*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*
*e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 21, Issue 1 Ser.15 (January. 2022), PP 17-20*
*www.iosrjournals.org*

# A rare case of Transmesosigmoid Internal Hernia presenting as Small Bowel Obstruction

Dr Debayan Chowdhury[1], Dr Shivaji Mandal[2]
[1]*(3rd Year DNB Post Graduate Trainee, Department of General Surgery, Vivekananda Institute of Medical Sciences, Kolkata, West Bengal, India)*
[2]*(Assistant Professor, Department of General Surgery, Vivekananda Institute of Medical Sciences, Kolkata, West Bengal, India)*

***Abstract:*** *Internal hernia is a rare form of hernia. Acquired internal hernia with acute small bowel obstruction is a very very rare presentation. We present here a 65 years old female with previous history of gynecologic surgery presenting with acute intestinal obstruction. Surgery revealed internal herniation of a loop of proximal ileum via a rent in the sigmoid mesocolon. No similar case has been found in medical literature.*
***Key Word****: obstructed internal hernia, transmesosigmoid, transmesocolic, postoperative internal hernia.*

---

Date of Submission: 12-01-2022 Date of Acceptance: 27-01-2022

---

## I. Introduction

An internal hernia is defined as the protrusion of abdominal viscera, most commonly small bowel loops, through a peritoneal or mesenteric aperture into a compartment in the abdominal and pelvic cavity.[1,2]. Internal hernia has a reported autopsy incidence of 0.2 to 0.9% [3] and is the cause of small bowel obstruction in 0.6 to 5.8% of the cases[4]. Internal hernial orifices can be congenital, including both normal foramina or recesses and unusual apertures resulting from anomalies of peritoneal attachment and internal rotation, or acquired if caused by inflammation, trauma and previous surgery. We report a rare case of an obstructed internal hernia developing in a patient with history of lower abdominal surgery 20 years back.

## II. Case Presentation

A 65 years old female housewife presented with diffused abdominal distension for 5 days with 10 episodes of vomiting in the last 2 days before admission. Vomiting was bilious and she was not passing stool or flatus for 5 days. She had history of lower abdominal hysterectomy with bilateral salpingo-oophorectomy 20 years ago.

On examination, vital signs were normal (BP 110/70, pulse rate 76 beats/min, respiratory rate 22cycles/min, and temperature 36.6℃). There was diffuse abdominal distension with sluggish IPS. On DRE, rectum was collapsed.

Haemogram showed Hb 11.6 gm%, WBC 6.8 x $10^9$/L. CECT abdomen showed small intestinal obstruction with stomach, jejunum and proximal ileum being dilated, distal ileum collapsed **(Fig 1)**. A suspicion of small bowel obstruction due to postoperative band arose.

She was resuscitated, put on NPO. Ryle's tube output was 1400ml on the first day of admission. Abdomen became soft. She was started with liquid diet, but distension recurred, no passage of stool or flatus still. Decision for exploratory laparotomy was taken.

