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Case Report

Acute Small Bowel Obstruction with Gangrenous Bowel due to Entrapment of Fallopian Tube-A Rare Case of Acute Abdomen

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Abstract

Small Bowel obstruction is one of most common causes of Acute Abdomen presenting as Surgical Emergency. The dynamic small bowel obstruction due to mechanical obstruction usually presents as acute onset abdominal pain, Distension, Vomiting and Absolute constipation. Intraabdominal adhesion and bands are most commonly responsible for Acute Small bowel obstruction and almost every case requires surgical intervention. However, bands and Adhesions occur more likely following an abdominal surgery. Fallopian tube entrapment is a very rare cause of acute small bowel obstruction mentioned in very few literatures. The etiology is unusual and difficult to diagnose from history and standard investigations.

Keywords: Acute Small Bowel Obstruction; Bowel; Entrapment; Fallopian Tube; Acute Abdomen

Introduction

Acute small bowel obstruction is a surgical emergency that requires prompt management. Initial resuscitation followed by early surgical decompression and release of obstruction is advised to prevent Bowel Ischemia and Peritonitis. The most common etiology is Adhesions/Bands which are commonly associated with Lower abdominal/Pelvic surgeries [1]. OtherCauses of obstruction are Malignancy, Hernia, Inflammatory bowel disease and Volvulus [2].

Obstruction due to Fallopian tube entrapment is a very rare cause of small bowel obstruction and only a few incidents have been reported so far about this entity. Middle aged or elderly women presents with symptoms of acute small bowel obstruction withoutany identifiable risk factors. The diagnosis is extremely difficult with Standard Contrast CT scans and in maximum cases it can only be diagnosed after Laparotomy. The onset of pain is sudden and symptoms worsens with time. Undue delay in diagnosis and Surgical exploration canprogress to Bowel Ischemia and Perforation.

Here we present a 65 year old lady with acute small bowel obstruction by fallopian tubeentrapment resulting in bowel gangrene and impending perforation.

Case Report

A 65 years old Post menopausal lady presented in emergency with 3 days history of acute onset intermittent periumbilical and right iliac colicky pain which gradually became diffuse andcontinuous. She also complained of repeated episodes of Bilious vomiting associated with progressive abdominal distension and absolute constipation for 2 days. On further questioning, She denied any history of similar pain abdomen, Altered bowel habits, significant weightloss, Malena, Dysuria or Hematuria in the past, but had an episode of Malena post admission. She is known for Hypertensive and Hypothyroid on regular medications and underwent Classical Caesarean Section 45 years back. On examination she was conscious and oriented, BMI - 18.4 kg/m^2. Her vitals were stable except she had Tachycardia (pulse - 106/min). Abdominal examination revealed Distended abdomen with diffuse tenderness and Periumbilical Guarding without any palpable lump. She had a small reducible and uncomplicated incisional hernia over previous scar. Bowel sounds were not appreciable, anda Digital Rectal examination revealed Altered blood stained liquid stool without any impacted feces or any palpable growth. Routine blood investigations were within normal limits except leukocytosis (TLC - 16,600/Cumm) and raised C-Reactive protein (5.20).

Straight Xray Abdomen (Figure 1) revealed Multiple Dilated Small bowel loops and absence ofrectal gas shadow suggesting obstruction. USG Whole abdomen reported Severe Ascites with a incisional hernia over Previous scar.

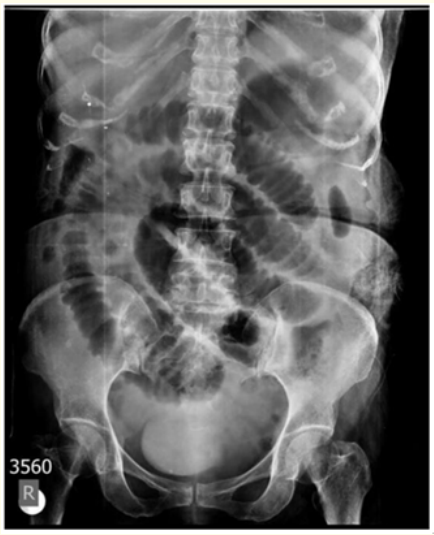

Figure 1

Contrast Enhanced CT scan (CECT) whole abdomen (Figure 2,3) confirmed Acute smallbowel obstruction with transition in Mid/distal Ileum with non enhancing wall of a segmentof bowel suggesting ischemia/impending perforation with features of peritonitis and as cites.

