Available online at www.sciencedirect.com
ScienceDirect
journal homepage: www.elsevier.com/locate/apme

Case Report

# Contribution of laparoscopy in small bowel obstruction: Report on two rare causes of small bowel obstruction

*Priyanka Tiwari* [a,e,*], *Juneed Lanker* [a,e], *Dinesh Zirpy* [b,e], *K.R. Palanisamy* [c,e], *Prasanna Kumar Reddy* [d,e]

[a] *Sr. Registrar in Minimal Access Surgery, Apollo Chennai, India*
[b] *Sr. Registrar in Surgical Gastroenterology, Apollo Chennai, India*
[c] *Sr. Consultant and Head of Department in Medical Gastroenterology, Apollo Chennai, India*
[d] *Sr. Consultant and Head of Department in Surgical Gastroenterology and Minimal Access Surgery, Apollo Chennai, India*
[e] *Department of Medical and Surgical Gastroenterology, Minimal Access Surgery, Apollo Main Hospital, Chennai, India*

ARTICLE INFO

*Article history:*
Received 2 October 2016
Accepted 18 November 2016
Available online xxx

*Keywords:*
Laparoscopy
Sub acute intestinal obstruction
Foreign body
Sclerosing encapsulating peritonitis

ABSTRACT

*Introduction:* Bowel obstruction occurs when the normal flow of intraluminal content is interrupted. The most common cause of small bowel obstruction is adhesion but other rare causes of intestinal obstruction have also been reported as fecolith, foreign body or bezoar, GIST, and abdominal cocoon. Laparoscopy as diagnostic as well as therapeutic tool in small bowel obstruction seems to be useful.

*Methods:* We described two rare causes of intestinal obstruction. The aim of the present article is to stress the role of laparoscopy associated with computed tomography (CT) in diagnostic confirmation of causes of intestinal obstruction as well as reasons for conversion. We also reviewed the relevant published literature.

*Result:* CASE 1: A 63-year-old female presented with history of recurrent episodes of pain in left side of abdomen for 1 year. Contrast Enhanced Computed Tomography (CECT) showed rounded radiopaque foreign body in distal jejunum. Laparoscopic adhesiolysis and reduction of hernial content were done. Laparoscopic surgery converted to open for removal of foreign body and hernioplasty.

CASE 2 64 year elderly male presented with history of intermittent episodes of colicky pain in periumbilical region for 1 month. CECT abdomen showed abdominal cocoon. Pneumoperitoneum access was not succeeded, thus exploratory laparotomy and adhesiolysis was done.

*Conclusion:* In small bowel obstruction, diagnostic laparoscopy has to be done for confirmation of diagnosis and if possible to release the cause of obstruction, but conversion to open by giving either small incision or exploratory laparotomy should be the choice to completely remove the cause for the further prevention of recurrence and complications.



* *Corresponding author at*: 72, Gengu Reddy Road, Egmore, Chennai 600006, India. Tel.: +91 9962474468.
E-mail address: dr.priyankatiwari@hotmail.com (P. Tiwari).

http://dx.doi.org/10.1016/j.apme.2016.11.006

## 1. Introduction

Intestinal obstruction is a common clinical entity, sometimes presenting with recurrent episodes of pain in abdomen. Bowel obstruction is subdivided into mechanical or paralytic and categorized into large and small bowel obstruction. The small bowel is affected in 60–80% of cases. Etiology of small bowel obstruction may be extrinsic, intraluminal, or intrinsic and ranges from hernias to adhesions.[1] Adhesions are the most common causes of obstruction, but some rare causes of obstruction have also been mentioned in literature as foreign body or bezoar and abdominal cocoon.[2,3] In some cases of small bowel obstruction, etiology remains unknown, for example, superior mesenteric artery syndrome and chilaidity syndrome.[4,5]

Diagnostic imaging is providing relevant information on site, severity, possible causes, and potential complications of obstruction. MDCT/CT enterography/CT enteroclysis (CTE) has the ability to reveal the causes of obstruction and modified patients management from conservative to surgical.[6] We can also categorize the patients selectively either to manage by laparoscopic exploration or need for open assistance.

