

# MORGAGNI HERNIA: AN UNCOMMON CAUSE OF INTESTINAL OBSTRUCTION IN ADULT

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## SUMMARY

*We present a patient with intestinal obstruction due to Morgagni hernia. The case was preoperatively diagnosed as a diaphragmatic hernia by direct chest and abdominal x-rays. An incarcerated Morgagni hernia was found in laparotomy and repaired with primary sutures.*

**Key Words:** Morgagni Hernia, Diaphragmatic Hernia, Intestinal Obstruction.

## ÖZET

*Bu yazıda, Morgagni hernisine bağlı bir barsak tıkanıklığı olgusu sunulmuştur. Vaka, preoperatif olarak, PA akciğer grafisi ve direk karın grafisiyle diafragmatik herni tanısı aldı. Laparotomide inkarsere Morgagni hernisi saptandı ve primer onarım yapıldı.*

**Anahtar Kelimeler:** Morgagni Hernisi, Diafragma Hernisi, Barsak Tıkanıklığı.

The Morgagni hernia is the rarest type of all diaphragmatic hernias (1). Also known as anterior diaphragmatic, retrosternal, parasternal, and Larrey's hernia, it has been referred to primarily as a Morgagni hernia since it was first described by Morgagni in 1761. (2-4). The present report illustrates a case of intestinal obstruction due to incarcerated Morgagni hernia and includes clinical presentation, diagnostic procedures and surgical approach.

**Case Report:** A 70-year-old male patient with a history of intestinal obstruction was admitted to the emergency room with a three-day history of vomiting and abdominal distension. His blood pressure was 100/70 mmHg, pulse rate 110/min, temperature 38°C, respiratory rate 15/min, white blood count 11000/mm<sup>3</sup> and hemoglobin 13g/dl. The patient was moderately dehydrated and had a distended, tender abdomen with

hyperactive bowel sounds. The lungs were normal to auscultation. Posteroanterior and lateral chest x-rays showed dilated bowel loops above the diaphragm in the anterior mediastinum and in the abdomen (Figure 1). The patient had no past history of trauma.

A diagnosis was made of mechanical intestinal obstruction due to diaphragmatic hernia. Following preoperative resuscitation, the patient was taken to the operating room. An exploratory laparotomy was performed through an upper midline abdominal incision, and a Morgagni hernia involving the right diaphragm was found. The transverse colon and the greater omentum occupied the hernia and were incarcerated. The hernia content was reduced, and the previously incarcerated bowel segment was detected in order to observe its viability. The diaphragmatic defect was sutured using interrupted polypropy-

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**Figure 1:** An abdominal x-ray shows a distended bowel loop in the paraesophageal area, air-fluid levels and distended bowel loops in the abdomen.

lene sutures. The postoperative period was uneventful, and the patient was discharged on the tenth postoperative day. The patient is doing well at the end of the first postoperative year.

**Discussion:** Approximately 20% of all surgical operations for acute abdominal conditions are due to intestinal obstruction (5). Incarcerated Morgagni hernia is a rare cause of intestinal obstruction. The incidence of Morgagni hernia is 3% among diaphragmatic hernias (3,4), with 90% bilateral, 8% right-sided and 2% left-sided

(2-4,6). The rarity of an isolated left-sided Morgagni hernia defect is most likely due to the reinforcing effect of the heart and pericardium. Although Morgagni hernias are commonly congenital in origin, some of them are caused by blunt trauma. Blunt injuries that damage only the left leaflet of the diaphragm are probably a result of the protective role of the liver on the right side. If herniation occurs, it may not always become symptomatic immediately after injury (1). Morgagni hernia may be missed, misdiagnosed,

or result in complications. The differential diagnosis should include pericardial cyst, a large pericardial fat pad and a solid tumor (4). The majority of patients who present with symptoms of Morgagni hernia are over 40 years of age. A large proportion are asymptomatic, with hernia diagnosed incidentally on routine chest x-rays or barium contrast studies (6,7). In patients who are symptomatic, symptoms are commonly related to complications due to delayed diagnosis (6). Complications of delayed diagnosis include herniation, obstruction and strangulation of the stomach, colon or liver. Bowel incarceration as a complication of Morgagni hernia is rare, with only a few reports appearing in the literature (6,8,9).

Repair of a Morgagni hernia is easily accom-

plished through an abdominal approach, which also allows repair of an unexpected bilateral hernia. In a patient with a large defect, a plastic marlex mesh prosthesis may be used to secure closure of the defect in the diaphragm. Recently, laparoscopic repair of Morgagni hernia have been performed, but only after preoperative diagnosis of Morgagni hernia and in cases where emergency abdominal surgery is not required. (10)

The present case shows an unusual cause of intestinal obstruction in an aged patient. Such rare cases may be revealed following a systemic physical examination, which we therefore recommend be performed on every patient admitted for intestinal obstruction.

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