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Strangulated Morgagni Hernia Hiding a Surprise

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Abstract | **Review Article**

Morgagni hernia is a rare congenital diaphragmatic hernia, typically diagnosed prenatally or neonatally, but it may occasionally present later in life, in adults, with mild symptoms that can progress to severe complications such as strangulation. We report a rare case of a female patient initially presenting with mild symptoms, such as epigastric pain and mild respiratory discomfort, overlooked until she presented to the emergency department with bowel obstruction. Diagnostic evaluation revealed a strangulated Morgagni hernia containing gastric and colonic contents. Surgical intervention was necessary and revealed an unexpected finding of a gastric tumor invading the transverse colon incarcerated within the diaphragmatic defect. Although the incarcerated structures were viable, this posed a significant therapeutic challenge. The decision was made for en bloc resection with lymph node dissection and diaphragmatic repair by suture. Postoperative recovery was uneventful, with hospital discharge after six days.

Keywords: Morgagni hernia, Strangulated hernia, Gastric tumor, Bowel obstruction.

INTRODUCTION

Congenital diaphragmatic hernias involve the protrusion of abdominal organs or omental fat into the thoracic cavity through an embryonic defect in one or both diaphragmatic domes. They are typically diagnosed prenatally and rarely in adults.

There are two main types of congenital diaphragmatic hernias: Bochdalek hernia, which is more common and posterolateral, and the Morgagni-Larrey hernia, which is rarer and anterior, representing only 2.6% of all diaphragmatic hernias.

We present an exceptionally rare and interesting case of a gastric tumor revealed by gastrointestinal obstruction due to a strangulated Morgagni hernia.

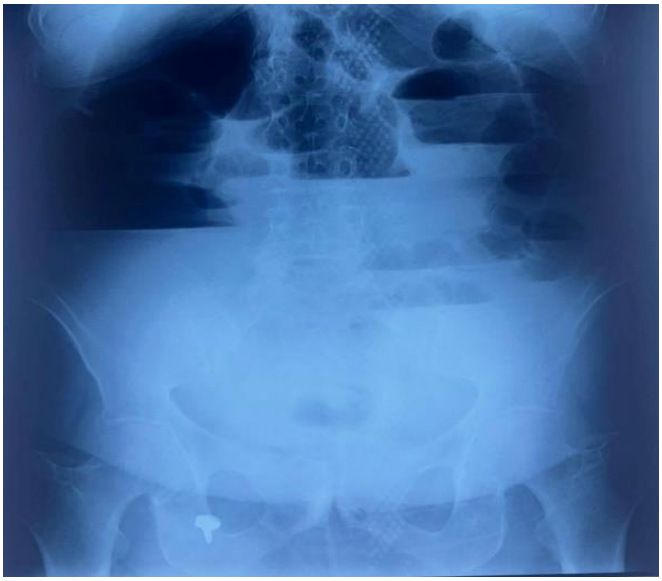
Patient Information and Clinical Observation

A 67-year-old female patient with no significant medical or surgical history, unaware of any congenital malformation, presented with episodes of exertional dyspnea and retrosternal pain that had been evolving over five months, for which she never sought medical consultation. The patient was admitted to the emergency department with signs of bowel obstruction, including a 1-day history of inability to pass stools or gas, diffuse abdominal pain, and persistent vomiting without hematemesis or rectal bleeding. Physical examination: The patient was conscious, with vital signs: BP 130/90 mmHg, HR 100 bpm, RR 20 breaths/min, and oxygen saturation 90%. Abdominal examination revealed generalized abdominal distension, diffuse tenderness, and tympanic percussion. Digital rectal examination showed an empty rectal ampulla.

