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Case Report

General Surgery and Clinical Medicine

Internal Omental Hernia: A Rare Case of Small Bowel Obstruction

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Abstract

Introduction: *Internal hernia represents an exceptionally uncommon occurrence of small bowel obstruction, with an incidence rate ranging from 0.2% to 0.9% and it is associated with a substantial mortality rate of approximately 45%, Trans-omental hernias are exceptionally uncommon, accounting for just 1–4% of all internal hernias. We report a case of a trans-omental hernia with obstruction due to a strangulated small bowel.*

Case Report: *A 67 year old man patient, Presented with symptoms of acute intestinal obstruction characterized vomiting, and abdominal pain., the abdominal examination showed abdominal distension with epigastric tenderness,, the abdominal computed tomography (CT) scan with contrast enhancement showed an intestinal obstruction in the right lower quadrant, with the presence of the beak sign, signifying the location of the small bowel obstruction (SBO) transition zone ,Emergency laparotomy surgery identified an entrapped segment of the small intestine protruding through a defect in the greater omentum The entrapped small intestine was successfully freed, and as the ileal segment remained viable, there was no need for bowel resection The patient remained in the Intensive Care Unit for duration of 15 days and was discharged from the hospital on the 28th day after admission, experiencing complete recovery thereafter.*

Conclusion: *In cases of acute abdomen suspected to involve internal hernia, the primary main task for the surgeon is the prompt identification of acute intestinal obstruction and an immediate recommendation for laparotomy. This approach aims to mitigate the risk of significant postoperative complications, as demonstrated by the current case.*

Keywords: Hernia, Intestinal Obstruction, Tomography

1. Background

Small bowel obstruction, often arising from postoperative adhesions, stands as a prevalent culprit behind acute abdominal pain, frequently necessitating surgical admissions. Internal hernia represents an exceptionally uncommon occurrence of small bowel obstruction, with an incidence rate ranging from 0.2% to 0.9% [1], and is associated with a substantial mortality rate of approximately 45% [1, 2]. This condition manifests in various forms, including congenital or acquired, as well as persistent or intermittent. They do not have specific clinical manifestations, often presenting with abdominal pain and vomiting. Trans-omental hernias are exceptionally uncommon, accounting for just 1–4% of all internal hernias [3]. Diagnosis is challenging, especially in patients without previous abdominal surgeries, and is often made during exploratory laparotomy, Delayed diagnosis can lead to severe complications, including bowel ischemia and necrosis,Treatment typically involves urgent surgical intervention to reduce the hernia and repair the omental defect, Postoperative mortality rates can be high, especially if strangulation is present, Early diagnosis and prompt surgical intervention are crucial for minimizing complications and improving patient outcomes [2,4]. We report a case of a trans-omental hernia with obstruction due to a strangulated small bowel.

2. Clinical Case

A 67-year-old male patient, with a history of coronary artery disease and heart rhythm disorder, had no history of abdominal surgery, who underwent endoscopic resection for a bladder tumor 11 days ago, Presented with symptoms of acute intestinal obstruction characterized vomiting, abdominal pain and cessation of bowel movements and gas, envolving for 6 hours. Physical examination revealed a well-nourished patient with a slight dehydration, tachycardia and respiratory distress, the abdominal examination showed abdominal distension with epigastric tenderness,the rest

of the exam was normal, laboratory examination revealed Acute kidney injury with creatine phosphoskinase concentration of 250 U/ML, C reactive protein concentration of 75 mg/dl ,and a leukocyte count of 22000/mm3, the abdominal computed tomography (CT) scan with contrast enhancement showed an intestinal obstruction in the right lower quadrant, with the presence of the beak sign, signifying the location of the small bowel obstruction (SBO) transition zone (FIG1), the patient underwent emergency laparotomy by midline approach , the abdominal exploration identified an entrapped segment of the small intestine protruding through a defect in the greater omentum (FIG2). The entrapped small intestine was successfully freed, and as the ileal segment remained viable, there was no need for bowel resection (FIG3). The patient remained in the Intensive Care Unit for duration of 15 days and was discharged from the hospital on the 28th day after admission, experiencing complete recovery thereafter.