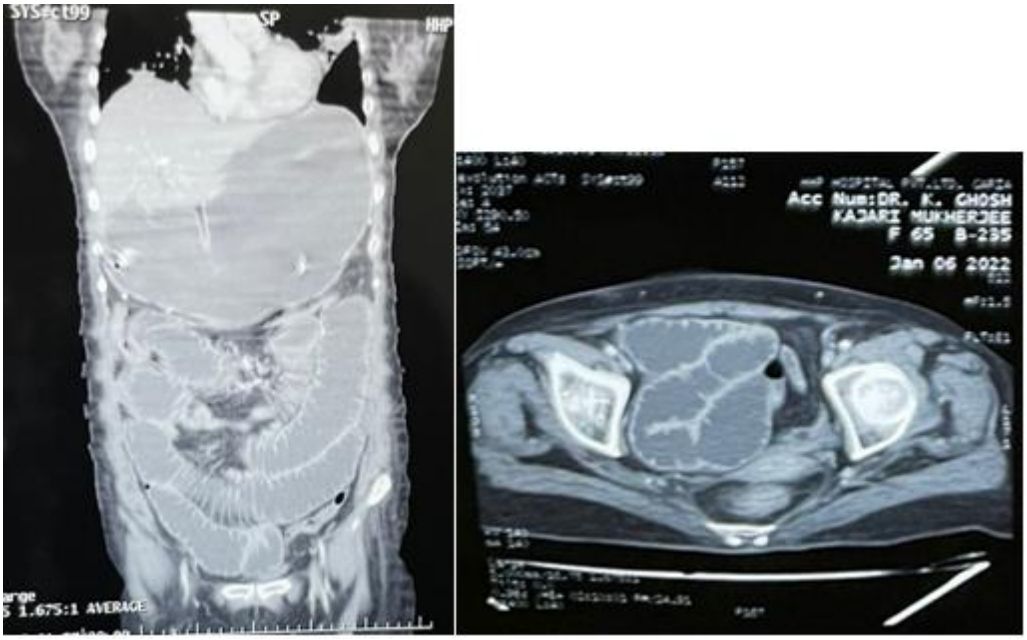


**Fig 1:** Showing dilated stomach, jejunum and proximal ileum with collapsed distal ileum showing point of obstruction.

## III. Findings

Midline laparotomy was performed. Greater omentum found adhered to the previous Pfannenstiel incision scar, the urinary bladder and sigmoid colon. Adhesiolysis done and greater omentum reflected up. Dilated jejunal loops noted with a collapsed distal ileum and normal ileocecal junction. Tracing the ileum, we found a loop of proximal ileum herniating via a rent in the sigmoid mesocolon into the pouch of Douglas, causing the obstruction (**Fig 2,3**). The loop of the herniating proximal ileum was disentangled and reduced. The rent in mesocolon was sutured using 2-0 silk continuous sutures. Warm mop compression was applied over the gut loop and within minutes peristalsis was visible, pink colour returned. Irrigation of peritoneal cavity with warm saline done. Abdomen closed without a drain. Postoperative period was uneventful, patient discharged after she passed stool, with advice to follow up at OPD after 10 days.