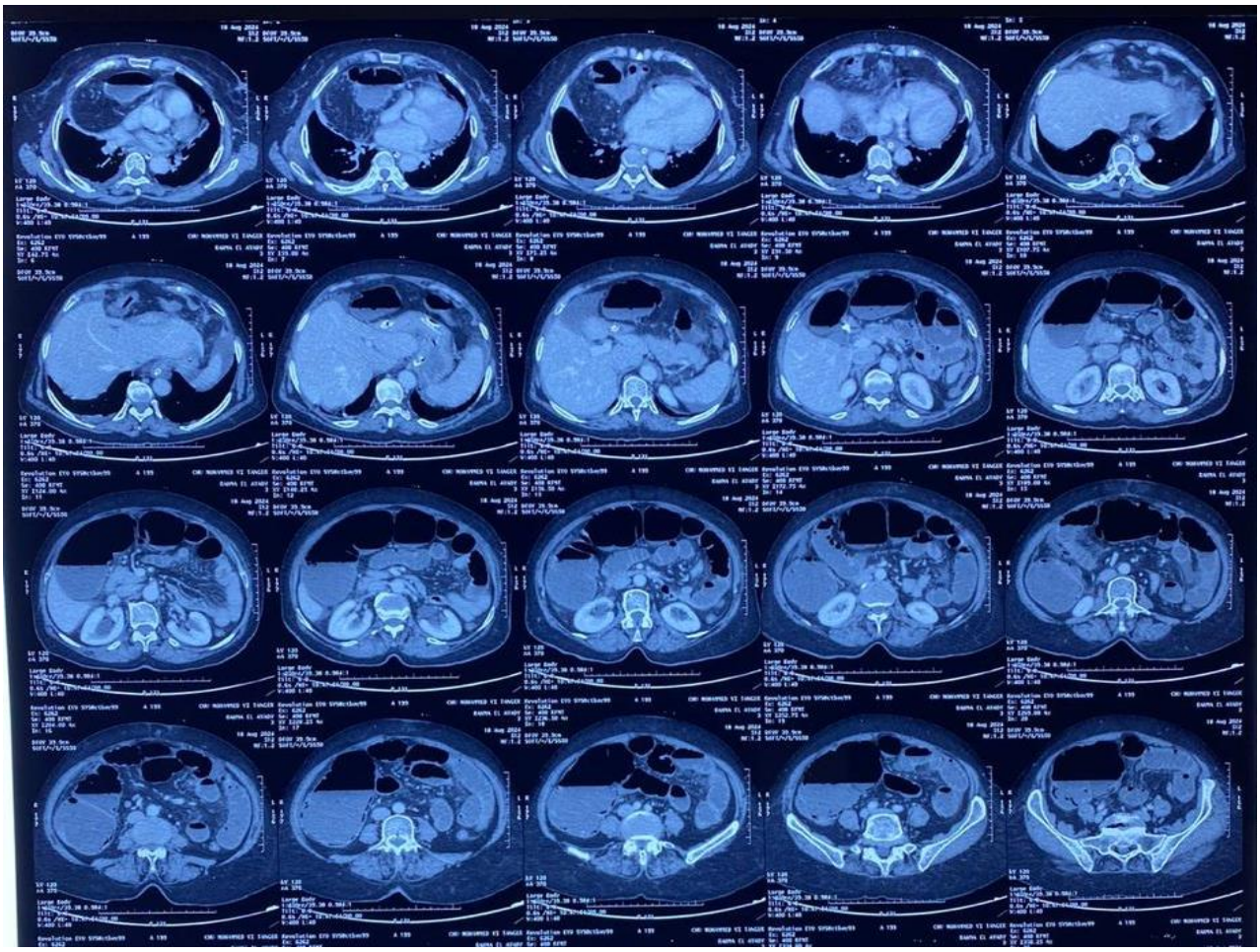
Diagnostic Approach

Laboratory findings: - Hemoglobin: 11 g/dL- WBC: 12,150/mm³- Platelets: 114,000/mm³- Prothrombin time: 77%- CRP: 84 mg/L- Urea: 0.6 g/L- Creatinine: 3 mg/L- Sodium (Na+): 142 mmol/L- Potassium (K+): 3.3 mmol/L

Abdominal X-ray: Demonstrated hydro-aeric levels consistent with colonic obstruction.

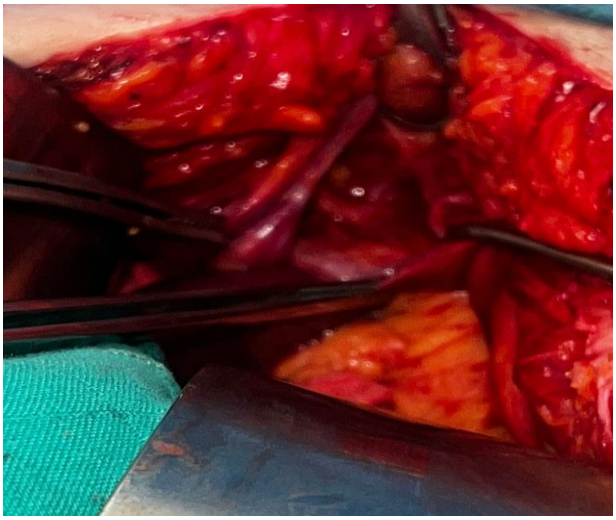


CT Scan: Revealed a diaphragmatic Morgagni hernia containing transverse colon and stomach, signs of colonic distress with pneumatosis intestinalis, and moderate peritoneal effusion

