CASE REPORT

Late presentation of a large Morgagni hernia in an adult

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delia.marinceu@gmail.com**SUMMARY**

A 57-year-old man with no medical history and comorbidities presented to the outpatient clinic with a 2-week history of increasing cough and shortness of breath following a recent viral upper respiratory tract infection. Chest X-ray showed increased mediastinal opacity. A CT scan of the thorax was performed which revealed a large right-sided diaphragmatic hernia extending across the mediastinum to the left side of the chest. Repair was performed via combined transthoracic and transabdominal approaches.

INVESTIGATIONS

See figures 1 and 2 for chest X-ray and CT of the thorax.

TREATMENT

Bronchoscopy was also performed before the surgical procedure which revealed a normal trachea. Right upper lobe, middle lobe and lower lobe bronchi were slit-like and compressed. No abnormality of the bronchial tree was found on the left side. Surgical repair was performed via right anterolateral thoracotomy. A large hernia was

BACKGROUND

Congenital diaphragmatic hernia (CDH) is an idiopathic malformation in humans that usually presents in infancy and childhood. CDH is one of the most common worldwide conditions, occurring approximately in 1 of 3000 births, with an overall higher prevalence in men.^{1 2} Morgagni hernias make up only 3% of all diaphragmatic hernia cases, extremely rare in adults and more common in the paediatric population, usually right sided or in the anterior mediastinum due to the retrosternal location of the foramen of Morgagni.³ The presence of diaphragmatic hernia in adulthood is very rare, and such a late presentation is usually associated with chronic respiratory or gastrointestinal symptoms, although it can also remain completely asymptomatic and just be an incidental finding.⁴

CASE PRESENTATION

A 57-year-old man presented with a history of chronic cough and increasing shortness of breath following a mild upper respiratory infection. The patient had no medical history, was not on any medications, no recent history of any trauma and had never had any investigations performed prior to this presentation. No childhood abnormalities on record, patient denies ever being more seriously ill than with the common cold. Family history was negative for any congenital defects or conditions. Chest X-ray performed showed increased mediastinal opacity (figure 1). A CT scan of the thorax revealed bowel loops present in the right hemithorax extending across the front of the mediastinum to the left side of the chest contained in hernia sac (figure 2). Remarkably, the patient had never had any previous imaging performed, and has always lived in the same area. The diagnosis of Morgagni diaphragmatic hernia was made, and the patient was admitted to the cardiothoracic surgery department for surgical repair.

Figure 1 Chest X-ray before (A) and after surgery (B).

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Figure 2 CT scan of the thorax. Abdominal viscera present in right hemithorax (A and B).

identified in the right side of the chest, extending across the front of the mediastinum to the left side of the chest. It was easily separated from the lungs, however it could not be easily reduced from the chest, therefore requiring a further transabdominal approach for hernia reduction. The bowel was viable, the hernia sac was ligated and resected. A Cormatrix ECM patch was used to repair the defect in the anterior diaphragm close to the central tendon. The incision was closed with continuous 2/0 Prolene and a number of interrupted sutures.

OUTCOME AND FOLLOW-UP

Repair was successful, patient was discharged home 5 days post-surgery. Outpatient clinic follow-up in 6 weeks time showed excellent recovery and no complications.

DISCUSSION

In adults, the late presentation of CDH is associated with lower morbidity and mortality than in the neonates as lung hypoplasia is not a component of the pathology, because in contrast to the neonatal group, the adult lungs are fully developed with normal functional reserves and only become compressed by the herniated contents. This explains the association of chronic

respiratory symptoms and CDH in the adult population group. Owing to the maintenance of normal lung structure and reserves, these patients tend to have an overall better prognosis and outcome postoperatively due to the preservation of lung function. There is no consensus to suggest that the presence of a hernia sac in adult CDH presentation confers an advantage, although certain authors suggest that a rupture of a hernia could serve as a trigger for a symptomatic onset.⁵ When it comes to surgical repair of CDH, there are several techniques used: video assisted thoracoscopy, laparoscopy and transthoracic or transabdominal approach. In adults, the video thoracoscopic method can allow for more choices when it comes to extrathoracic ligation, as well as offering a more precise control during the dissection of thoracic adhesions while also having the advantage of being a minimally invasive procedure.⁶ However, for right-sided hernias the transthoracic approach can permit the surgeon to have a better visualisation of the surgical field, a wider exposure and facilitate easier repair; especially in large hernias, where a combined transthoracic and transabdominal approach—as was used in our case—is preferable.^{7 8}

Learning points

- ▶ Late presentation of a Morgagni congenital diaphragmatic hernia (CDH) is quite rare.
- ▶ New onset respiratory symptoms in patients with no significant clinical history can be the only indication of CDH.
- ▶ Surgical repair can be performed using a variety of methods, however a combined open transthoracic and transabdominal approach should be considered in large defects such as the one presented in this report.

Contributors DM was involved in preparing the draft of the manuscript and submission and was directly involved in caring of the patient. ML and HO revised the draft and were directly involved in caring of the patient.

Competing interests None.

Patient consent Obtained.

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