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ABSTRACT:

Introduction

Volvulus of transverse colon is a rare cause of large bowel obstruction. Association with chilaiditi's syndrome is even rare and to our knowledge this is probably the fifth case reported in the world literature. Diagnosis can be challenging and the effective management remains controversial.

Case Report:

We report a case of a 40 year old female presenting with features suggestive of large bowel obstruction and episodes of mild abdominal discomfort for a year. Typical findings of right colonic volvulus were seen on X-Ray abdomen. On laparotomy, redundant transverse colon with long mesentery which was massively dilated was found to be rotated on its own axis and lying between the right lobe of the liver and diaphragm. Extended right hemicolectomy was performed with an uneventful post-operative period.

Conclusion:

It is important to highlight this case, as many surgeons may never have seen a single case of transverse colon volvulus with chilaiditi's syndrome. It may therefore not be considered in the differential diagnosis of recurrent intermittent abdominal pain or acute obstruction. This case also describes progression of mild abdominal discomfort to acute obstruction requiring surgical intervention.

Keywords: Chiladiti syndrome, bowel obstruction, diagnosis
TITLE: Transverse colon volvulus with Chilaiditi syndrome - Rare case of large bowel obstruction

INTRODUCTION
A volvulus is a twisting of any part of intestine about its mesentery. Any portion of large bowel can undergo torsion. For this to occur, segment should be attached to a long and floppy mesentery that is fixed to the retro-peritoneum by a narrow base of origin. The condition most commonly affects the colon [1]. A transverse colon volvulus is not a common event. Although this segment of the colon is often quite mobile and redundant, its wide based mesenteric attachments prevent frequent torsion. Association with chilaiditi syndrome is even rare. Chiladiti syndrome is transposition of any part of colon between liver and diaphragm. Most of the times Chiladiti syndrome is usually a asymptomatic condition however at times it can present as acute abdomen. Clinical features are similar to other causes of large bowel obstruction and radiological features lead to difficulty in diagnosis of the condition preoperatively [2].

CASE REPORT
A 40 yr old female presented to the emergency ward with abdominal distension, persistent vomiting, non-passage of flatus and stools for 7 days. She had two similar episodes in the past about 3 & 6 months ago which were managed conservatively by local practitioner. Physical examination revealed distended, tender abdomen which was resonant on percussion. Bowel sounds were absent. Digital rectal examination was normal.

Investigations
X-Ray abdomen showed massively dilated colon between right dome of liver and right hemi diaphragm (Figure 1). Provisional diagnosis of Chilaiditi syndrome was made. CECT abdomen showed volvulus of transverse colon, collapsed sigmoid colon. Patient was prepared for laparotomy.
Operative Findings

Transverse colon was rotated on its long floppy mesocolon in anti-clockwise direction and was interpositioned between right hemi diaphragm and liver displacing the liver inferiorly (Figure II). It was grossly dilated; measuring 15 cm in diameter, however there were no signs of ischemia (Figure III). Collapsed sigmoid colon along with dilatation of bowel proximal to volvulus was seen. Extended right hemicolecotomy with ileo-transverse colonic anastomosis (end to side) was performed. Patient had normal postoperative course and was discharged on sixth day. Patient is absolutely healthy after 2 years of surgery and is on regular follow up.

DISCUSSION

Volvulus of transverse colon is a rare entity; its incidence being approximately 3% [1, 2]. The mortality rate is as high as 33% [3]. Non-fixation of colon and chronic constipation with dolichocolon may predispose to such condition [4]. Chilaiditi syndrome, also called as Hepatodiaphragmatic interposition of bowel refers to interposition of the colon between the liver and the diaphragm anatomically. It was first introduced by Demetrius Chilaiditi in the year 1910 [5]. It is a rare anomaly incidence being 0.025-0.028% in general population[6]. It can be asymptomatic or symptomatic presenting as both acute abdomen or chronic intestinal obstruction with vague complaints. Chilaiditi sign refers to radiological identification of interposition of colon between liver and diaphragm. Etiologies for both chilaiditi sign and chilaiditi syndrome include colonic mobility or redundancy, congenital malrotation or malposition of colon, elevation of the right hemidiaphragm, enlargement of thoracic cage diameter and floating liver found in ascites [3]. It has been observed that Chilaiditi syndrome is insignificant in diagnosing transverse colon volvulus, it rather occurs as a side effect [3]. Resection of the redundant segment is the treatment of choice for transverse colon volvulus to prevent its recurrence [3]. However, decompression of the segment has also been described in literature [7]. But there exists no universal agreement that a particular surgical treatment option is superior to other though increased recurrence is observed following colopexy alone.
CONCLUSION

Though rare, chilaiditi syndrome should be kept as a differential diagnosis in patients presenting with large bowel obstruction.

CONFLICT OF INTEREST

The authors declare no conflict of interest whatsoever arising out of the publication of this manuscript.

AUTHOR’S CONTRIBUTIONS

Dr. Priya Goyal
Manuscript writing and editing

Dr. Shekhar Gogna
Operating Surgeon.

Dr. R.K. Karwasra
Manuscript writing and editing

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REFERENCES


FIGURE LEGENDS

Figure 1: X-Ray abdomen showing dilated colon lying just below diaphragm.

Figure 2: Transverse colon lying between right lobe of liver and diaphragm.

Figure 3: Intra-operative view of dilated & rotated transverse colon with long floppy mesentery.
Figure 1: X-Ray abdomen showing dilated colon lying just below diaphragm.
Figure 2: Transverse colon lying between right lobe of liver and diaphragm.

Figure 3: Intra-operative view of dilated & rotated transverse colon with long floppy mesentery.