ACCIDENTALLY FOUND MORGAGNI HERNIA IN ADULT - CASE REPORT

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Abstract
Adult onset diaphragmatic hernia is a rare condition with variable clinical manifestations. The majority of adult-onset diaphragmatic hernia is associated with trauma. Blunt thoracic and abdominal trauma associated with a 5% to 7% incidence of diaphragmatic injury, and in 3% to 15% for those with penetrating injury. In this report, we describe the case of an adult patient who had a rightsided diaphragmatic hernia but no history of trauma. Diaphragmatic hernia usually occurs in the posterolateral portion of the diaphragm (Bochdalek hernia) and is on the left side in 90% of cases; in 2% of cases it is bilateral. The estimated incidence is 1 to 4 in 10 000 live births. Anterior hernias (Morgagni hernia) are far less common.
Keywords: diaphragmatic hernia, Morgagni hernia

1. Introduction
The diaphragmatic hernia is protrusion of abdominal contents into the thorax through a defect in the diaphragm. There are two types of diaphragmatic hernia:
- Bochdalek hernia. A Bochdalek hernia involves the side and back of the diaphragm. The stomach, liver, spleen, and/or intestines usually move up into the chest cavity. Bochdalek hernia makes up about 80% to 90% of all cases.
- Morgagni hernia. A Morgagni hernia involves the front part of the diaphragm. The liver and/or intestines usually move up into the chest cavity. Morgagni hernia makes up 2% of all cases.[2,3,8]

The diaphragm is complete by 8 weeks of gestation from its components including the septum transversum and the pleuroperitoneal membranes. In congenital diaphragmatic hernia (CDH), the defect forms during the embryonic phase of lung development, usually on the left side (85–90%), but can occur on the right or bilaterally and may be associated with other anomalies. The commonest (70%) defect involves the posterolateral (Bochdalek) region of the diaphragm but the anterior (Morgagni; 25–30%) or central regions (2–5%) can also be affected. [5,14,15] Airway generations and terminal bronchioles are markedly decreased, alveolar septa are thickened, and there is decreased complexity of the respiratory acinus and alveolar volume. Arterial medial wall thickness is increased and peripheral muscularisation of smaller pre-acinar arteries occurs.[1,12] Loops of small and large bowel, stomach, liver, and spleen may protrude into the hemithorax on the involved side. If the hernia is large and the amount of herniated abdominal contents is substantial, the lung on the affected side is hypoplastic.[6,8]

2. Clinical report
Below is presented a case of 28-year-old man who was complaints it a high temperature and cough. He was hospitalized in the Pulmologycal clinic for treatment with diagnosis Pneumonia. The laboratory results showed signs of inflammation. Initial chest X-ray showed rounded mass in the right lung.

Fig. 1. Initial chest X-ray.

After five day treatment the X-ray image was without a change. The patient was without high temperature and the cough is redused. He was send for CT examination. CT was performed both as a non-enhanced study and after injection of intravenous contrast.

Fig. 2. An axial CT image shows the loops of bowel and mesenteric fat herniated into the right hemithorax.

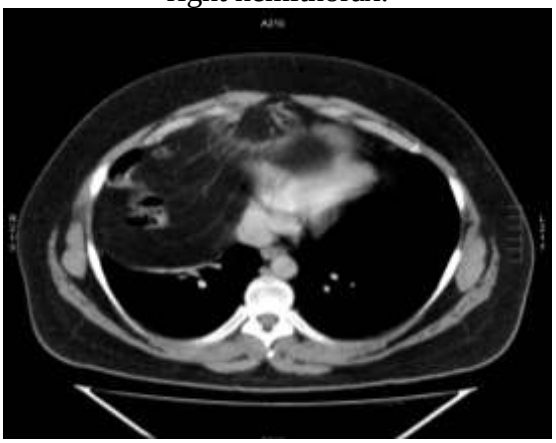

Fig. 3. An axial CT image shows a diaphragmatic defect at the ventral part.

