

Morgagni hernia in an adult: Atypical presentation and diagnostic difficulties

Erişkinde morgagni hernisi: Atipik klinik prezentasyon ve tanısal zorluklar

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Foramen of Morgagni hernias are rare diaphragmatic hernias, usually occurring on the right and located in the anterior mediastinum. Adult patients diagnosed with a foramen of Morgagni hernia are usually asymptomatic and associated with obesity, trauma or other causes of increased intraabdominal pressure. Plain pulmonary roentgenogram, radiological studies of the gastrointestinal system with contrast material, computerized tomography and magnetic resonance imaging studies are helpful in diagnosis. In this article, a 78-year-old female case with a Morgagni hernia incidentally diagnosed on chest X-ray is presented.

Key words: Morgagni hernia

Morgagni hernisi nadir bir diyafragmatik hernidir, genellikle sağda ve ön mediastende yer alır. Erişkin hastalarda çoğunlukla asemptomatiktir ve obesite, travma ya da intraabdominal basıncı artıran diğer nedenlerle ilişkilidir. Akciğer grafisi, kontrastlı gastrointestinal radyolojik yöntemler, bilgisayarlı tomografi ve magnetik rezonans tanıya yardımcı olur. Bu olguda 78 yaşında Morgagni hernili kadın hastaya akciğer grafisi ile tanı kondu.

Anahtar kelimeler: Morgagni hernisi

INTRODUCTION

Foramen of Morgagni hernias are rare diaphragmatic hernias, usually occurring on the right and located in the anterior mediastinum because of the retrosternal location of the foramen of Morgagni, described as the anterior diaphragmatic defect. Adult patients diagnosed with a foramen of Morgagni hernia are usually asymptomatic. Although most remain asymptomatic, some patients develop symptoms of dyspnea, cough, or sternal pain, depending on the extent of the hernia. The hernia usually contains omental fat, and bowel and liver are found less commonly in the hernia contents. In adults, foramen of Morgagni hernias are also usually associated with obesity, trauma, weight lifting, or other causes of increased intraabdominal pressure.

CASE REPORT

A 78-year-old woman presented with complaints of epigastric pain, nausea, sweats and palpitation. She gave an intermittent history of such symptoms

and no history of previous abdominal operation. On physical examination her temperature was 37°C and her heart rate 108/minute. She was anxious but cooperative. She had some epigastric tenderness but there were no signs of peritoneal irritation. Respiratory sounds were found to be diminished at the right basal region on auscultation. Routine CBC and blood biochemical analysis revealed nothing other than the low blood glucose level (18 mg/dl), which was a result of irregular oral antidiabetic drug usage. Abdominal ultrasonography was within normal limits.

On her routine posteroanterior chest X-ray, a homogeneous increase in opacity at the right para-cardiac area was observed (Figure 1). This opacity was located anteriorly on lateral chest X-ray (Figure 2). A barium meal study of the colon performed for the differential diagnosis of a potential congenital diaphragmatic hernia showed that colonic segments did not go beyond the diaphragm (Figure 3).

Computed tomography (CT) of thorax and upper

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abdomen was done for further investigation. The diaphragm at the right side was not clearly distinguishable on the subsequent CT images. Moreover, a homogeneous mass lesion was observed anteromedially, starting parasternally and extending over to the carina, with an opacity which had the characteristics of fat tissue, and also pushing cardiac structures to the left hemithorax (Figure 4). CT scan did not show any gas or contrast material in thoracic cavity. These findings suggested that the mass consisted of omental fat tissue through a congenital diaphragmatic hernia of Morgagni type, since it was located anteromedially.

Her blood glucose level was regulated and intravenous fluid was administered overnight. The general condition of the patient improved. General surgical consultation for the patient was done and elective

