic surgery. The laparoscopic approach was thought to increase the risk of SA due to the loss of three-dimensional perspective and tactile feedback (4). However, Liang et al. (5) reported that 66% of cases of SA appeared following open appendectomy while 34% appeared following laparoscopic appendectomy. Leaving the appendiceal stump smaller than 5 mm has been suggested to reduce the risk of SA (1).

The first step to make a diagnosis is to think about the probability of SA. CT is more useful than ultrasound for making a prompt diagnosis. CT also eliminates other possible etiologies of acute abdomen. Pericecal inflammation, abscess formation, fluid in the right iliac fossa, cecal wall thickening, and an ileocecal mass may be CT findings in SA, which are similar to those in acute appendicitis. In case of vagueness, diagnostic laparoscopy may be next diagnostic and therapeutic approach (2). Treatment is completion appendectomy (5).

Stump appendicitis is a rare condition. Its delayed diagnosis increases the risk of complications. SA should be kept in mind in cases that imitate acute appendicitis where the patient has a history of appendectomy. CT is useful to diagnose SA and shows the anatomy of the residual appendix.

Ethics Committee Approval: N/A.

Informed Consent: N/A.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - S.K., S.C.C.; Design - S.K., H.B.; Supervision - H.K., H.B.; Resources - S.C.C., H.G.; Materials - S.K., S.C.C.; Data Collection and/or Processing - S.K., H.B.; Analysis and/or Interpretation - H.B., H.K.; Literature Search - S.K., H.B.; Writing Manuscript - S.K., H.G.; Critical Review - H.K., H.G.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

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Received: February 9, 2017

Accepted: February 15, 2017

Available Online Date: March 23, 2017

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