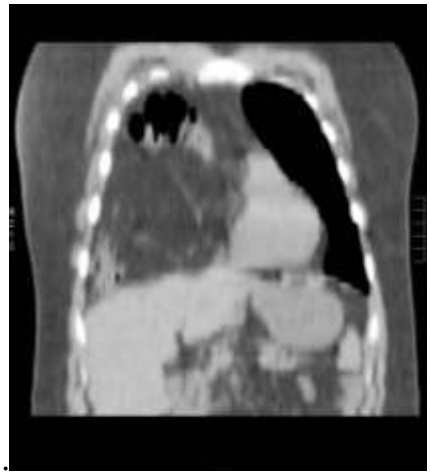

Fig. 4. CT showed scans in coronal reconstruction-the loops of bowel and mesenteric fat herniated into the right hemithorax.

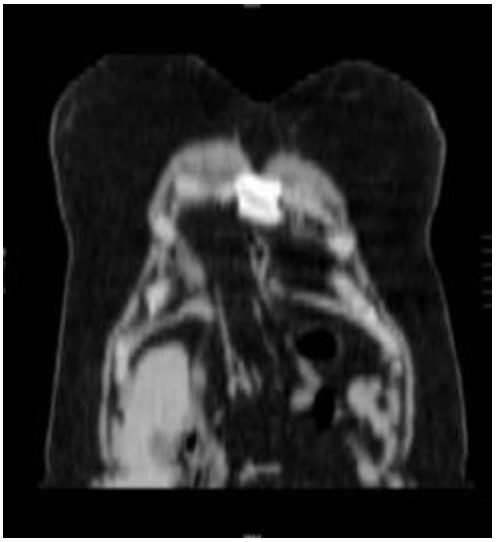

Fig. 5. CT showed scans in coronal reconstruction-Morgagni hernia involves the front part of the diaphragm

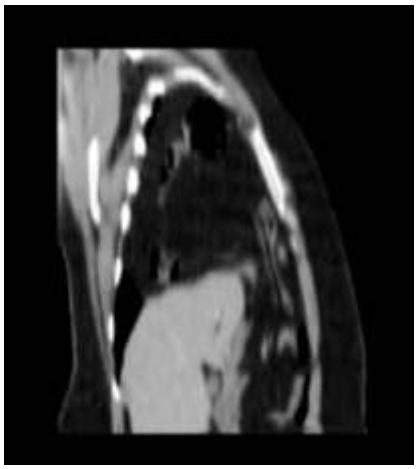

Fig. 6. CT showed scans in sagittal reconstruction-Morgagni hernia involves the front part of the diaphragm

Morgagni hernias are:

- anterior
- more often right-sided (~90%)
- small
- rare (~2% of CDH)
- at low risk of prolapse [6,7,9]

Additionally, recurrent chest infections and gastrointestinal symptoms have been reported in those with previously undiagnosed Morgagni hernia. Morgagni hernias most often contains omental fat, but transverse colon (60%) orstomach (12%) may be included within the hernia.
The main differential diagnosis for Morgagni hernia is a cardiophrenic fat pad.[4] Othercardiophrenic angle lesions can be considered in the differential diagnosis on chest radiograph, although Morgagni hernia is relatively radiolucent compared with other lesions not containing fat.
The cardiophrenic space is usually filled with fat. However, lesions originating above or lower to the diaphragm can present as cardiophrenic angle lesions.
The more common lesions encountered include:

- pericardial fat pad
- pericardial cyst
- pericardial fat necrosis
- Morgagni's hernia
- lymphadenopathy
- pericardial lipomatosis

Other less common lesions include:

- thymoma
- right middle lobe collapse
- impending cardiac volvulus: an abnormal bulging can be seen at the cardiophrenic angle, preceding cardiac volvulus
- fibrous tumour of the pleura
- hydatid cyst [4,9,11]

3. Conclusions

Diaphragmatic hernia is a multifactorial condition, which means that "many factors," both genetic and environmental, are involved. It is thought that multiple genes from both parents, as well as a number of environmental factors that scientists do not yet fully understand, contribute to diaphragmatic hernia. It is necessary to take correct decisions for treatment.

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