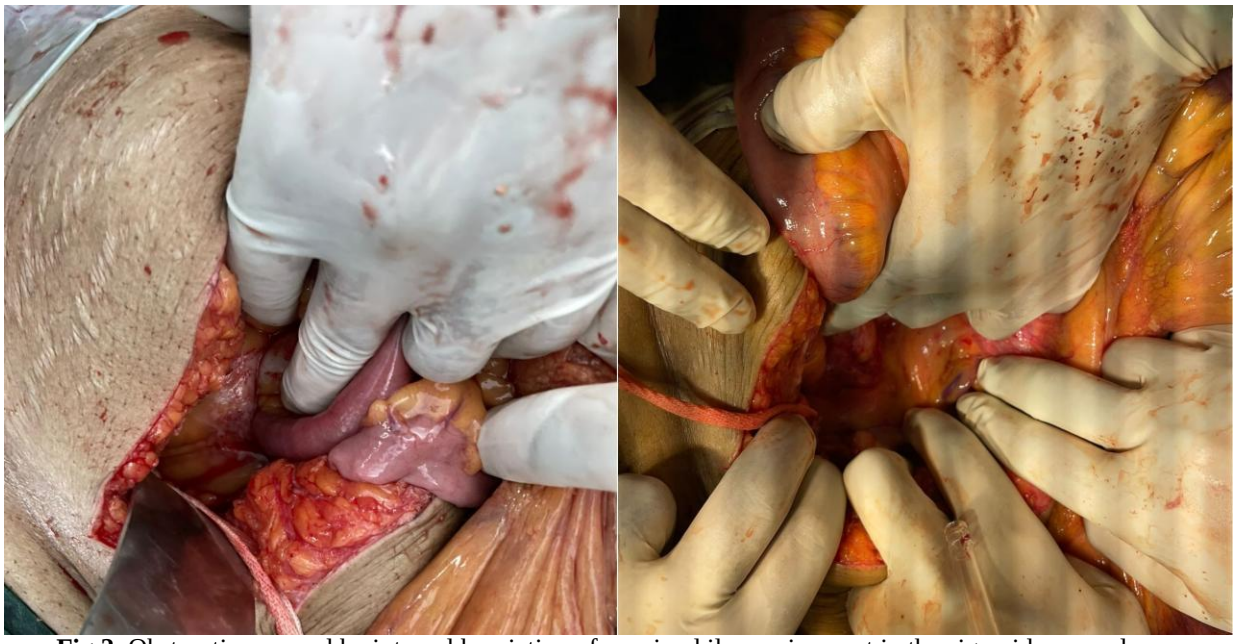

**Fig 2**: Obstruction caused by internal herniation of proximal ileum via a rent in the sigmoid mesocolon

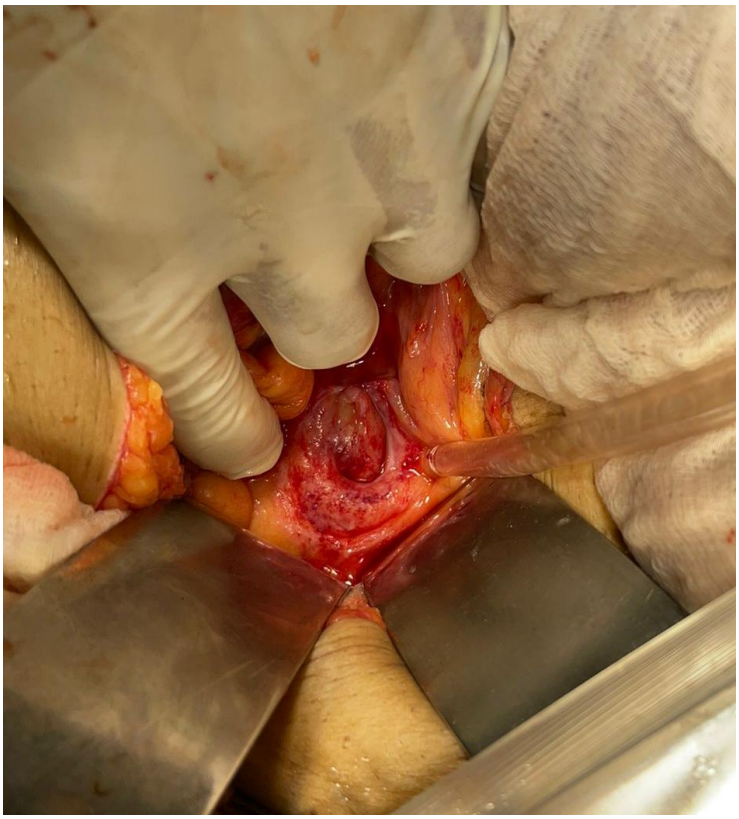

**Fig 3**: Rent in the sigmoid mesocolon through which loop of proximal ileum was protruding.

## IV. Discussion

Internal hernia is defined as the protrusion of a viscus, most commonly small bowel, through a peritoneal or mesenteric orifice, resulting in its dislocation into another compartment[5]. They can be congenital or acquired, the latter constituting the majority. Important causes of acquired internal herniation in adults are previous abdominal surgery (mainly liver transplantation and bariatric procedures like gastric bypass), trauma, peritoneal inflammation, or ischemic changes[6]. We present a case of obstructed internal hernia in a patient with a previous history of gynecologic surgery.

Clinically, internal hernias can be asymptomatic or cause significant symptoms, which can include nausea, vomiting, or recurrent obstruction[7]. The most common manifestation of an internal hernia is strangulating SBO, that occurs after a closed-loop obstruction[8]. In our case, a loop of proximal ileum was herniating via a rent in the sigmoid mesocolon causing obstruction. No structures were gangrenous.