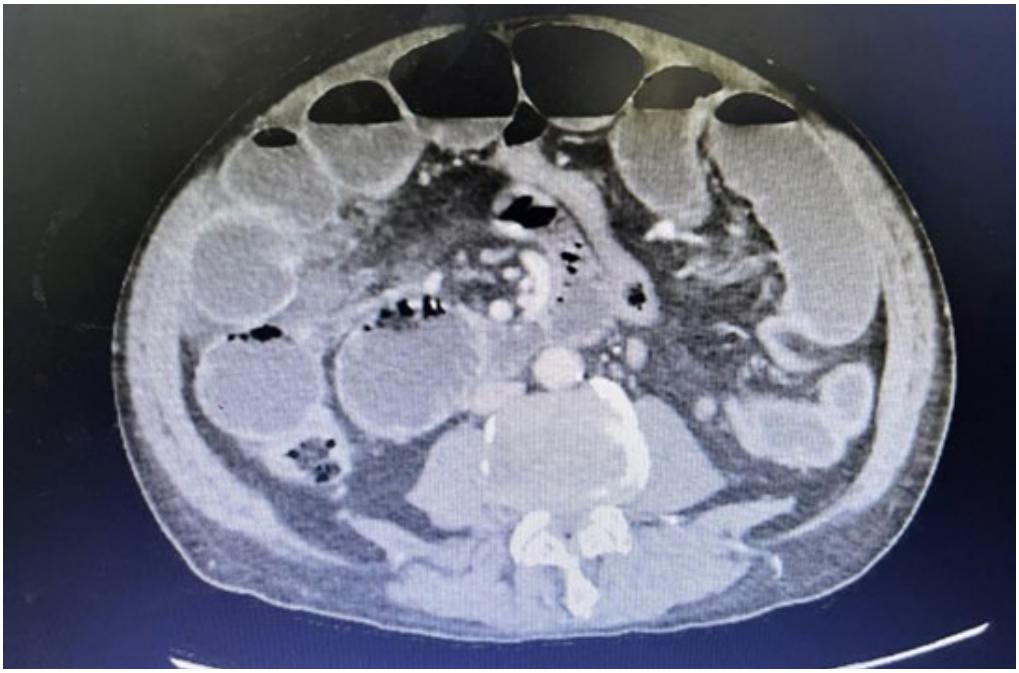

Figure 1: The Beak Sign is in the Lower Right Quadrant

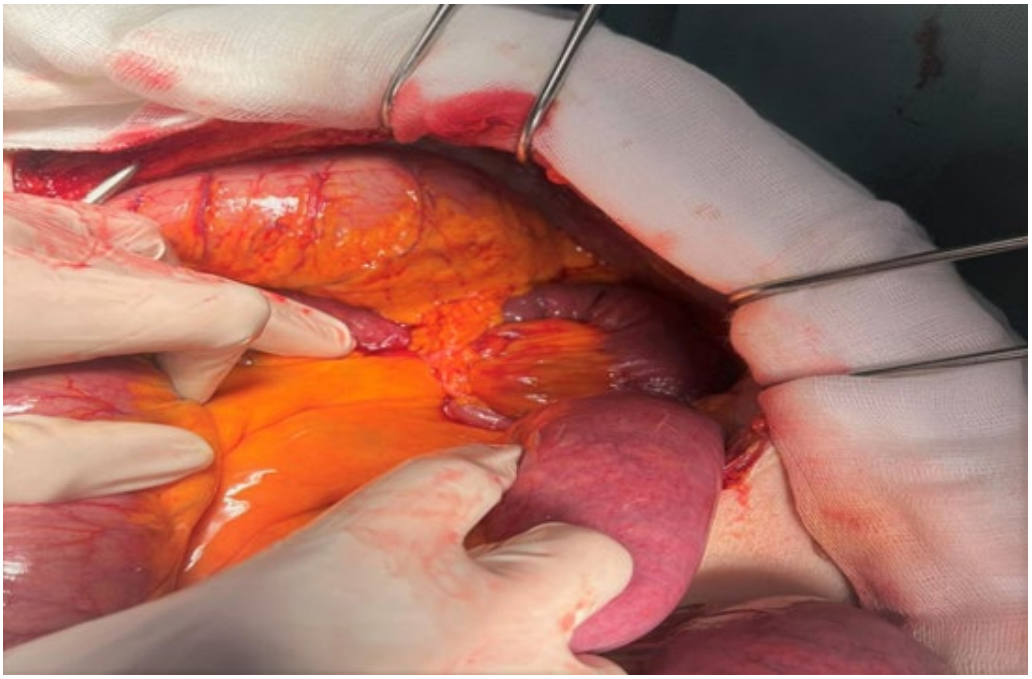

Figure 2: Strangulation of Small Bowel through a Defect in the Greater Omentum

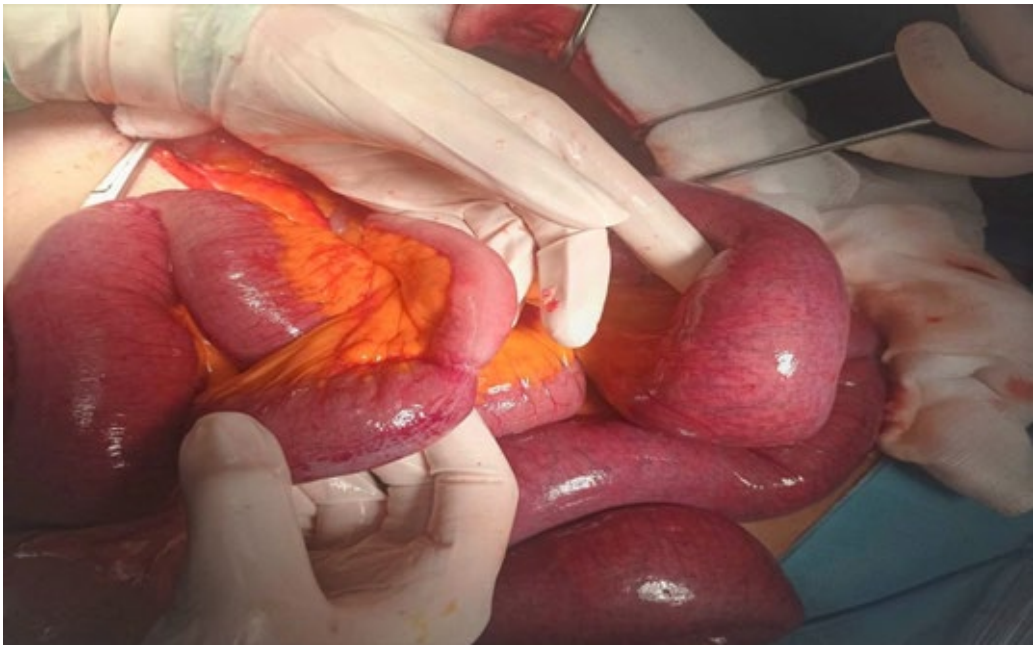

Figure 3: The Transition Zone and the Small Bowel Loops Seem Congested and Protrude Through the Greater Omentum

3. Discussion

An internal hernia is characterized by the protrusion of internal organs through an intraperitoneal opening within the abdominal cavity [1,2]. A spontaneous trans-omental hernia commonly arises due to the age-related degeneration of the greater omentum in individuals without any prior abdominal surgery, trauma, or inflammatory conditions in their medical history [4]. There are a various types of internal hernias , such as percicaecal,para-duodenal hernias, peri-cecal hernias , intersigmoid hernias, pelvic hernias , and finally through the broad ligament, A sac is never discovered, and the entire hernia consistently remains intraperitoneal. The majority of trans omental hernias manifest on the right side of the greater omentum, and the size of the defect can range from 1 to 10 cm in diameter [7].

