

Appendicitis: a rare cause of intestinal obstruction

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Introduction

Intestinal obstruction is often regarded as one of the most common surgical emergencies that are well known worldwide [1]. Even though, a wide range of causes of intestinal obstruction is known, there are extremely rare cases of intestinal obstruction due to an appendix acting as a band causing extraluminal compression. Earliest report has been attributed to Lucius Hotchkiss in 1901 when he read it at the meeting of New York surgical society [2]. Sometimes it is difficult to diagnose these conditions and final diagnosis is made during laparotomy. The diagnosis is always made at the time of laparotomy. We are reporting a case of elderly male, who presented with features of intestinal obstruction, the pre-operative CT was of questionable value and intra-operatively appendicular band was found to be the culprit and then appendectomy was done.

Case presentation

A 50-year-old man chronic smoker was admitted to our hospital with acute history of abdominal pain for 4 days associated with episodes of bilious vomiting and not passing stools for 3 days. Physical examination revealed vitals were stable and Abdomen was distended and bowel sounds were absent. There is no previous history of any surgery or any chronic illness with no positive family history. No certain abnormalities in routine blood workup with Haemoglobin being 9.82g/dl, total leukocyte count being 8.77/cumm and the differential leukocyte count as N83L8M9B0. The abdominal CT revealed dilated jejunal, proximal and mid ileal loops with maximum diameter measuring approximately 3.7 cm with transitional point at distal ileal loop, caecum seems collapsed (Figure 1).

Intraoperatively, dilated jejunal loops were seen. A segment of ileum was obstructed by a band formed by inflamed appendix, which was running from the caecum to root of mesentery

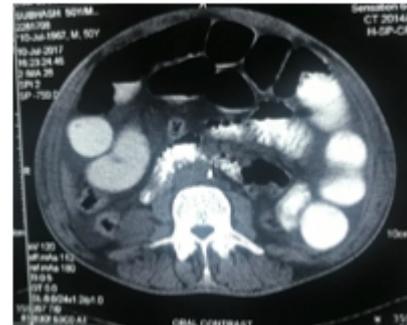


Figure 1. The abdominal CT revealed dilated jejunal

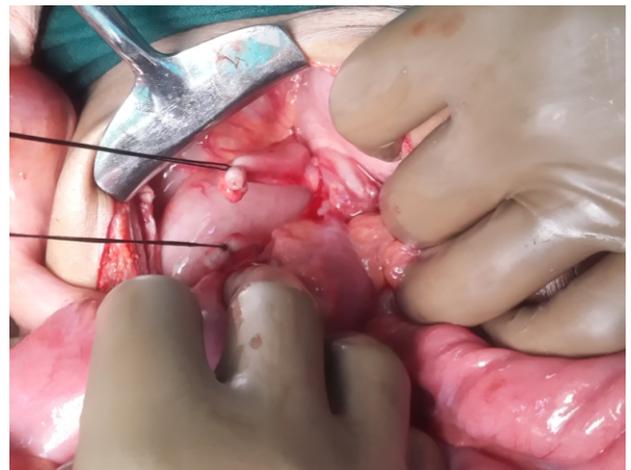


Figure 2. A segment of ileum was obstructed by a band formed by inflamed appendix

of ileum creating a window underneath (Figure 2). The band was released from the ileum and omentum, following which appendectomy was done. The bowel was viable and hence no resection was needed. Post-operative period was uneventful. Histopathology report confirmed acute appendicitis with periappendicular abscess.

Discussion

Mechanical intestinal obstruction occurs as a result of kinking, compression or traction of the small bowel trapped in an appendicular mass or abscess. Appendicitis has a bimodal incidence with one peak in adolescence and another peak in older aged patients [3].

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Intestinal obstruction in elderly secondary to an appendicular pathology is mostly due to appendicitis causing small bowel ileus, or an appendicular mass, appendicular perforation or abscess formation [4] and its diagnosis will not be possible on abdominal X-rays or ultrasound of the abdomen. Computed Tomography (CT) with contrast of the abdomen and pelvis is recommended for the evaluation of patients with suspected bowel obstruction as it might give some clue about the cause for obstruction [5].

Role of CT in detecting appendix as the cause of intestinal obstruction is questionable as in the acute phase of active appendicular inflammation there may be appropriate CT findings but these findings may not be present in patients who develop intestinal obstruction after the resolution of appendicitis. Thus pointing out appendix as the cause would not be possible [6].

Pre-operative diagnosis of intestinal obstruction due to acute appendicitis has been very difficult and quite challenging. Most of the cases reported previously have been diagnosed at operation, similar to the case we are reporting. Acute appendicitis in the elderly may lead to increased morbidity and mortality due atypical presentation which can result in a delayed diagnosis [7]. Presentation with mechanical bowel obstruction may pose further challenges.

The intra-operative treatment of the intestinal obstruction, which is often achieved by immediate appendectomy, is very straight forward once there is no associated strangulation of

the loops of bowel [8].

Conclusion

There are numerous mechanisms for acute appendicitis to result in mechanical small bowel obstruction, still it is very rarely considered in the differential diagnosis. Role of CT in detecting appendix as the cause of intestinal obstruction is questionable. Due to the rarity of disease process, the surgeon, gastroenterologist and radiologist should keep a keen observation in elderly population.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

References

1. Allard R.H. The thyroglossal cyst. *Head and Neck Surgery*. 1982;5(2):134–146. <https://doi.org/10.1002/hed.2890050209>
2. Yang YJ, Haghiri S, Wanamaker JR, Powers CN. Diagnosis of papillary carcinoma in a thyroglossal duct cyst by fine-needle aspiration biopsy. *Arch Pathol Lab Med*. 2000;124:139–142
3. Dedivitis RA, Guimarães AV. Papillary thyroid carcinoma in thyroglossal duct cyst. *Int Surg*. 2000;85:198–201
4. Weiss SD, Orlich CC. Primary papillary carcinoma of a thyroglossal duct cyst: report of a case and literature review. *Br J Surg*. 1991;78:87–89. <https://doi.org/10.1002/bjs.1800780127>
5. Wexler MJ. Surgical management of thyroglossal duct carcinoma: is an aggressive approach justified? *Can J Surg*. 1996;39:263–264

Learning Points:

- Intestinal obstruction caused by appendix forming a band is extremely rare with very few cases reported, appendicitis should therefore be considered in cases of mechanical intestinal obstruction of unknown cause, especially in the elderly.
- X-ray, ultrasonography may be not be sufficient for diagnosis and role of CT in detecting appendix as the cause of intestinal obstruction is questionable. However CT is very useful to detect bowel ischaemia, intestinal obstruction and ascites when present.