There are many spaces in the pelvis which allow hernia sacs to develop, including the supravesical space, hernia through the broad ligament, vesicouterine pouch, pouch of Douglas (rectouterine), and perirectal pouch[9]. Pelvic adhesions secondary to gynecologic disease or surgery are common in adult females. There are several reports of internal hernias into the rectouterine pouch and vesicouterine pouch[10,11]. Our case is an acquired internal hernia protruding into the pouch of Douglas.

Preoperative suspicion and diagnosis of an internal hernia in an emergency setting is difficult due to rarity of the entity, nonspecific clinical presentation, and limited utility of imaging in cases of acute intestinal obstruction[12]. Surgery is the only treatment for an internal hernia. In our case, we performed an emergency laparotomy followed by reduction of the loop of proximal ileum which was the content, with closure of the rent in sigmoid mesocolon thereby relieving the obstruction.

## V. Conclusion

Internal hernias are a rare but important cause of intestinal obstruction given the high mortality associated, nevertheless still often underdiagnosed. Internal hernias should be kept in the differential diagnosis of acute intestinal obstruction in adults with previous history of surgery. Since physical examination findings are nonspecific, a high index of clinical suspicion along with urgent CT is suggested to aid in the preoperative diagnosis of internal hernia. Early surgical intervention is crucial to avert the high risk of associated morbidity and mortality. We present this case as we have failed to find any such previous reported case in medical literature, a very rare case of small bowel obstruction due to a transmesosigmoid internal hernia.

## References

[1]. Miller PA, Mezwa DG, Feczko PJ, Jafri ZH, Madrazo BL. Imaging of abdominal hernias. Radiographics. 1995 Mar;15(2):333–47.
[2]. Akyildiz H, Artis T, Sozuer E, Akcan A, Kucuk C, Sensoy E, Karahan I. Internal hernia: complex diagnostic and therapeutic problem. International Journal of Surgery. 2009 Aug;7(4):334–7.
[3]. Jang E-J, Cho SH, Kim D-D. A case of small bowel obstruction due to a paracecal hernia. Journal of the Korean Society of Coloproctology. 2011 Feb;27(1):41-43.
[4]. Newsom BD, Kukora JS. Congenital and acquired internal hernias: unusual causes of small bowel obstruction. American Journal of Surgery. 1986 Sep;152(3):279–285.
[5]. Blachar A, Federle MP. Internal hernia: an increasingly common cause of small bowel obstruction. Seminars in Ultrasound CT and MRI. 2002 April;23(2):174–183.
[6]. Edwards HM, Al-Tayar H. A transmesenteric congenital internal hernia presenting in an adult. Journal of Surgical Case Reports. 2013;2013(12): 3 pages. doi:10.1093/jscr/rjt099.
[7]. Martin LC, Merkle EM, Thompson WM. Review of internal hernias: radiographic and clinical findings. American Journal of Roentgenology. 2006 Mar;186(3):703–717.
[8]. Takeyama N, Gokan T, Ohgiya Y, Satoh S, Hashizume T, Hataya K, Kushiro H, Nakanishi M, Kusano M, Munechika H. CT of internal hernias. Radiographics. 2005 Jul-Aug;25(4):997–1015.
[9]. Meyers MA. Dynamic Radiology of the Abdomen: Normal and Pathologic Anatomy. 5th ed New York: Springer; 2005.
[10]. Bunni J, Teichmann D, Berstock JR. Pouch of Douglas pelvic hernia: a rare entity managed laparoscopically. Hernia. 2012 Oct;16(5):601–603.
[11]. Mou D, Seshadri A, Fallon M, Thummalapalli R, Askari R. Internal hernia through a congenital peritoneal defect in the vesico-uterine space. International Journal of Surgery Case Reports. 2016;25;171–173.
[12]. Ghiassi S, Nguyen SQ, Divino CM, Byrn JC, Schlager A. Internal hernias: clinical findings, management, and outcomes in 49 nonbariatric cases. Journal of Gastrointestinal Surgery. 2007 Mar;11(3):291–295.

Dr Debayan Chowdhury, et. al. "A rare case of Transmesosigmoid Internal Hernia presenting as Small Bowel Obstruction." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 21(01), 2022, pp. 17-20.