

Congenital Defect in Lesser Omentum Leading to Internal Hernia in Adult: A Rare Case Report

SURAG KAJOOR RATHNAKAR¹, SHRIDHAR MUNIYAPPA², VIKRAM HUBBANAGERI VISHNU³, NAGARAJ KAGALI⁴

ABSTRACT

Intestinal obstruction is one of the common clinical condition which is encountered in emergency room. Internal hernia is one of the rare causes of small bowel obstruction accounting for less than 1% of cases. A congenital omental defect is very rare, but can potentially cause internal hernia leading to obstruction or strangulation of the bowel.

We present a case of a 54-year-old man who was brought to the emergency department with sudden onset of lower abdominal pain. He had no history of abdominal surgeries or history of trauma. An emergency laparotomy was performed. On exploring the abdominal cavity, the lesser omental defect was detected, 3cm in size. Loops of jejunum had gone through the defect. Congested bowel loop was pulled back and defect was approximated. An adult congenital omental defect is rare; however, it should be considered as one of the differential diagnoses in a relatively young patient with bowel obstruction without external hernia, previous abdominal surgery or trauma.

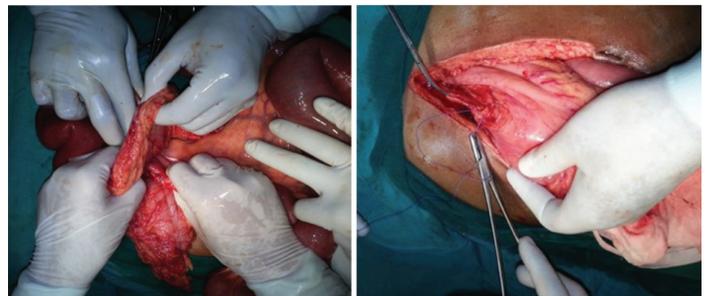
Keywords: Congested bowel loop, Intestinal obstruction, Lesser omental defect, Transomental internal hernia

CASE REPORT

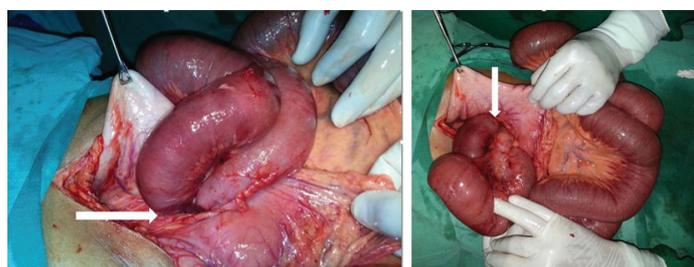
A 54-year-old male patient came to the emergency with sudden onset of lower abdomen pain, vomiting and constipation since 1 day. There was no history of abdominal surgery or trauma. On physical examination his vitals was stable, abdominal distension was present, tenderness was present in umbilical and hypogastric region, bowel sounds were absent, per rectum examination was normal.

Routine haematological and biochemical tests were normal. Erect X-ray abdomen revealed bowel shadows with multiple air fluid levels suggestive of small bowel obstruction. Emergency CT scan facility was not available in the hospital and hence, an emergency laparotomy was performed under General Anesthesia (GA), by taking prior consent. Intra operative findings revealed a distended loop of jejunum passing through defect of 3x2cm in lesser omentum with congestion of bowel loop [Table/Fig-1-3]. Loop of jejunum was pulled back [Table/Fig-4] and warm mops were placed over it till it appeared pinkish and the defect was

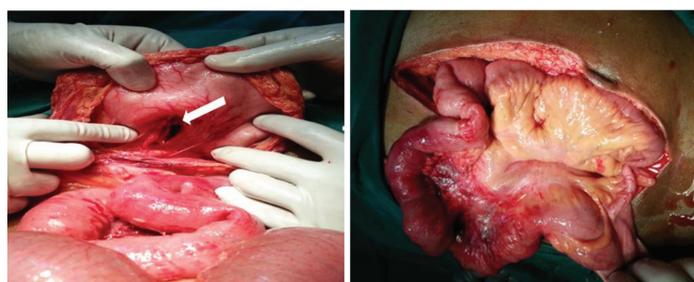
approximated with vicryl 2-0 sutures [Table/Fig-5]. Postoperative stay was uneventful with bowel sounds appearing after 2 days and the patient was discharged after 10 days after abdominal wound suture removal. On follow up, after 1 month, patient was found to be healthy.



[Table/Fig-4]: Bowel loop being pulled back. [Table/Fig-5]: Lesser omental defect being approximated with 2-0 vicryl.



[Table/Fig-1]: Loop of jejunum through defect in lesser omentum.



[Table/Fig-2]: Defect of 3x2 cm in lesser omentum; [Table/Fig-3]: Congested bowel loop.

