Journal of Health and Rehabilitation Research 2791-156X JHRR

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Case Report

Silent Danger: Uncovering Greater Omental Internal Herniation

Wahaj Ayub[1]*, Syed Asad Maroof[2], Shahzeb Khan[3], Sibghat Ullah[4], Abdul Mueed Bangash[5], Muhammad Ayub Khan[6], Abdul Wahab[6], Tayyeb Ahmed[4]

[1]Chief Surgical Resident, Department of General Surgery, Khyber Teaching Hospital MTI Peshawar, Pakistan.
[2]Assistant Professor, Department of General Surgery, Khyber Teaching Hospital MTI Peshawar, Pakistan.
[3]Consultant Registrar, Department of General Surgery, Khyber Teaching Hospital MTI Peshawar, Pakistan.
[4]Post Graduate Surgical Resident, Department of General Surgery, Khyber Teaching Hospital MTI Peshawar, Pakistan.
[5]House Officer, Department of General Surgery, Khyber Teaching Hospital MTI Peshawar, Pakistan.
[6]Training Medical Officer, Department of General Surgery, Khyber Teaching Hospital MTI Peshawar, Pakistan.
Corresponding Author: Wahaj Ayub, Chief Surgical Resident; Email: wahajayub207@yahoo.com

Conflict of Interest: None.

*Ayub W., et al. (2024). 4(2): **DOI**: https://doi.org/10.61919/jhrr.v4i2.1085*

ABSTRACT

Background: Internal hernias, though infrequent, are significant causes of intestinal obstruction, contributing to 0.2 to 4% of cases. Greater omental hernias, even rarer at 8%, predominantly affect older individuals, where senile atrophy often leads to omental defects.

Objective: This study aims to highlight the importance of considering internal hernias in the differential diagnosis for intestinal obstruction, particularly in patients without prior abdominal interventions or trauma.

Methods: We review a case of a 75-year-old female presenting with symptoms indicative of internal herniation, including the absence of significant historical abdominal insults. Diagnostic strategies involved physical examinations, imaging via X-ray and CT scans, and eventual surgical intervention.

Results: The patient's initial presentation involved subacute obstruction symptoms, progressing to complete obstruction on the second day of admission. Imaging failed to reveal a definitive transition point, but suggested small bowel obstruction. Surgical findings confirmed an intact herniated bowel loop, successfully treated without complications.

Conclusion: Internal hernias should be suspected in patients with intestinal obstruction symptoms, even in the absence of typical predisposing factors. Prompt recognition and treatment are crucial to prevent severe outcomes such as strangulation and necrosis.

Keywords: Greater omentum, Internal hernias, Intestinal obstruction, Omental defect, Senile atrophy.

INTRODUCTION

An internal hernia (IH) is the herniation of abdominal organs, typically small bowel loops, through a defect in the peritoneum or mesentery into an abdominal or pelvic compartment. Internal hernias account for approximately 0.2 to 4% of all cases of intestinal obstruction. These defects may be congenital or acquired due to factors such as trauma, often post-surgical, infection, inflammation, or senile atrophy (1,2). Paraduodenal hernias are the most prevalent form, constituting about 53% of cases. Other types include pericaecal (13%), foramen of Winslow (8%), transmesenteric and transmesocolic (8%), intersigmoid (6%), and retroanastomotic (5%) (3). Among the rarer types, transomental and transmesenteric hernias typically present with subacute or acute small intestinal obstruction (4). This case study discusses a 75-year-old female with no prior abdominal surgery, trauma, infection, or inflammation who developed symptoms of subacute intestinal obstruction, which progressed to complete obstruction during her hospital stay.