Diagnosing a trans omental hernia can be challenging due to its diverse clinical presentation, ranging from mild, sporadic abdominal pain to intense, sudden pain associated with nausea and vomiting, as observed in this particular case. Typically, it is identified during urgent laparotomy conducted for acute intestinal obstruction [3]. Abdominal CT is the primary diagnostic technique due to its availability and reliability. CT scans signs are Common in all types of internal hernias, included signs of Small bowel obstruction [10], While abdominal CT scans assist in identifying trans omental hernias through their distinctive features, its notable that these features may not be present in every case, which can pose à challenge in diagnosis [5,10]. The primary basis for this diagnosis has been surgical observations [8]. Post opérative mortality can exeeds 30%, Even 50% if strangulation occurs, therfore emergency management of omental hernia by surgery is crucial and can lead to favorable outcomes [9]. The treatment for trans omental hernia involves surgical intervention with laparotomy being the Most Common method, although laparoscopy is increasingly utilized, both for diagnostic and therapeutic purposes [11]. It is imperative to carefully reposition the herniated small bowel loops. If there is any indication of necrosis or perforation in the herniated intestinal segments, bowel resection becomes necessary [4]. Additionally, Preventing recurrence will depend on the hernia's location. Cclosure of the omental defect is crucial in order to prevent future recurrences and this the case of our patient, and no recurrence was noted after 01 year [11].

4. Conclusions

In cases of acute abdomen suspected to involve internal hernia, the primary main task for the surgeon is the prompt identification of acute intestinal obstruction and an immediate recommendation for laparotomy. This approach aims to mitigate the risk of significant postoperative complications, as demonstrated by the current case.

Conflict of Interest

The authors declare that they have no conflict of interest.

Funding

This study was financed with the institution's own resources.

Ethical Responsibilities

The authors declare that no experiments on humans or animals have been performed for this research.

Confidentiality of Data

The authors declare that they have followed the protocols of their work center on the on the publication of patient data.

Patient's Consent

The authors have obtained the informed consent of the patients and/or subjects referred to in the article.

References

1. Malakhia, A., Badet, N., & Delabrousse, E. (2017). Gastrointestinal : Strangulated transomental hernia. *Journal of Gastroenterology & Hepatology, 32*(7).
2. Duarte, G. G., Fontes, B., Poggetti, R. S., Loreto, M. R., Motta, P., & Birolini, D. (2002). Strangulated internal hernia through the lesser omentum with intestinal necrosis: a case report. *Sao Paulo Medical Journal, 120*, 84-86.
3. Takagi, Y., Yasuda, K., Nakada, T., Abe, T., Matsuura, H., & Saji, S. (1996). A case of strangulated transomental hernia diagnosed preoperatively. *American Journal of Gastroenterology (Springer Nature), 91*(8).
4. Inukai, K., Takashima, N., Miyai, H., Yamamoto, M., Kobayashi, K., Tanaka, M., & Hayakawa, T. (2018). Two patients with spontaneous transomental hernia treated with laparoscopic surgery: a review. *Journal of Surgical Case Reports, 2018*(4), rjy070.
5. Ishigami, S., Natsugoe, S., Ojiro, M., & Aikou, T. (2000). A case of trans-omental hernia: an incarcerated bowel condition detected by computed tomography. *Digestive Surgery, 17*(2), 173-174.
6. Pacheco, A. C., Jervis, M. J., Pimenta, J., Escrevente, R., & Caratão, F. (2020). Internal double omental hernia: a rare cause of acute abdomen. *Journal of Surgical Case Reports, 2020*(3), rjaa038.
7. Birol Ağca, D. A. B. K., Yalın İşcan, D. Y. Ö., Fersahoğlu, M. M., & Memişoğlu, K. (2015). Nadir bir ince bağırsak tıkanıklık nedeni: Spontan strangüle transomental fıtık. *Ulus Travma Acil Cerrahi Derg, 21*(2), 160-162.
8. Skeik, N., & Jabr, F. I. (2012). Trans-omental hernia as a rare cause of small bowel obstruction. Le Journal Medical libanais. *The Lebanese Medical Journal, 60*(2), 120-121.
9. Ugianskis, A. (2022). Lesser omental hernia without intestinal gangrene–Case report. *International Journal of Surgery Case Reports, 96,* 107361.
10. Blachar, A., Federle, M. P., & Dodson, S. F. (2001). Internal hernia: clinical and imaging findings in 17 patients with emphasis on CT criteria. *Radiology, 218*(1), 68-74.
11. Smail, A. (2024). "Internal Hernias: Diagnosis and Management." International journal of surgery & surgical techniques, undefined (2024)