A Primary Jejunal Enterolith Presenting as Small Bowel Obstruction

Mahendra Pratap Singh¹ · Tanweerul Huda¹ · Kunal Vikram Singh¹

Received: 14 February 2018 / Accepted: 28 February 2018 / Published online: 9 March 2018

© Association of Surgeons of India 2018

Abstract

An elderly male presented to our emergency room with acute abdomen. Clinical and imaging evaluations suggested small bowel obstruction due to primary jejunal enterolith with associated stricture. We performed surgical exploration when initial nonoperative therapeutic management failed to resolve the symptoms. Primary jejunal enterolith obstruction is a rare disease presentation reported in literature.

Keywords Enterolith · Primary enterolith · Jejunal stricture · Small bowel obstruction

Case Description

A 70-year-old Indian gentleman presented to our emergency room with a 3-day history of worsening colicky, central abdominal pain and constipation. His past medical history of note was laparoscopic cholecystectomy for gall stone disease 25 years ago. Clinical evaluation suspected small bowel obstruction. Abdominal imaging study with X-ray and contrast-enhanced computed tomography (CECT) (Fig. 1a, b, c) showed a radio-opaque shadow of 3.1 cm × 2.7 cm size having central lucency with associated stricture in distal jejunum confirming enterolith obstruction. Routine blood and laboratory reports were unremarkable. Nonoperative therapeutic management was initiated, failure of which led to surgical exploration where narrowed inflamed distal jejunal segment, with proximal dilatation and adjacent mesenteric thickening and adhesion, with enlarged lymph nodes, was noted. Evacuation of enterolith with an enterotomy, segmental resection of pathological 10 cm of distal jejunum and end-to-end anastomosis led to complete postoperative recovery uneventfully. Histopathological examination of

resected segment showed a stricture with chronic nonspecific inflammation. (Fig. 2a, b) and an analysis by FTIR (Fourier transform infrared spectroscopy) method reported enterolith composed of calcium oxalate monohydrate 60%, calcium oxalate dihydrate 30% and carbonate apatite 10% consistent with a true primary enterolith.

Small bowel enterolith is rare and usually secondary to a gall stone. Primary enterolith is a very rare entity and is usually associated with postinflammatory adhesions, stricture and diverticulum that lead to stasis, promoting crystallisation of bowel contents in altered luminal pH [1]. Enterolith can present as bowel obstruction, haemorrhage and perforation though most are cleared asymptotically. Imaging study is essential for preoperative detection with only one third enteroliths radio-opaque but CT abdomen can detect radiolucent stone as well as their underlying bowel pathology [2]. Management is similar to that of small bowel obstruction, with surgical exploration indicated in cases of large enterolith with associated pathology if nonoperative therapeutic management fails [3].

✉ Mahendra Pratap Singh
mpsingh.surgery@aiimsbhopal.edu.in

Tanweerul Huda
tanweer11@gmail.com

Kunal Vikram Singh
kunalrajput2373@gmail.com

¹ Department of General Surgery, All India Institute of Medical Sciences (AIIMS), Bhopal, MP, India

Fig. 1 **a** Abdominal radiograph and **b, c** CECT with reconstruction images, showing (arrow) a large radio-opaque shadow with central air lucency within the distal jejunum with associated stricture and proximal dilatation

Fig. 2 **a** Operative photograph showing (arrow) enterolith visible through enterotomy at the narrow distal jejunum and proximal dilatation; **b** resected pathological jejunum segment with enterolith

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

References

1. Gurvits GE, Lan G. Enterolithiasis. *World J Gastroenterol.* 2014;20: 17819–17829.
2. Nishikawa T, Takei Y, Tsuno NH et al. Perforation of Meckel's diverticulum with enteroliths. *Clin J Gastroenterol.* 2012;5:298–301.
3. Leow CK, Lau WY. Treatment of small bowel obstruction by jejunal enterolith. *Surgery.* 1997;122:977–978.