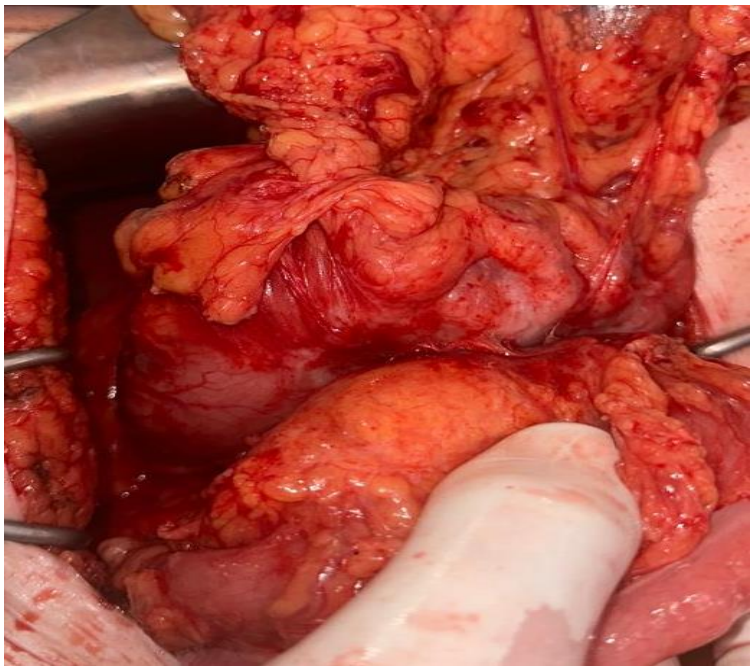


Treatment

The patient underwent stabilization with monitoring, intravenous fluid resuscitation, oxygen therapy, analgesia, antibiotic prophylaxis, and blood preparation. Surgical exploration via midline incision revealed a strangulated Morgagni diaphragmatic hernia containing gastric, colonic, and omental contents. Upon reduction, an unexpected tumor involving the gastric body and transverse mesocolon was discovered, with viable strangulated bowel segments.



After careful deliberation, a decision was made to treat both conditions simultaneously: - First, an en-bloc resection comprising subtotal gastrectomy, segmental resection of the transverse colon with its mesentery, lymph node dissection (D1.5 gastrectomy), gastrojejunal anastomosis (Omega loop), and side-to-side colo-colic anastomosis. - Second, diaphragmatic defect closure with interrupted X-shaped Vicryl sutures, without resection of the hernia sac, followed by abdominal drainage placement.



Postoperatively, the patient spent one day in intensive care, then transferred to the surgical ward. Oral feeding resumed on postoperative day 4, and clinical recovery allowed discharge after 6 days.

Follow-up and Results

The patient returned for follow-up one week post-discharge, showing satisfactory clinical improvement. The pathology results confirmed gastric adenocarcinoma invading the transverse colon, with serosal breach and negative results for malignancy in all 18 lymph nodes. The patient was subsequently referred to oncology for chemotherapy.

DISCUSSION

Congenital diaphragmatic hernia is a rare condition resulting from embryonic diaphragm defects, causing abdominal viscera to migrate into the thoracic cavity. Typically diagnosed antenatally or in newborns, it is rarely identified in adults. Adult presentation usually occurs incidentally or with nonspecific symptoms such as respiratory discomfort or epigastric pain, often underestimated until complications arise. The uniqueness of our case lies not only in its rarity as a strangulated hernia but also in the incidental discovery of advanced gastric cancer, unknown even through preoperative imaging. This presented a significant

therapeutic dilemma: whether to treat only the urgent obstruction and subsequently manage the tumor after further investigation or perform immediate oncologic resection.

The courageous decision was to perform a simultaneous oncologic resection and hernia repair, leading to favorable patient outcomes.

CONCLUSION

Morgagni hernia is the rarest form of congenital diaphragmatic hernia, often discovered incidentally in adults through nonspecific symptoms. This case emphasizes the importance of early clinical and diagnostic investigations to prevent severe complications. Additionally, clinicians must remain vigilant, as a Morgagni hernia may conceal other significant pathologies such as cancer.

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