



## A case of Retained Appendicolith

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**Abstract :** A 37 year old male presented with pain in the right posterolateral aspect of abdomen (on off) and fever of three months duration. He underwent laparoscopic appendicectomy seven months back elsewhere. On investigating after admission, usg abdomen showed well defined extraperitoneal collection of 10.4 x 3.1 cm along right lateral abdominal wall with a calculus of size 1.4 cm. And a small intraperitoneal collection of 3.8 x 2.0 cm close to the lower border of extraperitoneal collection. He underwent exploration under spinal anaesthesia. Appendicolith was removed and pus collection drained out. Right side inter costal and intermuscular drain tubes placed. Post operative period he had recurrent fever spikes which gradually subsided with appropriate treatment.

**Keyword :** Appendicectomy, appendicolith, abscess

### INTRODUCTION

Most common emergency surgery done worldwide is appendicectomy. Post laparoscopic appendicectomy intra – abdominal abscess is a complication seen often. Frequency of postoperative complication of intra – abdominal abscess[6] raises to 20 % in cases of appendicular perforation[2]. Retained appendicolith causing intra – abdominal abscess is a rare entity , and if detected should be removed immediately before leading to the formation of an abscess. In most of the cases appendicoliths are the common cause for acute appendicitis. As appendicoliths cause acute inflammation of mucosa due to luminal narrowing. Most of the appendicoliths are composed of mucus, inorganic salts faecal material and calcium phosphates. Intra-abdominal abscess are mostly resolved by drainage and antibiotics. Rarely surgical management by drainage of abscess and retrieval of appendicolith laparoscopically [5]or by open techniques is done.

### CASE REPORT

A 37 year old male presented with pain in the right posterolateral aspect of abdomen (on & off) and fever of three months duration. He underwent laparoscopic appendicectomy seven months back elsewhere. Following which he continued to have recurrent episodes of abdominal pain and fever , for

which he was investigated at another hospital. USG abdomen done showed mild collection of around 50ml in the extraperitoneal space of right posterolateral aspect of abdomen with intraperitoneal extension. He underwent diagnostic laparoscopy and abscess drainage. Following which he had persistence of symptoms, so referred to the authors for further management. On admission and examination he had tachycardia ( 98 beats / min), but blood pressure, respiratory rate and body temperature were within normal limits. Abdominal examination done revealed tenderness to palpation in right lumbar region and renal angle with no palpable masses. Blood tests done showed mild leucocytosis. USG abdomen done showed a well defined extraperitoneal collection of 10.4 x 3.1 cm along right lateral abdominal wall with a calculus of 1.4 cm, likely a fecolith and a small intraperitoneal collection of 3.8x2.0 cm close to the lower border of extraperitoneal collection [IMAGE 1,2,3]. USG guided aspiration of collection done and sent for culture & sensitivity which grew Escherichia coli (ESBL). X ray erect abdomen done showed radioopaque shadow at right lumbar region [IMAGE 4]



**Image1: USG ABDOMEN SHOWING WELL DEFINED EXTRAPERITONEAL COLLECTION OF 10.4 x 3.1 CM**



**Image2:USG ABDOMEN SHOWING FOCAL INTRAPERITONEAL COLLECTION OF 3.87 X 2.0 CM**

He underwent exploration [ **IMAGE 5**]which revealed ? appendicolith (with the help of C- arm) and around 30-40ml of pus drained out from the extraperitoneal space. Calculi got dislodged when attempted to remove it. During the process of relocating the calculi, inadvertently pleural space was opened on the right side for which inter costal drain tube was placed. Calculi was retrieved & intermuscular drain tube placed and wound closure done. Retrieved calculi was sent for analysis which showed presence of oxalate, calcium, phosphorus, magnesium & carbonate. But no evidence of uric acid. [ **IMAGE 6**]



**Image3: USG ABDOMEN SHOWING CALCULUS OF 1.4 CM**



**Image4: X RAY ERECT ABDOMEN SHOWING RADIOOPAQUE SHADOW AT RIGHT LUMBAR REGION**



**Image5: ABDOMEN INCISIONS PLACED FOR EXPLORATION OF APPENDICOLITH**



**Image6: RETRIEVED APPENDICOLITH**

During the patient's postoperative course he had recurrent fever spikes, for which he was treated with antibiotics according to culture & sensitivity reports and had right lung pleural effusion with basal consolidation, which was treated with supportive measures and chest physiotherapy. Patient improved gradually and was discharged on postop day 16 in a stable condition.

#### **DISCUSSION**

Appendicitis affects around 7 % of the population worldwide, making it the most frequently encountered surgical emergency in routine practice. Infection is the most commonly anticipated complication post appendectomy & more often in cases of perforated appendicitis as the incidence of dropped appendicolith is high. Spillage of the appendicolith may be during resection of appendix, perforated appendix or during forceful extraction of the specimen

through the port site. Retained or spilled appendicolith is relatively rare and frequency is unknown as compared to spilled gallstone during laparoscopic cholecystectomy[7]. Complications with a retained gallstone is less than with a retained appendicolith as it causes intra-abdominal abscess. It might take days to years for the clinical features to manifest in cases of retained appendicolith. Patients usually present with fever, abdominal pain and leucocytosis. There are chances of recurrence of an intra-abdominal abscess due to retained appendicolith after drainage. So proper treatment involves drainage of the abscess along with removal of the appendicolith either by open or laparoscopic surgery. Reports of percutaneous extraction [4] of appendicolith is also reported. Localization of appendicolith using guidewire and ultrasound [3] pre & intraoperatively can be done .But locating appendicolith is difficult using the above techniques is difficult in case of laparoscopic surgery. CT scan is being used at present to detect retained appendicoliths [1]. Importance should be given in avoiding spillage of appendicoliths to prevent its subsequent complications.

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