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A Rare Reason of Dyspnea in an Elderly Patient

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

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Case Study

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ABSTRACT

Aims: Morgagni hernia is a rare congenital diaphragmatic hernia in an adult. The issue of Morgagni Hernia, which was difficult for surgical selection, was tried to be explained with articles. It was presented because it is scarce in adults.

Presentation: A 76-year-old woman, admitted to our clinic with dyspnea had typical cardiorespiratory symptoms, dyspnea, tachypnea, tachycardia, fatigue, constipation, due to Morgagni hernia sac pressure. Her body mass index was 35. On x-ray and computed tomography scans of the thorax revealed intestines were full in the left hemithorax and anterior mediastinum. The primary diaphragmatic repair was performed through a posterolateral thoracotomy. No mortality or morbidity has occurred.

In this study, diagnosis of Morgagni hernia, preoperative and postoperative approach, and operation were discussed. Discussion: Surgical treatment of Morgagni hernia with thoracotomy is a safe method in elderly and obese patients.

Keywords: Dyspnea; Morgagni hernia; diaphragm.

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1. INTRODUCTION

Morgagni Hernia (MH), which first described by Larrey in 1789, has a prevalence of 3-5% in adults and children. It is usually observed in females and 90% on the right side. Symptoms are seen early time in men than woman. The conditions increasing the intraabdominal pressure such as the obesity and relentless effort are reported to play a role in developing of the hernia, particularly in the adult age group [1]. While gastrointestinal and cardiorespiratory symptoms may be seen in adults, it is generally asymptomatic in children. Peritoneum in MH is intact; an actual sac is reported to exist in most cases. Frequently there may be omentum and sometimes large intestine in MH sac while small intestine and stomach are rarely observed [2].

2. CASE REPORT

A 76-year-old female patient was consulted with progressive complaints of dyspnea, tachycardia and palpitation in the supine position. Physical examination revealed tachycardia and intestinal sounds in the left hemithorax and cardiac auscultation points.

Intestinal gases were filled 75% of the left hemothorax on the chest x-ray (Fig. 1). With the large mass of intestines effect in the anterior mediastinum and left hemithorax, which is

shifting the heart to the right was discovered on the computed tomography scan (Fig. 2).

The patient was fed with liquid food and with parenteral nutrition for three days preoperative days. Left Posterolateral thoracotomy was performed under general anaesthesia. The patient was diagnosed as MH during the intraoperative period. The adhesions in the mediastinal pleura, pericardium, left lung, and subdiaphragmatic were separated. Also, adhesions between the intestines were removed into MH sac. Then the sac was pushed into the abdomen. Sternocostal hiatus or (Larrey's) triangle, which was approximately 5 cm in size, was primarily sealed with no:1/0 round needle silk. There was approximately 100 cc bleeding in the operation. There were no complications during the operation. Two catheters were placed in the apex and base of the lung.

The patient's lungs were fully expanded (Fig. 3). Just after the operation, dyspnea and other complaints had significantly regressed. Solid foods were started on the fourth postoperative day. Because of prolonged pleural effusion and delay in the release of gas from the lazy bowel, the patient was discharged on the seventh postoperative day without any complication. The patient is still under follow-up, and no recurrence has occurred.



Fig. 1. Chest x-ray, the patient's intestines were occupied 75% of the left hemithorax

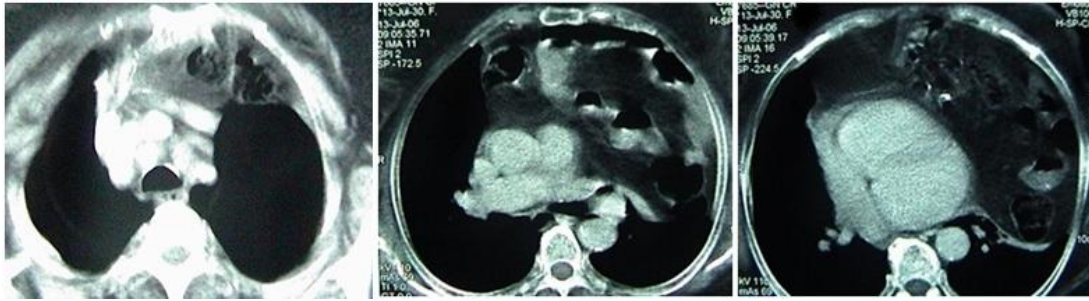


Fig. 2. In the thorax, CT revealed a large hernia sac filled with intestinal gas in the left hemithorax and shifting the heart to the opposite side



Fig. 3. Postoperative chest x-ray

3. DISCUSSION

MH may be asymptomatic, but by the increasing amounts of intestine inside the hernia sac, some respiratory and cardiac symptoms occur due to the pressure effect [3]. Like in this case, the symptoms may appear after 70-80 years of age. In this case, cardiorespiratory symptoms were due to large intestine, small intestine and omentum in the thorax. Gastrointestinal symptoms may vary from nonspecific symptoms such as constipation to severe disorders like strangulation and perforation, which may lead to death [4]. Therefore, when it is diagnosed, surgical repair is recommended the choice of treatment [5].

It is beneficial to use tomography for the diagnosis of a hernia. Thus, neighbouring organ structures, diaphragm and mediastinum can be determined from the position. If there is a hernia in the mediastinum, it may be MH or diaphragmatic herniations depending on their size. Diagnosis becomes difficult as herniation increases [6].

Both thoracic and abdominal approach may be preferred for surgical treatment. Both thoracic and abdominal approaches have their advantages. Thoracotomy is the most widely used surgical approach (49%). However, laparoscopic repair has gained popularity in the last years [7]. If a patient had a large amount of

intestine in the thorax, it is a full indication for surgical repair. Between the surgical treatment options are included a transabdominal laparoscopic or video-assisted thoracoscopy too [8-9].

In the case of preoperative diagnosis, the trans-abdominal approach is useful in terms of feeding reduced abdominal organs and assessing functional conditions [10]. In this case, preoperative MH or a significant diaphragmatic rupture was considered. She was referred to us by the General Surgery Clinic, as regards the intestinal loops of the case had been in the thorax for a long time, and there might be adhesions. So the transthoracic approach was preferred to the patient. If the transthoracic approach were not preferred, it would be more challenging to overcome adherence to the mediastinum and the lung.

The choice in the approach of the surgeon plays a critical role intraoperative and in the postoperative period. Minneci PC et al. preferred transabdominal approach followed by thoracostomy to distinguish mediastinal mass from MH while Kılıç et al., Sırmalı et al. preferred thoracotomy in old and obese patients if the hernia is not bilateral and if there are no intestinal strangulation or incarceration [11-13].

In our case, mean feeding time was four days after surgery, and the hospital stay is seven days. It has results similar to laparoscopic surgery [14].

4. CONCLUSION

Morgagni Hernia's symptoms may occur at very late ages. Surgery should be considered as soon as the patient is diagnosed in all hernia cases. Especially in the elderly, thoracotomy should be preferred for severe adhesions in the intestine and thorax.

CONSENT

As per international standard or university standard, patient's consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard was written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

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