Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Visceral Surgery II

Strangulated Ventral Hernia with Intestinal Perforation and Generalized Peritonitis: A Complex Clinical Case

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DOI: https://doi.org/10.36347/sjmcr.2025.v13i08.030 | **Received:** 14.06.2025 | **Accepted:** 11.08.2025 | **Published:** 18.08.2025

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Abstract | **Case Report**

This article presents the clinical case of a 64-year-old patient with a history of hypertension (HTN) and diabetes, who underwent multiple surgeries. She was admitted for a strangulated ventral hernia complicated by intestinal perforation and generalized peritonitis. After emergency management, including small bowel resection, stoma formation, and peritoneal lavage, the patient showed a favorable recovery following a stay in intensive care and digestive rehabilitation. This case highlights the severity of complications associated with ventral hernias and underscores the importance of timely surgical intervention 1,2

Keywords: Ventral hernia, intestinal perforation, generalized peritonitis, small bowel resection, stoma, septic shock, surgical complication.

INTRODUCTION

Ventral hernias are common complications following abdominal surgeries, especially after median laparotomy. These hernias can be complicated by strangulation, intestinal perforations, and peritonitis, conditions that require prompt surgical management. This clinical case presents a 64-year-old patient admitted with a strangulated ventral hernia complicated by intestinal perforation and generalized peritonitis. The aim of this article is to describe the management of this patient and discuss the challenges encountered in treating such a complex pathology [3,4].

CASE REPORT

The patient is a 64-year-old woman with a history of hypertension (HTN) and diabetes, under treatment for these conditions. She had undergone cesarean sections in 1998 and 2001, a hernia repair in 1999, and intestinal obstruction surgery in 2014. She presented with a painful ventral hernia that had been causing symptoms for the past four days. On examination, the patient was confused, had a foul odor, was febrile (axillary temperature of 38.8°C, heart rate of 122 bpm, SpO2 95%), and showed signs of skin necrosis at the site of a previous median laparotomy scar. Biological tests showed significant leukocytosis (17,000/mm³), anemia (hemoglobin 11 g/dL), and elevated CRP (389 mg/L), indicating acute inflammation. Electrolyte imbalances were also noted with hyponatremia (133 mmol/L), hypokalemia (2.59 mmol/L), and hypocalcemia (Ca 84 mg/dL). Abdominal CT revealed a small bowel obstruction with possible necrosis of some loops, along with a large strangulated hernia likely causing perforation and generalized peritonitis. Operative Report: On April 21, 2025, the patient underwent emergency surgery. The preoperative diagnosis was a strangulated ventral hernia complicated by intestinal perforation and generalized peritonitis, with septic shock. A small bowel resection was performed, along with the creation of a double ileostomy, peritoneal lavage, and drainage. A median incision was made, and the abdomen was found to be highly adherent. Exploration revealed multiple layers of ventral hernia, with a perforated small bowel fistulized to the skin in the area of necrosis, located 4 meters from the first loop and 50 cm from the DAI. There was ischemia of 60 cm of the small intestine in the strangulated hernia sac, which led to resection of the ischemic bowel, preserving 4 meters of small intestine. A posterior wall was created, and peritonization was performed. A double ileostomy was created, with the stoma placed on the left side due to right-side skin necrosis. A thorough lavage with saline solution was performed, and drainage of the Douglas pouch was carried out using a Redon drain. The abdominal wall was closed, and the excess skin was

removed. The surgery lasted 200 minutes. Postoperative Course: Following the surgery, the patient was admitted to intensive care for three days due to metabolic acidosis and hypokalemia, which were difficult to control. After stabilization, she was transferred to the postoperative care unit. Her progress was favorable by the 6th postoperative day, and she gradually recovered. After 45 days, the patient underwent restoration of digestive continuity with no significant complications and had a simple recovery thereafter.

