Laparoscopic management for stump appendicitis : a report of six cases

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INTRODUCTION

An appendectomy is one of the most common emergency surgical operations. Stump appendicitis is a rare complication after appendectomy and is caused by acute inflammation of the remnant portion of the appendix. Because of both the low incidence of stump appendicitis and a low index of suspicion owing to a previous appendectomy, the diagnosis of stump appendicitis is often delayed. Here, we describe several cases of stump appendicitis which were treated through laparoscopic procedures.

CASE REPORT

From January 2008 to December 2017, 6 patients were diagnosed as having a stump appendicitis with or without perforation, and underwent laparoscopic procedures at the Department of Surgery at Chungbuk National University Hospital, Korea. All patients were admitted to the emergency room with right abdominal pain and assessed using contrast-enhanced abdominal and pelvic computed tomography (A-P CT). We retrospectively reviewed the patients' medical records and radiologic images. Five patients were male, with a mean age of 42.4 years (range 11 – 77 years). The mean time from initial appendectomy to presentation was 17.3 months (range 2 weeks – 30 years). Four patients had previously undergone an open appendectomy. On A-P CT scans, 3 patients demonstrated perforation around the stump appendix. In cases 1 and 3, there was an appendicolith in the short stump appendix with inflammation around the appendix (Figure 1). In case 4, A-P CT scans showed perforation of the stump appendiceal tip (Figure 2). These 3 patients underwent laparoscopic completion appendectomy. In cases 2, 5 and 6, A-P CT scans found a pericecal inflammatory infiltration with abscess and bowel edema (Figure 3). These 3 patients underwent laparoscopic ileocecectomy. By the pathologic reports, the mean stump length was 2.3 cm (range 1 – 4 cm) (Table 1). The mean hospital stay was 9 days (range 5 – 13 days). All patients were discharged in good general condition.

Case	Sex	Age (years)	Initial appendectomy m ethods	Interval time	Pain location	Perforation	Definitive surgery*	Specimen stump length (cm)
Case 1	M	43	Laparosocpic	2 mo	RLQ	-	Appendectomy	2
Case 2	M	28	Open	3 mo	RLQ	+	Ileocecectomy	3
Case 3	M	11	Laparoscopic	9 mo	RLQ	-	Appendectomy	2.5
Case 4	M	41	Open	30 yr	RLQ	+	Appendectomy	4
Case 5	F	52	Open	2wks	RLQ	+	Ileocecectomy	1
Case 6	M	77	Open	2wks	RLQ	+	Ileocecectomy	2

Table 1. characteristics of six patients of stump appendicitis

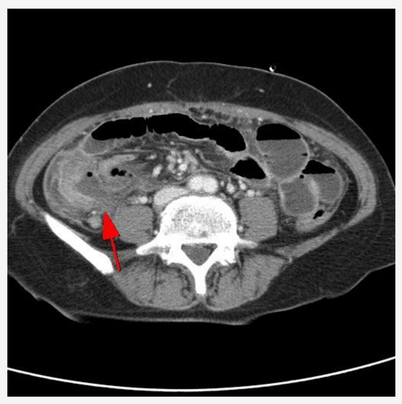

Figure 1.
Contrast-enhanced A-P CT in case 1. An appendicolith in the short stump appendix with inflammation around the appendix(arrow)

Figure 2.
Contrast-enhanced A-P CT in case 4. A perforation of the tip of stump appendix (arrow)

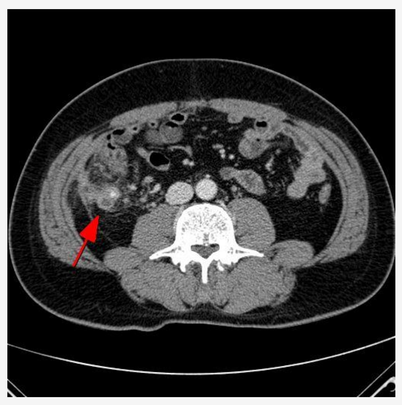

Figure 3.
Contrast-enhanced A-P CT in case 5. A pericecal inflammatory infiltration with abscess and bowel edema (arrow)

CONCLUSION

Although a stump appendicitis is a rare complication after an appendectomy, it can be a cause of right-sided abdominal pain in patients who have had appendectomies previously. Because delayed diagnosis is associated with increased postoperative morbidity and also affects the extent of resection, clinicians should consider the possibility of stump appendicitis as a cause of acute abdominal pain. A laparoscopic approach can be adopted for management of stump appendicitis with or without perforation.

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