# Trans Mesosigmoid Hernia

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#### PRESENTATION OF CASE

A 34-year-old lady presented with sudden acute abdominal pain and vomiting. She showed no other symptoms except continuous vomiting and no flatus after onset. Patient gave a history of previous surgery for ectopic gestation 10 years back. On general examination, pulse rate was 60/min, and blood pressure was 110/70 mmHg. On per abdominal examination, there was a vague firm (fullness) swelling in the left iliac region and diffuse tenderness and sluggish bowel sound. Laboratory tests showed elevated white blood cells (WBC) count ( $21.7 \times 10^3$ /µl). Radiological investigation was suggestive of small bowel obstruction. In view of subacute intestinal obstruction, patient was conservatively managed with Ryle's tube decompression and IV fluid and was serially monitored. Patient's general condition was not improving; hence, with the diagnosis of small bowel obstruction we performed emergency exploratory laparotomy.



Laparotomy revealed extensive engorgement of the small intestine and discoloration of bowel loops. Approximately 10 cm of the small intestine extending 10 cm from the ileo- caecal junction had undergone strangulation (Figure 3) and herniated into the defect of sigmoid mesocolon, (Figure 4) leading to a diagnosis of trans mesosigmoid hernia. Because portion of the small intestine was gangrenous, we performed intestinal resection and reconstruction and closed the defect in the sigmoid mesocolon. Her immediate postoperative period was uneventful, and she started to take a meal on the 3rd postoperative day. On the 6<sup>th</sup> postoperative day, she developed surgical site infection in the laparotomy wound which was managed with serial dressings and secondary suturing was done and was discharged.



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## Case Report







Figure 5. Black Arrow Showing the Oval Defect of Size 4 cms Defect in the Meso Sigmoid Where We Can See Surgeon Finger Through It.

## CLINICAL DIAGNOSIS

Small Bowel Obstruction.

## DISCUSSION

Internal hernia is caused by defects within the peritoneal cavity, which might be congenital, postoperative, and/or idiopathic.<sup>1</sup> It causes up to 5.8% of cases of small bowel obstruction (SBO)<sup>2,3</sup> if strangulated and left untreated, internal hernias demonstrate a mortality of more than 50%.<sup>4,5</sup> Sigmoid related hernias are especially rare, and account for 6% of internal hernias.<sup>6</sup> Benson et al. have classified SMHs into three types:7 (1) intersigmoid hernia (ISH): herniation into the intersigmoid fossa, situated at the attachment of the lateral aspect of the sigmoid mesocolon. This fossa is formed during fusion of the left peritoneal surface of the sigmoid mesentery with the parietal peritoneum of the posterior abdominal wall, the line of Toldt. (2) Trans-mesosigmoid hernia (TMSH): incarceration of intestinal loops through an isolated oval defect in the sigmoid mesocolon. No hernial sac is present. (3) Intramesosigmoid hernia (IMSH): a congenital, oval defect unrelated to the intersigmoid fossa is present in juxtaposition to the colon and involves only one leaf (lateral more common) of the sigmoid mesocolon with herniation. Normal fusion fascia is present, and the right leaf is intact in this setting. This case belonged to the class of Transmesosigmoid hernia. Most of the reasons for small bowel obstruction are found during the time of surgery. CT scan plays a major role in abdominal CT scan is important for SBO, which provides information of obstructive location, content, and the possible underlying causes, such as malignancy, strictures, and congenital atresia and stenosis within the bowel wall, and other intraluminal problems such as intussusception, gallstone, ileus, feces or meconium, or Bezoar.<sup>2</sup>

Transmesosigmoid hernia can be diagnosed in CT if the CT shows following features: (1) CT scan showing dilated loops of small bowel with collapsed distal segments suggests the possibility of internal hernia; and (2) CT scan revealing anteromedial displacement of the sigmoid colon due to entrapped bowel loops behind the left posterior or lateral aspect of the sigmoid colon.<sup>8</sup> SBO due to transmesosigmoid hernia has a high incidence of strangulation, which rapidly progresses to gangrene. In contrast, for SBO secondary to postoperative adhesion, a substantial percentage of selected patients can be treated successfully using a conservative approach<sup>9</sup> According to the study conducted by Bin-Li et al<sup>10</sup> 72.7% patients had bowel necrosis and underwent bowel resection, with the average length of resection being 44.5 cm. the mean defect size in the mesocolon in their study size were about 2-5 cms and the possibility of strangulation is high in this average as the larger the size the defect the bowel tend to move in and out smaller the defect only partial bowel wall can enter and thus preventing from strangulation in our case it was about 4 cm and the segment of bowel which was gangrenous was about 10 cm.

Patients with small bowel obstruction who does not respond to conservative therapy will require emergency surgical treatment if an internal herniation is suspected, and laparoscopy is useful if there is no evidence of strangulation or necrosis. Recently, some reports have recommended laparoscopic abdominal surgery for both diagnosis and surgical treatment.<sup>11</sup> We performed an open emergency laparotomy.

#### FINAL DIAGNOSIS

Trans Mesosigmoid Hernia

#### REFERENCES

- Hirashima K, Date K, Fujita K, et al. Strangulation of the small intestine caused by an intra-mesosigmoid hernia: a case report. Surg Case Rep 2017;3(1):129.
- [2] Salar O, El-Sharkawy AM, Singh R, et al. Internal hernias: a brief review. Hernia 2013;17(3):373-377.
- [3] Ghahremani GG. Internal abdominal hernias. Surg Clin North Am 1984;64(2):393-406.
- [4] Harrison OJ, Sharma RD, Niayesh MH. Early intervention in intersigmoid hernia may prevent bowel resection-a case report. Int J Surg Case Rep 2011;2(8):282-284.
- [5] Martin LC, Merkle EM, Thompson WM. Review of internal hernias: radiographic and clinical findings. AJR Am J Roentgenol 2006;186(3):703-717.
- [6] Jimmy J, Wani SV, Shetty VV, et al. Laparoscopic management of small bowel obstruction caused by a

Sigmoid Mesocolic hernia. J Minim Access Surg 2011;7(4):236-238.

- [7] Benson JR, Killen DA. Internal hernias involving the sigmoid mesocolon. Ann Surg 1964;159:382-384.
- [8] Villalona GA, Diefenbach KA, Touloukian RJ. Congenital and acquired mesocolic hernias presenting with small bowel obstruction in childhood and adolescence. J Pediatr Surg 2010;45(2):438-442.
- [9] Li MZ, Lian L, Xiao LB, et al. Laparoscopic versus open adhesiolysis in patients with adhesive small bowel

obstruction: a systematic review and meta-analysis. Am J Surg 2012;204(5):779-786.

- [10] Li B, Assaf A, Gong YG, et al. Transmesosigmoid hernia: case report and review of literature. World J Gastroenterol 2014;20(19):5924-5929.
- [11] Van der Mieren G, de Gheldere C, Vanclooster P. Transmesosigmoid hernia: report of a case and review of the literature. Acta Chir Belg 2005;105(6):653-655.