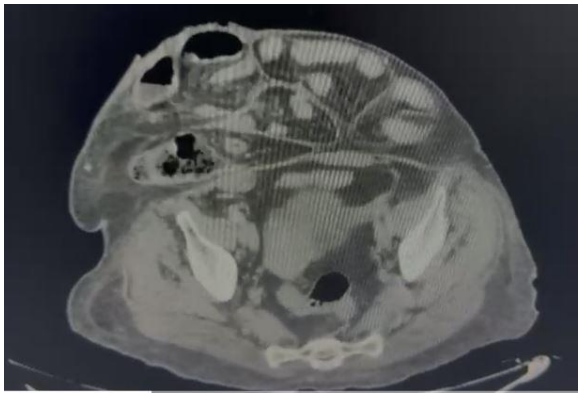

Fig. 1: Abdomial CT Grelic occlusion upstream of a large strangulated hernia

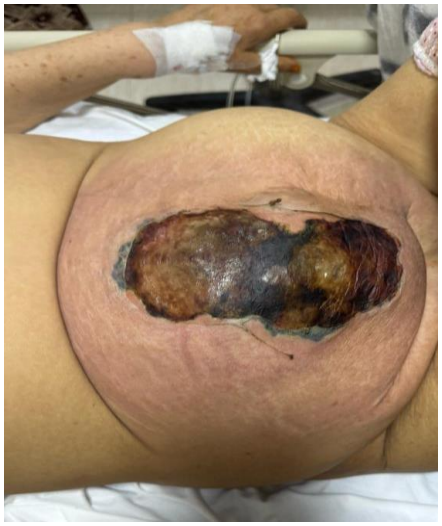

Fig. 2: Extensive skin necrosis

Fig. 3: Large hernia with enterocutaneous fistula

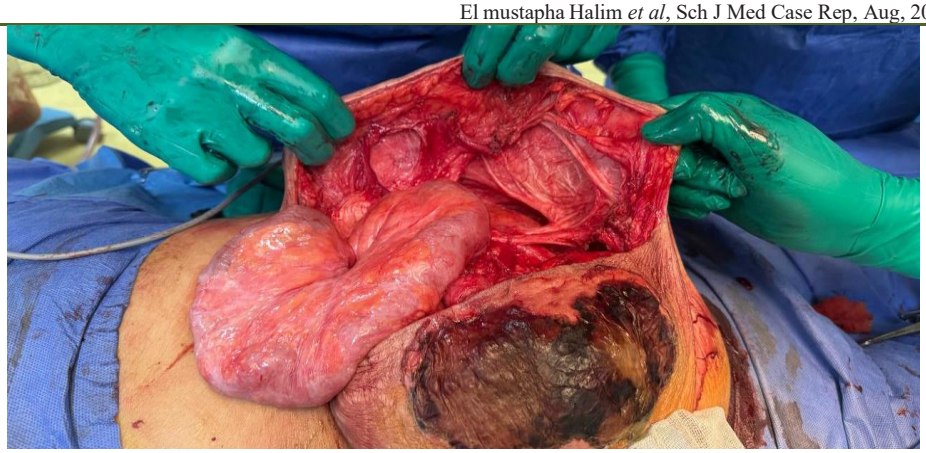

Fig. 4: staged evisceration

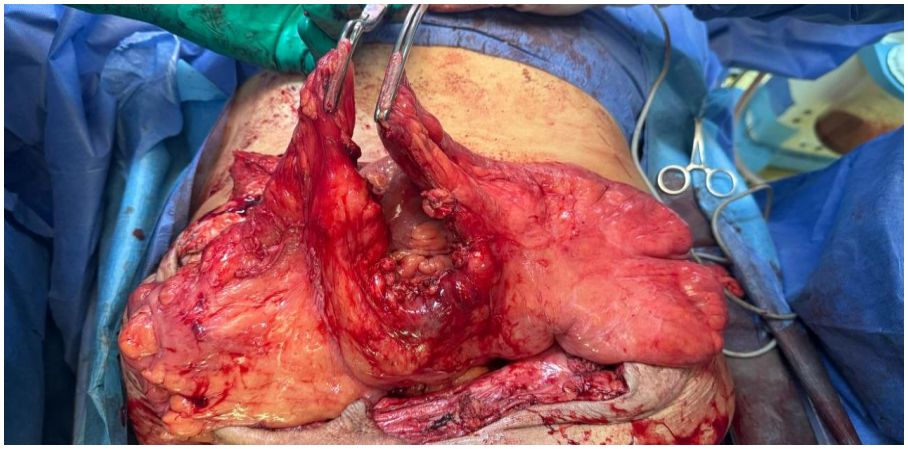

Fig. 5: Small bowel resection with double stoma

DISCUSSION

Ventral hernias, particularly those complicated by strangulation and perforation, are associated with significant morbidity and require timely surgical intervention [5]. This case highlights the severity of these complications and emphasizes the need for rapid surgical management to prevent further deterioration. Early intervention likely contributed to the positive outcome of this patient [6-9]. The challenges in managing such cases include addressing necrotic tissue, managing septic shock, and performing small bowel resections while ensuring proper postoperative care to correct metabolic disturbances. Postoperative management, including monitoring for acid-base imbalances and electrolyte disturbances, is critical in preventing further complications. One of the most delicate aspects of treatment remains the management of strangulated hernias, where the affected intestinal portion must be carefully examined to identify necrotic areas [10-2]. The formation of ileostomies is sometimes necessary, particularly in cases of extensive small bowel necrosis, requiring close postoperative follow-up to ensure proper digestive function recovery. Managing septic shock, especially in elderly patients, is also a major challenge, requiring intensive support and continuous monitoring [13].

CONCLUSION

This clinical case illustrates the complexity of managing a strangulated ventral hernia complicated by intestinal perforation and generalized peritonitis. A swift surgical approach and appropriate postoperative care are essential to ensure optimal outcomes. Close monitoring and proactive management of metabolic and infectious complications are crucial for achieving a favorable recovery. Ultimately, this case emphasizes the importance of clinical vigilance and rapid intervention in the face of such surgical emergencies [14,15].

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