Preoperative diagnostic modalities Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) have to be done to know the cause of small bowel obstruction and to prevent inadvertent bowel injury because of diagnostic laparoscopy. Exploratory laparotomy has to be done in those cases where laparoscopy is contraindicated to release the obstruction.[1,7]

In this article, the author wants to discussed two rare causes of recurrent small bowel obstruction in which preoperative CECT confirmed the etiology of small bowel obstruction, but in the first case, laparoscopic procedure was converted to open for the removal of foreign body and in the other case, the cause of conversion was difficulty in access to abdomen for pneumoperitoneum due to sclerosing peritonitis.

## 2. Case 1

A 63-year-old female presented with history of recurrent pain in the left side of abdomen for 1 year. She also complained of severe pain in abdomen for 1 month, which increased after food and was relieved by vomiting. Abdomen was distended. Tenderness was present in left paraumbilical region. Cough impulse was present in left paraumbilical region. In lower midline, previous surgical incision mark was present. She was managed conservatively by nasogastric decompression and iv fluid hydration for 2 days. The following were observed: S. Glucose – 110 mg/dl, Hb – 10.5 g% TLC – 23,990, platelet – 228,000. LFT – normal, S.Cr – 0.8 mg/dl, BUN – 28 mg/dl, S.Na – 123 meq/l S.K – 4.0 meq/l, CRP-318. CECT showed dilatation in stomach and jejunal loop. Rounded radiopaque foreign body was present in distal jejunum with coexisting several jejunal diverticulae. Evidence of hernia was noted in left iliac fossa and umbilical region with omentum as content. Gall stones were also detected. Diagnostic laparoscopy was done and showed small bowel obstruction due to foreign body associated with incisional hernia and adhesions. Laparoscopic adhesiolysis and reduction of hernia sac were done. Small incision was given in midline to exteriorize the mobilized bowel. Enterotomy was given for the removal of foreign body. Hernioplasty was also done. The patient's postoperative course was uneventful (Figs. 1–5).

## 3. Case 2

A 64-year-old elderly male presented with history of colicky pain in periumbilical region for 1 month and fever for 4 days. He had recurrent episodes of similar pain in abdomen since 4 years and was managed conservatively. Abdomen was distended and central abdominal tenderness was present. A vague mass was palpable in periumbilical region. No clinical evidence of peritonitis was present. X-ray of abdomen showed

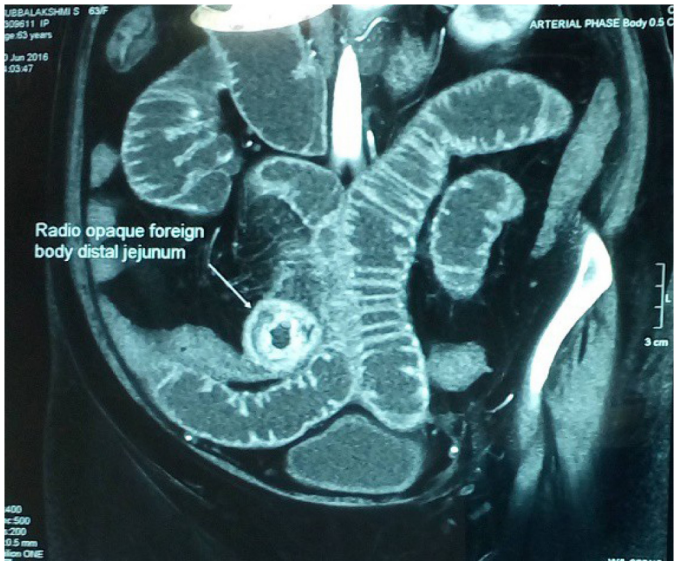


**Fig. 1 – Radiopaque foreign body.**

Please cite this article in press as: Tiwari P, et al. Contribution of laparoscopy in small bowel obstruction: Report on two rare causes of small bowel obstruction, *Apollo Med.* (2017), http://dx.doi.org/10.1016/j.apme.2016.11.006