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Case Report

Incarcerated Morgagni hernia in an elderly patient: A case report

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Abstract
Congenital diaphragmatic hernias are Bochdalek, Morgagni and Esophagialhernias.
An anterior medial localization defect occurs in the Morgagni hernia diaphragm.
It can be clinically asymptomatic in adults, or may present with serious life-threatening conditions. It is more common in women than men in adults.
In this case, we aimed to present the 87-year-old patient who was operated on to achieve a Morgagni hernia.

Keywords
Morgagni; Hernia; Adult patient

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Introduction

It is reported that the incidence of Morgagni hernias among all diaphragmatic hernias is between 3-4%. It is the rarest diaphragmatic defect. Morgagni hernia is located in the anterior diaphragm and is seen bilaterally in 90-100% on the right, 8% on the left and 2% on the left. [1] As it may be asymptomatic, the most common signs of obstruction are blunt abdominal pain, constipation, and obstruction if the herniated organ is incarcerated. [2]

Radiological examinations are highly successful in diagnosis. A solid or air-fluid density is observed adjacent to the heart, usually on the right, in the retrosternal area. With computed tomography, a definite diagnosis can be made between 83-100% of a Morgagni hernia. [1]

In the treatment of Morgagni hernia, according to the experience of the surgeon, the thoracic or abdominal route can be preferred, surgery is performed by choosing one of the laparoscopic, thoracoscopic or open surgical procedures.

This study presents a patient who was diagnosed with Morgagni hernia in our clinic and whose treatment was completed surgically.

Case Report

An 87-year-old female patient applied to our clinic with complaints of nausea, vomiting, inability to eat, abdominal pain, and respiratory distress that became evident with effort for the last week. His medical history included hypertension, diabetes mellitus, and chronic obstructive pulmonary disease. The patient had stated that he had intermittent constipation and colic-style pain for years. On physical examination, the abdomen was natural, and there was tenderness in the epigastrium and right upper quadrant by palpation. Respiratory sounds were greatly reduced, and bowel sounds were heard in the right thorax upon listening. Routine blood values were as follows: WBC: 10.41, HB: 13.5, PLT: 236, glucose: 165, urea: 61, creatinine: 1.4, AST: 18, ALT: 9, Na: 146, K: 3.4, CRP: 16, INR: 1.21. In the chest radiography, diaphragm elevation on the right, blunting in costophrenic and cardiophrenic angles and air-fluid level in the paracardiac area on the right were observed.

In tomography examination, Morgagni hernia, 6x8 cm in size, extending from the anterior paracardiac area to the thorax was detected on the right. The pouch filled the stomach, omentum and transverse colon. The preoperative preparations were completed as ASAIII. She was operated with a transabdominal approach with mini laparotomy. During the surgery, it was observed that the corpus of the stomach, antrum, duodenum, omentum, and transverse colon were herniated into the thorax in the right and hernia sac. Organs were rejected in the abdomen, there was widespread edema in the incarcerated organs, and mild ischemic discoloration of the duodenal stomach antrum, no necrosis. The hernia defect was closed with 1 no prolenile separate suture. He was discharged on the 3rd day without any complications.

Discussion

Giovanni Battista Morgagni found that during autopsy, the diaphragm defect at the sternocostal junction and colon with gangrene in this region caused the patient's death. [1] Although Morgagni hernia is frequently encountered in childhood, it is rarely encountered in adulthood. Adult Morgagni hernia is more common in women and obese people. [3] Morgagni hernia in adults can be diagnosed with a delay because it may be asymptomatic. Symptoms often result from strangulation of the organ within the hernia sac. In our case, the hernia of the patient was detected in the early youth, but the surgery was delayed because it was not symptomatic and the patient was

Figure 1. Preoperative computed tomography image

Figure 2. 6th months after surgery. Posterior–anterior chest radiography

afraid of the operation. Radiological studies were carried out to reveal the cause of ileus, while an appropriate fluid-electrolyte replacement was performed for the patient who could not take orals and was dehydrated due to vomiting. Straight posterior anterior and lateral chest radiographs are extremely valuable in diagnosis. [4] The most valuable diagnostic tool is computed tomography. [1] In cases that are asymptomatic or detected incidentally, surgery should be recommended considering possible gastrointestinal obstructions, organ necrosis and severe complications.

The surgeon's experience is important in choosing a thoracic or abdominal approach. It is stated that thoracic approaches provide a wide field of view and allow reduction with easy access to the contents of the hernia, and are frequently preferred by thoracic surgeons. [5] Abdominal approaches provide advantages in the repair of bilateral hernias. [6] It is preferred by general surgeons, stating that organ resections and anastomoses can be performed more easily if necessary. In addition, since 1992, Morgagni hernia has been performed laparoscopically with the advantages of minimally invasive surgery. [1] Laparoscopic surgery could not be performed in our patient due to his accompanying diseases. The surgery was initiated with a mini laparotomy, and the operation was completed without enlarging the incision, since organ necrosis was not observed in the hernia sac. It should be known that pericardial and pleural perforations may develop during the removal of the hernia sac. [7] In the literature, it was stated that no problem was encountered in the follow-up of cases whose hernia sac was not resected. [8] The hernia sac was easily removed in our case because it did not cause serious adhesions. No 1 prolene defect was repaired with individual stitches. In recent years, the safe use of prolene patches has increased.

As a result, Morgagni hernias, although rarely seen, can cause serious morbidity and mortality. After the diagnosis, they should be operated under elective conditions.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

Conflict of interest

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

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