CASE REPORT
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A rare adult morgagni hernia mimicking lobar pneumonia

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ABSTRACT

Morgagni hernia is the rarest form of congenital diaphragmatic hernia and is commonly found either in the first few hours of life or in antenatal period. It is less common in adult and is mostly diagnosed incidentally in an asymptomatic patient. Symptomatic adult cases are even rarer with a wide variety of symptoms. Here we report a patient with a one year history of chronic recurrent cough and dyspnea, who had been misdiagnosed as recurrent pneumonia before being recognized and treated as Morgagni hernia.

Keywords: Adult, morgagni hernias, misdiagnosis

INTRODUCTION

Morgagni hernia is the rarest form of congenital diaphragmatic hernia with 2-3% of prevalence. Herniation occur due to defect on the anterior part of diaphragm, which allows abdominal organs penetrate thoracic cavity (1). It is commonly found in the first few hours of life or in antenatal period (2). This condition can be detected during fetal life by routine ultrasonography, when the abdominal organs are demonstrated in thoracic cavity (3). Late findings of this condition in adults are less common with only 81 asymptomatic cases reported between 1955 and 2002. Symptomatic adult cases are even rarer with only 12 cases described (4).

Adult patients who present with diaphragmatic hernias complain a wide variety of non-specific symptoms and the diagnosis may be difficult (2). The majority describe abdominal pain due to strangulation of the viscera (1). However, very few also complain about respiratory symptom such as cough, dyspnoea, and chest pain depending on the severity of the defect (5). Here we report an adult male with chronic recurrent cough, who had been treated as recurrent pneumonia before being diagnosed as Morgagni hernia.

CASE REPORT

A 22 year old male was admitted to the emergency department with a one year history of chronic recurrent cough and dyspnea. He had been treated as recurrent pneumonia in several hospitals. Two days before admission, productive cough and dyspnea were developed. Simple chest X-ray showed a non-specific opacity at the right lower hemi-thorax and the left hemi-diaphragm was not clearly visible (Figure 1). The patient was diagnosed with lobar pneumonia and treated by other department. After two days in the hospital, the patient was consulted to our department with aggravated dyspnea and vomiting. Computed tomography (CT) scan of the chest was performed. Ascending colon and small intestine were demonstrated at the right hemi-thorax (Figure 2).

Furthermore, the patient underwent reduction of hernia contents via laparotomy approach and evaluated for any sign of intestinal injury or ischemic. The hernia sac was left unresected. Thoracotomy approach was used to expose the diaphragm defect, there was a 5 x 6 cm defect on the right anterolateral of right hemi diaphragm. The defect was closed using dacron patch. A thoracic drain was placed

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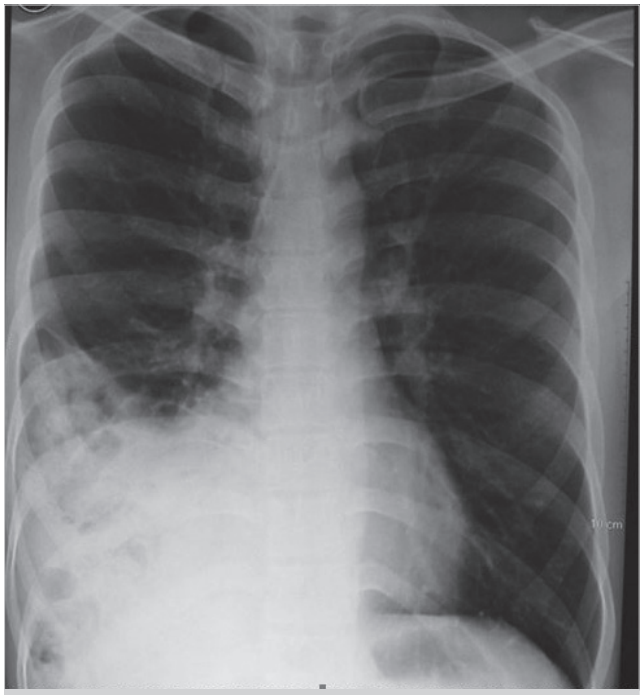

Figure 1. Simple chest X-ray showing a non-specific opacity at the right lower hemi-thorax.