DISCUSSION

Internal hernia is protrusion of the bowel through the mesentery or peritoneum but which remains within the abdominal cavity. It is a very rare cause of small bowel obstruction with significant mortality. It can be congenital or acquired. Paraduodenal space, foramen of Winslow, defect in mesentery or omentum, transverse mesocolon, diaphragm, broad ligament are some of the potential sites of internal hernia. Internal hernia is a rare condition which accounts for 0.2–0.9% of cases of intestinal obstruction [1,2]. Transomental hernia accounts for 1–4% of all the internal hernias. Majority of them occurs through defect in the right side of the greater omentum without a sac and are always intraperitoneal. Internal hernia through defect in lesser omentum is extremely rare [3]. Congenital anatomic defects of the liver, lesser sac, mesentery, as well as the presence of adhesions or increased intra-abdominal pressure are some of the predisposing factors for transomental hernias [4]. The herniated bowel loops may return to its normal location or may develop gangrene depending on the size of the defect and length of the bowel loop which has gone through the defect. Internal hernia might occur after previous surgeries or following abdominal trauma. However a congenital defect in omentum is very rare that too presenting in middle age but can potentially cause internal

hernia with subsequent strangulation of the small intestine [5]. There are reports of congenital defects leading to hernia in paediatric age group leading to unexpected death [6]. Intestinal obstruction due to internal hernia should be suspected in patients without external hernia or previous abdominal surgery or trauma. Sometimes it is difficult to diagnose internal hernia because of lack of specific signs and symptoms [7]. On the other hand, internal hernias are invariably manifested as acute intestinal obstruction that requires early diagnosis and immediate surgery. Radiological tools like CT scan will be most helpful preoperatively and can be diagnosed by characteristic findings on CT like stretched bowel sign” if it is kept in mind as a probable diagnosis [8]. However most of the time they are usually diagnosed on table for acute intestinal obstruction [9-12].

The management of acute intestinal obstruction will be adequate initial resuscitation and nasogastric tube decompression, followed by immediate laparotomy. A thorough examination of the abdominal cavity is done to identify the structures involved in the obstruction. Then the herniated structures are reduced, resection of ischemic intestinal segments done, followed by closure of the hernial orifice [13].

CONCLUSION

Internal hernia should be considered as one of the differential diagnoses in patient with bowel obstruction without external hernia, previous abdominal surgery or trauma. When omental

defect is found on table in unrelated abdominal surgery, it should be closed to prevent it from causing internal hernia in future.

REFERENCES

- [1] Hashimoto D, Hirota M, Sakata K, Yagi Y, Baba H. Adult transmesenteric hernia: Report of two cases. *Surg Today*. 2012;42:489–92.
- [2] Rehman Z, Khan S. Large congenital mesenteric defect presenting in an adult. *Saudi J Gastroenterol*. 2010;16:223–25.
- [3] Gulino D, Giordano O, Gulino E. Les hernies internes de l'abdomen. À propos de 14 cas. *J Chir (Paris)*. 1993;130:179-95.
- [4] Panda SK, Panda A. Strangulated internal hernia through lesser sac- An unusual case of small bowel obstruction. *Austin J Surg*. 2015;2(6):1072.
- [5] Crispin-Trebejo B, et al. Internal Abdominal Hernia: Intestinal obstruction due to trans-mesenteric hernia containing transverse colon. *International Journal of Surgery Case Reports*. 2014;5(7):396–98. PMC. Web. 16 May 2016.
- [6] Katagiri H, Okumura K, Machi J. Internal hernia due to mesenteric defect. *Journal of Surgical Case Reports*. 2013;5.
- [7] Genovese AM, Taranto F, Fiore D, Segreto M, Giardinelli A, Cavallaro G. Internal abdominal hernia. Unusual case of intestinal occlusion. *Minerva Chir*. 2000;55:177-80.
- [8] Kundaragi NG, Vinayagam S, Mudali S. Stretched bowel sign in combined transmesocolic and transomental internal hernia: A case report and review of literature. *The Indian Journal of Radiology & Imaging*. 2014;24(2):171-74.
- [9] Pessaux P, Tuech JJ, Derouet N, Du Plessis R, Roncarray J, Arnaud JP. Internal hernia: A rare cause of intestinal obstruction. Apropos of 14 cases. *Nan Chir*. 1999;53:870-73.
- [10] Zavan NP, Lee FT Jr, Yandow DR, Unger JS. Abdominal hernias: CT findings. *Am J Roentgenol*. 1995;164:1391-95.
- [11] Blachar A, Federle MP, Dodson SP. Internal hernia: Clinical and imaging findings in 17 patients with emphasis on CT criteria. *Radiology*. 2001;218:68-74.
- [12] Wachsber RH, Helinek TG, Merton DA. Internal abdominal hernia diagnosis with ultrasonography. *Can Assoc Radio J*. 1994;45:223-24.
- [13] Ozenc A, Ozdemir A, Coskun T. Internal hernia in adults. *Int Surg*. 1998 83:167-70.

PARTICULARS OF CONTRIBUTORS:

1. Junior Resident, Department of General Surgery, ESIC Medical College, Bengaluru, Karnataka, India.
2. Professor, Department of General Surgery, ESIC Medical College, Bengaluru, Karnataka, India.
3. Senior Resident, Department of General Surgery, ESIC Medical College, Bengaluru, Karnataka, India.
4. Assistant Professor, Department of General Surgery, ESIC Medical College, Bengaluru, Karnataka, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Surag Kajoor Rathnakar,
Kamal Dev Daycare Clinic, S.P Road, Sakleshpur, Hassan, Karnataka-573134, India.
E-mail: surag244@gmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: **Mar 16, 2016**

Date of Peer Review: **Apr 26, 2016**

Date of Acceptance: **May 25, 2016**

Date of Publishing: **Aug 01, 2016**