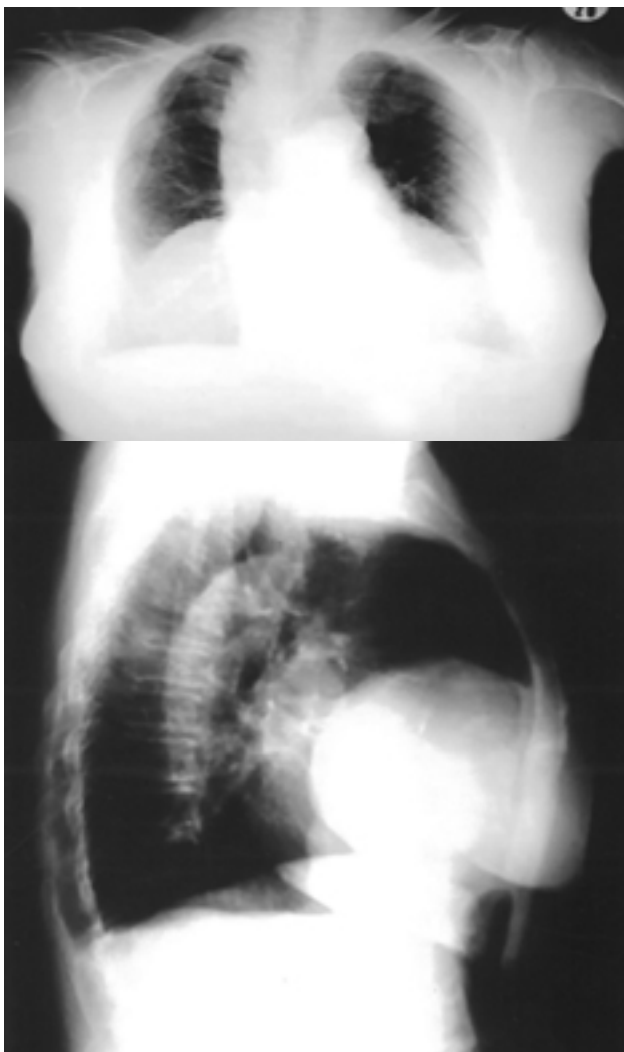


Figure 1-2. Posteroanterior chest X-ray showing a homogeneous increase in opacity, 9 cm in diameter and regularly delineated at the right para-cardiac area

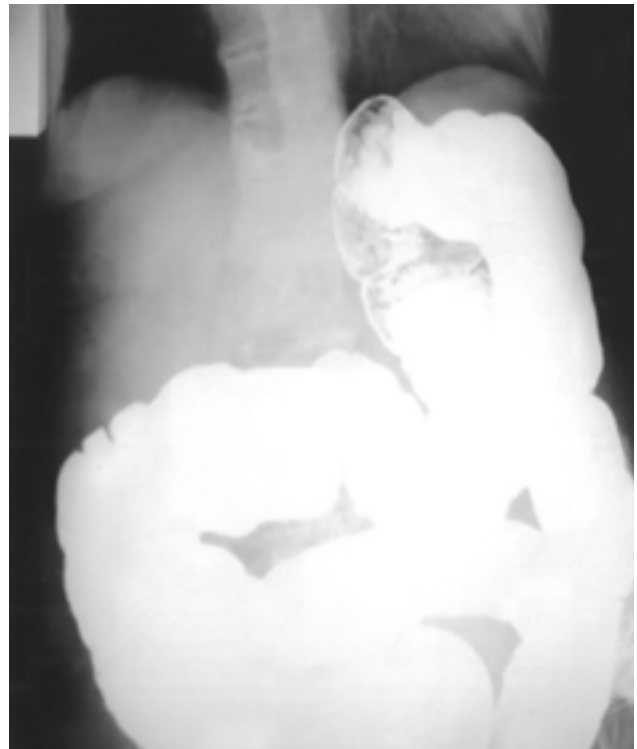


Figure 3. A barium meal study of the colon performed for the differential diagnosis of a potential congenital diaphragmatic hernia showed that colonic segments did not go beyond the diaphragm

surgery for the repair of the defect offered, but she declined the operation and was discharged uneventfully. She is fairly well during her two-year follow-up with intermittent mild symptoms.

DISCUSSION

Congenital diaphragmatic hernias are a rare form of diaphragmatic hernias during adult life. They are characterized by their location. Bochdalek's hernias are located posterolaterally and Morgagni hernias are located anteriorly. They may be mono- or bilateral. The incidence is 1/5,000 in every live birth. Ninety-eight percent of congenital diaphragmatic hernias are Bochdalek (posterolateral), and 2% are Morgagni (retrosternal or parasternal) hernias (1). Though Morgagni hernia is a congenital hernia, it is rarely diagnosed during the early years of life. It is generally asymptomatic in adults and detected incidentally on the chest X-ray (2). Here, in view of the rareness of its appearance, we report a 78-year-old female case with a Morgagni hernia diagnosed incidentally on the chest X-ray.