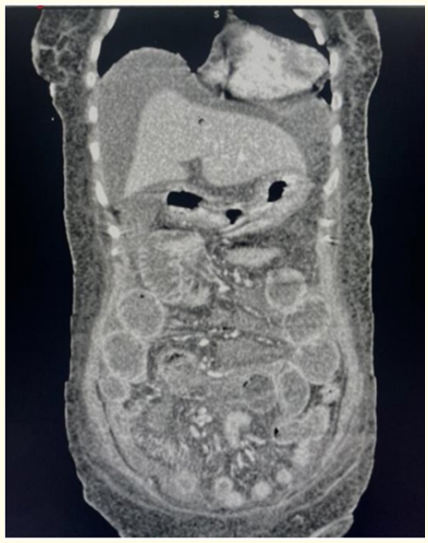

Figure 2

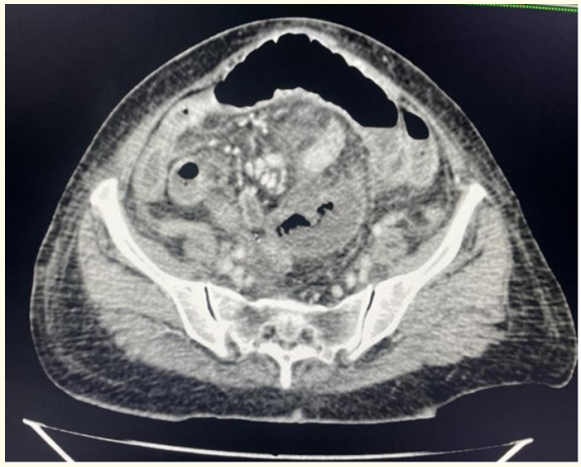

Figure 3

After initial resuscitation with aggressive Intravenous Fluids, Nasogastric decompression, Broad Spectrum IV antibiotics, Emergency Laparotomy was performed by a Lower midlineincision. Intra-Operatively, 25 cm length of Necrotic Mid Ileal loop was found with distended proximal loops with approximately 2 litre of hemorrhagic Peritoneal fluid. The Right Fallopian tube was wrapped around mid ileal Mesentery forming a transitional zone. (Figure 4,5) Obstruction was released by Right salpingectomy and Non viable bowel was resected. The Dilated proximal bowel was decompressed and End ileostomy withmucus fistula was matured at Right iliac fossa. Incisional hernia was completely reducible without herniation of bowel loops. Midline sheath was closed including the hernial defect.

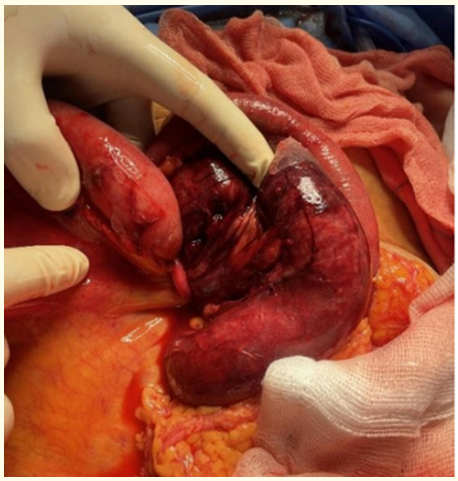

Figure 4

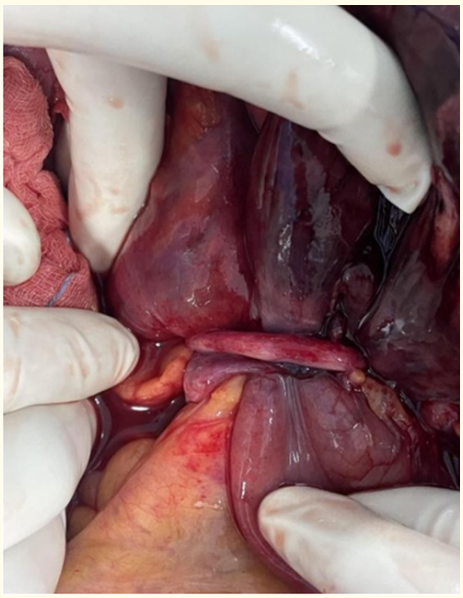

Figure 4

Postoperatively, She was shifted to ICU on elective mechanical ventilation. On POD 1, Shewas extubated successfully. She was thereafter managed conservatively with TPN, Intravenous fluids, IV Antibiotics and electrolyte correction, to which she responded well and was eventually shifted to ward on POD 3. She was orally started on Liquid diet followed by Soft diet and was discharged in a hemodynamically stable condition on POD with a healthyand functioning Stoma.

