Retained fecaliths after laparoscopic appendectomy disappearing spontaneously with non-operative management

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ABSTRACT

Introduction: Intra-abdominal abscess after laparoscopic appendectomy is a well-known complication. In cases of perforated appendicitis, the frequency of postoperative intra-abdominal abscess formation can be up to 20%. However, intra-abdominal abscess due to retained fecaliths has rarely been reported. A retained fecalith following appendectomy is a rare complication and it has been reported that retained fecaliths should be removed immediately after their diagnosis because of its potential to cause abscess. We present a rare case of retained fecaliths after laparoscopic appendectomy which disappeared spontaneously with non-operative management.

Keywords: Retained fecaliths, Laparoscopic appendectomy, Intra-abdominal abscess

INTRODUCTION

A fecalith is often detected in cases of acute appendicitis. It can drop pre- or intraoperatively into the peritoneal cavity [1]. The frequency of retained fecaliths after appendectomy is unknown and only a few case reports have been published [2]. Postoperative abscess after appendectomy is a well-known complication and, in cases of perforated appendicitis, the frequency can be up to 20% [3]. A retained fecalith can cause intra-abdominal abscess and the abscess often relapses despite adequate drainage [4]. Previous reports recommended the removal of complicated fecaliths after diagnosis. We present a very rare case of retained fecaliths after laparoscopic appendectomy which disappeared spontaneously with non-operative management.

CASE REPORT

A 70-year-old male was brought to emergency department complaining of abdominal pain for last three days. He had a past history of myocardial infarction, paroxysmal atrial fibrillation, hypertension, chronic renal failure and benign prostate hypertrophy. On physical examination, he showed severe tenderness of the right lower quadrant and generalized peritonitis. Computed tomography (CT) scan revealed a swollen appendix with several high density areas, which were compatible with fecaliths, and pelvic fluid was detected (Figure 1). We diagnosed him with perforated appendicitis and performed emergency laparoscopic appendectomy. On exploring the peritoneal cavity, a small amount of dirty peritoneal fluid was detected and the appendix had perforated. During the operation, some fecaliths had
dropped into the peritoneal cavity. We retrieved the fecaliths, followed by removing the appendix.

After surgery, a slight fever and paralytic ileus prolonged for several days. We suspected an intra-abdominal abscess, and CT scan of abdomen was done. The CT scan revealed small, high-density areas in the peritoneal cavity, which were compatible with retained fecaliths, and small abscesses around them (Figure 2A–B).

As the patient refused further surgery, we administered antibiotics and decompression with a nasogastric tube. Fortunately, his symptom improved, and he was discharged after 22 days of surgery.

Three months later, a check-up abdominal CT scan was done. The CT scan revealed no intra-abdominal abscess and the fecaliths had disappeared (Figure 3).

**DISCUSSION**

Acute appendicitis is one of the most common surgical emergencies in daily practice. It affects approximately 7% of the population over the lifetime [2]. There are several complications after appendectomy and the most common is infection. It occurs typically in patients with a perforated appendicitis. In cases of perforated appendicitis, the risk of a dropped fecalith is high. It can also drop at the time of resection of the appendix, during forceful extraction through the port, or when the appendix perforates [1]. Fecaliths are composed of inspissated fecal material, mucus with trapped calcium phosphate and inorganic salts [1]. To avoid spilled fecaliths, gentle manipulation of the acutely inflamed or gangrenous appendix and an endoscopic bag or pouch to facilitate removal should be employed [5].

A dropped gallstone during laparoscopic cholecystectomy is a relatively common complication. However, a dropped and retained fecalith after appendectomy is rare and its frequency is unknown.

Compared with a gallstone, a retained fecalith has the potential risk of causing an intra-abdominal abscess [5]. Days to years can elapse between an appendectomy and clinical manifestations of a retained fecalith [2, 6]. Patients with retained fecaliths present abdominal pain, fever, elevated white blood cell count, or a combination of these findings [2, 4]. In this patient, slight fever has persisted but he did not complain of abdominal pain.

An intra-abdominal abscess due to a retained fecalith often relapses despite adequate drainage [4], so treatment should not only involve drainage but also removal of the fecalith. The management of a complicated

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**Figure 1:** Computed tomography scan of the abdomen demonstrating a swelling appendix and fecaliths inside with a small amount of peritoneal fluid.

**Figure 2:** (A, B) Computed tomography scans of axial and coronal views of the abdomen. Retained fecaliths and surrounding abscesses were detected (arrow).
The fecalith most commonly described in literature is open or laparoscopic surgery [1, 2, 4, 5]. Percutaneous extraction of the fecalith has also been reported [6]. Preoperative and intraoperative localization of fecalith using guidewire or intraoperative ultrasound as majority of cases locating a fecalith can be difficult in laparoscopic surgery. Prevention of this complication should focus on avoidance of dropping fecaliths.

In this patient, the retained fecaliths were enclosed by an intra-abdominal abscess and they caused postoperative ileus. We considered surgical removal. However, the patient refused surgery, and the location of abscess was hard to approach percutaneously, so we continued nonoperative management with antibiotics. Fortunately, his symptoms improved and the retained fecaliths diminished. To our knowledge, this is the first reported case of retained fecaliths disappearing without surgical procedures.

At present, the diagnosis of a fecalith is mainly based on CT scan. The CT scan can effectively detect calcification, so the feces, which are not calcified completely, might be revealed as fecaliths. Such fecaliths can possibly be treated as tiny abscesses.

CONCLUSION

A retained fecalith after appendectomy is a rare complication. However, surgeons have to be aware of this rare complication. We have experienced a very rare case of retained fecaliths after laparoscopic appendectomy which disappeared spontaneously with nonoperative management. In some patients with retained fecaliths, there might be cases not requiring surgical procedures.

REFERENCES


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**Author Contributions**

Hideki Katagiri – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

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Takashi Sakamoto – Analysis and interpretation of data, Critical revision of the article, Final approval of the version to be published

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Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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