

Case Report

Acute intestinal obstruction due to appendicular tie syndrome: a rare case report

Akash Agrawal, Palak Vora*

Department of Surgery, G. M. E. R. S. Hospital, Dharpur, Patan, Gujarat, India

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***Correspondence:**

Dr. Palak Vora,

E-mail: palak14_vora@yahoo.co.in

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ABSTRACT

Acute intestinal obstruction is one of the most common surgical emergencies encountered by surgeons on daily bases. Most common causes for small bowel obstruction includes postoperative adhesions and hernia. One of the rarest cause of intestinal obstruction is appendicular band syndrome. Here we report a case of small bowel obstruction due to appendicular tie syndrome in a 70 years old male patient at GMERS hospital, Dharpur, Patan, Gujarat, India.

Keywords: Appendicular tie syndrome, Appendicular band, Intestinal obstruction, Mucocele of appendix

INTRODUCTION

As appendicitis can cause mechanical small bowel obstruction because of adhesion.¹ But, there are very few cases of mechanical small bowel obstruction developed as a direct result of appendicitis have been reported in literature. Hotchkiss first reported in 1904, but till today, there are only few cases have been reported.² The clinical picture of appendicitis may not be seen characteristically in this kind of small bowel obstruction. That is why, the diagnosis is very difficult preoperatively and is made only at the time of laparotomy.³

CASE REPORT

A 70 year old male patient came with complains of abdominal distention since the last 24 hours. This was associated with nausea, vomiting, and absolute constipation since 4 days. Abdomen was distended with guarding. Bowel sounds were hyper-peristaltic. On Examination, blood pressure of 100/70 mmHg, pulse rate of 100/min. Laboratory investigations showed white cell count of 11800/mm³ with raised PT (19.65) and INR (1.5). Plain radiograph of the abdomen standing showed signs of intestinal obstruction. CECT abdomen and pelvis

was suggestive of small bowel obstruction with tight stricture at terminal ileal loop, around 4cm proximal to IC junction.

Exploratory laparotomy revealed small bowel obstruction caused by appendicular knotting due to encircling of terminal ileum by appendix (Figure 1).

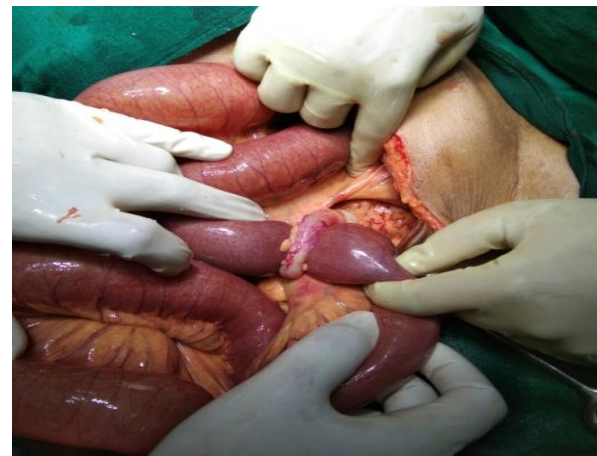


Figure 1: Appendicular tie around terminal ileal loop.

Adhesion of appendix to mesentery of distal ileum was noted (appendicular tie syndrome) (Figure 2).

Mucocele of appendix was also noted along with it (Figure 3). The adhesion was detached from the tip of the appendix and the obstruction was relieved.

The bowel was healthy and as the obstruction was completely relieved, appendicectomy was performed. Patient got discharged from hospital on post-operative day 12. Histopathology report of specimen was suggestive of mucocele of appendix.

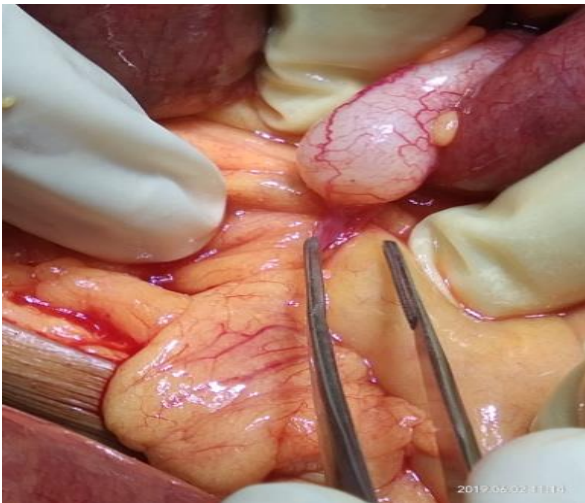


Figure 2: Adhesion of appendix to mesentery of distal ileal loop.



Figure 3: Mucocele of appendix.

DISCUSSION

Appendicular tie syndrome also known as appendicular band syndrome or appendicular knot syndrome is an extremely rare surgical condition, in which there is

entrapment of bowel loop by the appendix, acting as constricting ring, and may lead to obstruction.³

The first case of intestinal obstruction due to acute appendicitis was described by Hotchkiss.²

A diagnosis of acute intestinal obstruction is made clinically based on the history and physical examination of the patient. The typical features are acute abdominal pain, vomiting, not able to pass stool, and abdominal distension, all of which were present in this patient. Confirmation of bowel obstruction is then usually made with an X-ray abdomen standing.

Appendicular knot or band syndrome is reported in neonates, children, and adults. It is not clear how the appendix encircles ileal loop, forming a band or tie. The tip of a long appendix is usually found adherent to cecum, retroperitoneum, mesentery of ileum, forming a potential space where a loop of bowel may entrap.¹ Acute inflammation of the appendix is probably the initiating event of this band formation.

The appendix itself may be acutely inflamed, perforated especially at the tip, or it may be completely gangrenous. This entrapment results not only in intestinal obstruction and strangulation of the entrapped bowel but also in ischemia of appendix itself due to compression. The reported complications of appendicular tie syndrome are intestinal obstruction, volvulus, strangulation of the small bowel, and strangulation of appendix itself.¹

In 2009, Bhandari et al classified intestinal obstruction because of appendicitis into four types: adynamic, mechanical, strangulation, and caused by mesenteric ischemia.⁴ Adynamic obstruction or paralytic ileus is the most common type and it is due to the appendicular inflammation spreading to the surrounding structures (caecum, small bowel or posterior peritoneum). Strangulation of bowel loop may result from a long standing closed loop obstruction, which can be due to the long appendix constricting around a loop of small bowel). In 2005, Assenza et al reported only six such cases in the review.⁵

CONCLUSION

Appendicular tie syndrome is one of the rare causes of small bowel obstruction. We have reported one of the rare cases of this type of small bowel obstruction due to appendicular band.

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