Morgagni hernia occurs as a herniation of intra-abdominal organs into the thorax through a parasternal or retrosternal defect of the diaphragm (1). It

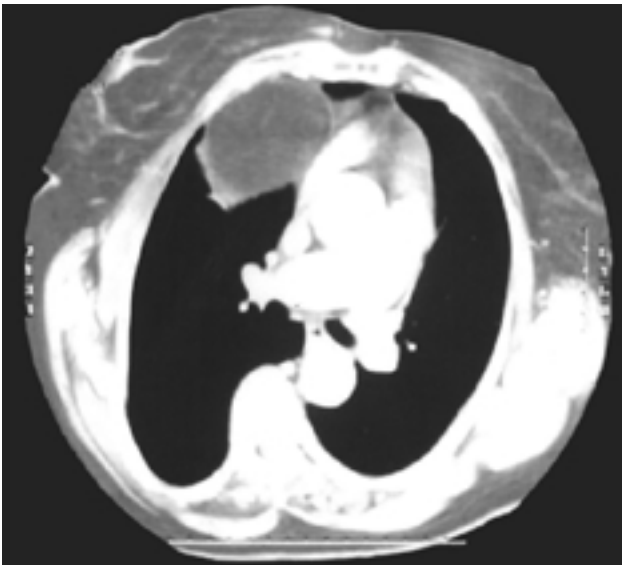


Figure 4. The lesion was observed anteromedially, starting parasternally and extending over to the carina, with an opacity which had the characteristics of fat tissue, and also pushing cardiac structures to the left hemithorax

was first described by Giovanni Battista Morgagni in 1761 (3). The herniation develops mostly on the right side of the diaphragm, with a incidence reported as 90%, but it can also occur on the left side, as well as bilaterally. The reason for the more infrequent occurrence on the left side was suggested to stem from the enhancement of the diaphragm by the heart and pericardium (3). The published studies in our country also show that the defect presents mostly on the right side (2). The pathology is more frequent in women. The frequency increases with age, particularly after 50 years of age (3). The case presented here was a 78-year-old woman, and the herniated pouch was observed on the right side. It may co-exist with other congenital abnormalities and may be familial as well. Although these cases present as a consequence of trauma, the most important etiological factor is considered to be a defect in embryological development (4).

In Morgagni hernia, the defect is usually small (1). Complaints are related to the size and content of the hernia. In Morgagni hernia, the content of the

herniation most frequently includes omentum and colon segments; however, stomach, liver and intestines might also be herniated. The herniated structure in the case presented here was also omental fat tissue. The symptomatology of Morgagni hernia is quite variable; the cases can be asymptomatic or may present with a clinical picture of acute respiratory distress (1). Asymptomatic cases or cases with a course of only slight chest or abdominal pain till advanced age have been reported in the literature. However, constipation, diarrhea, development retardation, vomiting, post-prandial distension, other gastrointestinal symptoms resembling gallbladder disorders or peptic ulcer, as well as repetitious pulmonary infections and acute respiratory distress related to the respiratory system can be observed in Morgagni hernia cases, who are more symptomatic during childhood than the adults. In diaphragmatic hernia cases, a decrease in the respiratory sounds or presence of colonic sounds on chest examination is a significant finding in diagnosis (3).

Risk of complications is quite high, with the main complications being gastric volvulus and colonic obstruction (2).

Plain pulmonary roentgenogram, radiological studies of the gastrointestinal system with contrast material, computerized tomography and magnetic resonance imaging studies are helpful in diagnosis. On the pulmonary roentgenogram, a space-occupying lesion is detected at the anterior mediastinum and intestinal loops might sometimes be seen at pulmonary areas. In cases with no emergency, contrasted passage radiological studies of the stomach-duodenum and/or colon might be performed. The nature of the mass detected in anterior mediastinum might be evaluated through CT scanning (2).

Space occupying lesions of the anterior mediastinum such as pleuro-pericardial cysts, pleural mesothelioma, pericardial fat cushion, mediastinal lipoma, diaphragmatic tumors or cysts, thymoma and front thoracal wall tumors should be considered in the differential diagnosis (1).

It is generally agreed that even asymptomatic cases should be repaired surgically (1). Nevertheless, this patient refused the surgery, most likely due to her advanced age, and was well during the follow-up.

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