CASE REPORT

YouTube link: https://youtu.be/jT1vltOpGkc?si=CBp7CRCQZlVVTVdj (5)

A 75-year-old female presented to the emergency department with symptoms of nausea, vomiting, inability to tolerate solid foods, and generalized abdominal pain persisting for three days. She reported passing only small amounts of liquid stools. Her medical, surgical, social, family, and drug histories were notable only for the use of proton pump inhibitors and antispasmodics. Physical examination revealed a soft but distended abdomen with generalized tenderness upon deep palpation. A succussion splash was audible, and bowel sounds were present. Following resuscitation, the patient was admitted, and a nasogastric (NG) tube was

inserted, draining approximately 80ml of bile-stained fluid. An erect abdomen X-ray showed multiple air-fluid levels. A CT scan of the abdomen with intravenous contrast revealed multiple enlarged fluid-filled ileal loops and collapsed jejunal loops, though no transition point was identified. The findings suggested a diagnosis of small bowel obstruction.

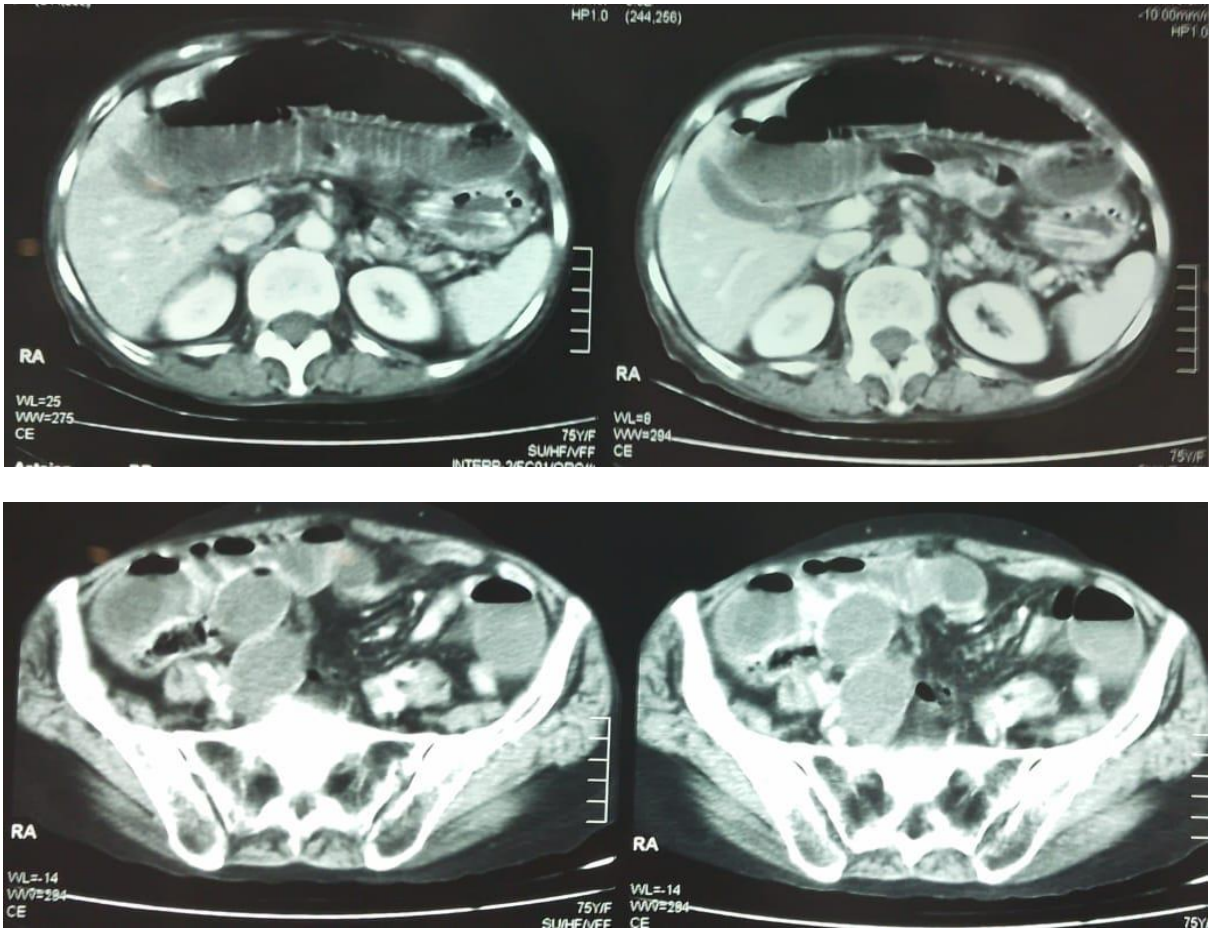

Figure 1 Axial CT series showing proximal dilated small bowel loops

Exploratory laprotomy was planned. Per op 160cm from duodenojejunal junction, there was small bowel loop of about 25cm herniated through a rent in the greater omentum. Herniated gut loop was released by resecting one side (narrow band) of the rent. The herniated gut loop appeared viable, healthy and was left as such Post operatively patient experienced resolution of symptoms and an uneventful recovery.

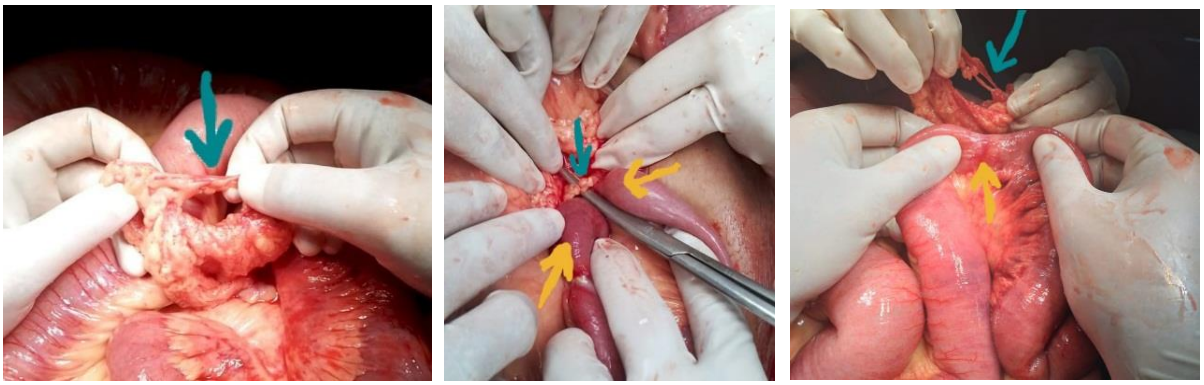

Figure 2 Yellow arrows show the herniated gut loop and green arrows show the rent in the greater omentum

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DISCUSSION

Internal hernias, despite being the underlying cause in only 0.2 to 4% of intestinal obstruction cases, should always be considered in differential diagnoses (1). This is crucial even in patients lacking a notable history of abdominal surgery, trauma, infection, or inflammation, as in the case reported. Notably, omental defects may arise from senile atrophy (1,2), which appears probable in our 75-year-old patient who had no other identifiable causes for the omental defect. Transomental and transmesenteric hernias, among the rarest types of internal hernias, typically present with acute intestinal obstructions (4). In this instance, the patient initially exhibited subacute intestinal obstruction symptoms, which progressed to complete obstruction by the second day of admission. Timely diagnosis and intervention are critical to prevent potential complications such as strangulation, infarction, and necrosis of the herniated intestinal loops (6). Our case was managed promptly; during surgery, the herniated bowel loop was found to be healthy, and the patient made an uneventful recovery.

CONCLUSION

Internal hernias should be included in the differential diagnosis for patients with intestinal obstruction, even those without a significant medical history of pertinent abdominal events. Particularly in the elderly, omental defects due to senile atrophy should be considered. Early diagnosis and treatment are essential to avert severe complications and to minimize morbidity and mortality associated with this condition.

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