Discussion

Adhesions are the most common cause of Intestinal obstruction (60%) followed by Hernia (25%) and malignancy (5-10%) [3]. Adhesive small bowel obstruction can present within a month to more than 20 years after Primary surgery [4]. Early adhesions (Fibrinous) are filmsy ones and late adhesions are formed by dense Fibrous tissue (bands) which results in closed loop obstruction. Bands can be Congenital (Obliterated Vitelloinstenial duct) or Acquired (String band following previous Abdominal surgery or peritoneal inflammation) [5]. Delayed diagnosis and management can result in Strangulation and Ischemic bowel perforation. However adhesions are formed most commonly after Appendicectomy, Colorectal, gynaecological and urological surgeries, unusual cases of Small bowel obstruction in female patients have been reported in various literatures. Cameron., *et al*. has reported defect in the broad ligament as well as fallopian tube acting as a band around smallbowel causing obstruction [6]. Bugmann., *et al*. have reported in their study strangulated small bowel caused by an ectopic fallopian tube [7]. Similar case was reported by Amit Gupta., *et al*. in 2020 about a case of intestinal obstruction due to Fallopian tube acting as aband in a postoperative case of Modified Puestow's procedure performed for chronic calcific Pancreatitis [8]. In a study, Forsythe CM., *et al.* have described internal hernia withincarceration of Cecum through a loop created by elongated fallopian tube [9]. Torsion of fallopian tube is also a rare incident seen in 1: 1,50,000 women [10] but if affects mostly women in reproductive age group associated with Anatomical predisposition such as ovarian cysts, hydrosalpinx, Pyosalpinx long mesosalpinx or previous pelvic surgeries [11].

In our case the obstruction at mid ileum was due to right fallopian tube coiling around.

Mesentery resulting in bowel Gangrene and Peritonitis. The case is unique as there was notubo ovarian pathology predisposing anatomical abnormality in a case of 65 years old postmenopausal lady with only surgical history (Cesarean Section) 45 years back. No bands/Adhesions or any pathology were found other than this.

Contrast Enhanced CT scans plays a important role in assessment of patients presenting withSBO specially level of obstruction, mesenteric vasculature and venous congestion, reduced bowel wall enhancement and Peritoneal fluids [12]. The Eastern Association for the Surgery of Trauma (EAST) guideline recommends early operative intervention for patients presenting with SBO together with Strangulation and Bowel ischemia based on Clinical assessment and Radiological findings [12]. In absence of Clinical or radiological indicators of bowel ischemia, non-operative management can be successful in 65-80% patients [12].

Conclusion

This case depicts a very unusual and rare cause of Small bowel obstruction in a elderly ladywithout significant predisposing factors. Though few literatures have mentioned fallopian tube as a cause of bowel obstruction, it was either due to associated Broad ligament herniation or Tuboovarian abnormalities or following pelvic surgeries. Whereas, Obstructed hernia and Malignancies, Colonic Pseudo obstruction and fecal Impaction are mostly responsible for such presentation in elderly patients, Fallopian tube as a rare cause of Obstruction should be kept in mind in a female patient. Early Surgery is recommended inpresence of clinical peritonitis and CT features suggesting bowel wall Ischemia.

Bibliography

1. Cox MR., *et al*. "The operative aetiology and typesof adhesions causing small bowel obstruction". *Australian and New Zealand Journal of Surgery* 63.11 (1993): 848-52.

2. Hayanga AJ., *et al*. "Current management of small-bowel obstruction". *Advances in Surgery* 39 (2005): 1-33.

3. Ten Broek RP., *et al*. "Burden of adhesions in abdominal and pelvic surgery: systematic review and met-analysis". *BMJ* (2013): 347.

4. Ellis H., *et al*. "Adhesion-related hospital readmissions after abdominal and pelvic surgery: a retrospective cohort study". *The Lancet* 353.9163 (1999): 1476-1480.

5. Vrijland WW., *et al*. "Abdominal adhesions: intestinal obstruction, pain, and infertility". *Surgical Endoscopy and OtherInterventional Techniques* 17 (2003): 1017-1022.

6. Cameron M., *et al*. "A closed loop obstruction caused byentrapment of the fallopian tube and herniation through the broad ligament". *International Journal of Surgery Case Reports* 12 (2015): 57-59.

7. Bugmann PH., *et al*. "Intestinal obstruction caused by an ectopic fallopian tube in a child: case report andliterature review". *Journal of Pediatric Surgery* 36.3 (2010): 508-510.

8. Rajput D., *et al*. "Fallopian tube as a cause of intestinal obstruction: a rare case report withreview of literature". *International Journal of Research in Medical Sciences* (2019).

9. Forsythe CM., *et al*. "Internal hernia with incarceration of the cecum through a loop created by an elongated fallopian tube". *Radiology Case Reports* 14.2 (2019): 282-286.

10. Rajaram S., *et al*. "Fallopian tube torsion: a rare emergency". *Journal of Gynecologic Surgery* 27.1 (2011): 41-42.

11. Dueholm M and Præst J. "Isolated torsion of the normal fallopian tube". *Acta Obstetricia EtGynecologica Scandinavica* 66.1 (1987): 89-90.

12. Maung AA., *et al*. "Evaluation and management of small-bowel obstruction: an Eastern Association for the Surgery of Trauma practice managementguideline". *Journal of Trauma and Acute Care Surgery* 73.5 (2012): S362-369.