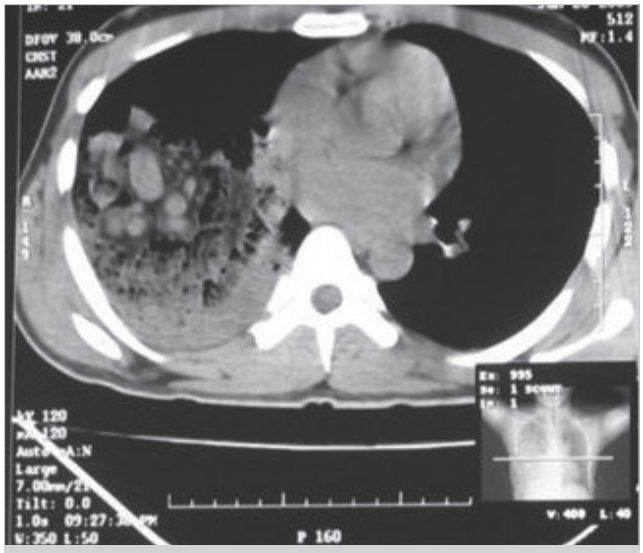

Figure 2. CT scan of chest showing ascending colon and small intestine at the right hemi-thorax.

to be evaluated for any secret later, and then the operation was terminated.

Three months after the surgery, the patient was completely recover without symptoms. A follow-up chest X-ray revealed normal pulmonary vasculature without residual hernia (Figure 3). Written informed consent was obtained from patient who participated in this case.

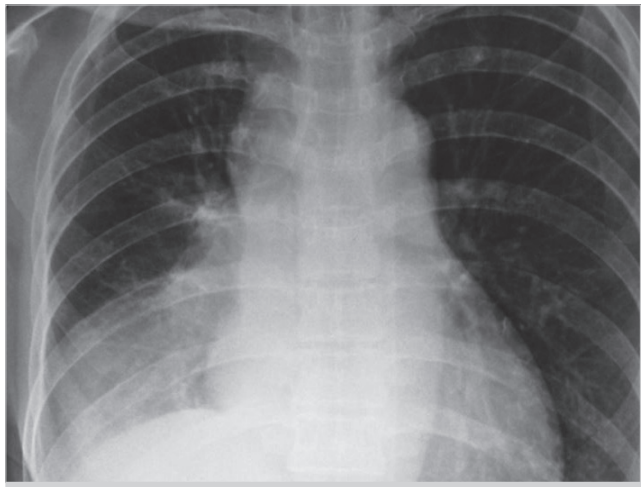

Figure 3. A follow-up simple chest X-ray showing normal pulmonary vasculature without residual hernia.

DISCUSSION

Majority of adult Morgagni hernia cases are asymptomatic due to plugging of the defect by the underlying liver or omentum, which prevent other abdominal organs herniation into thoracic cavity (6). Therefore, most patients were diagnosed incidentally by a routine chest X-ray. In symptomatic cases, the patients may complain a wide variety of non-specific respiratory and gastrointestinal symptoms and the diagnosis might be difficult. Respiratory symptoms of chest pain, dyspnea and recurrent respiratory infection are commonly found in pediatric patient (4). In adult, majority of cases are presented with non-specific gastrointestinal symptoms due to intestinal obstruction or strangulation of abdominal organs (1,4). Our case was unique, that the patient had predominant respiratory symptoms for one year and had been treated as recurrent pneumonia in several hospitals before diagnosed and treated as Morgagni hernia. This case illustrates the difficulty in diagnosis of adult Morgagni hernia, which is rare and presented with non-specific symptoms.

Radiological investigation can be performed to confirm the diagnosis of Morgagni hernia. Plain chest X-ray are usually conclusive for diagnosing Morgagni hernia in pediatric or asymptomatic adult patients (4). The opacity can be seen in right, left, or bilateral pericardiophrenic area due to herniation of omentum. In the presence of transverse colon, small intestine, or gastric herniation, air fluid level may present (7). However, in our case, plain chest X-ray only is inconclusive and causing previous misdiagnosis. Respiratory symptoms of productive cough and dyspnea accompanied with opacity on plain chest X-ray in this case are suggestive for lobar pneumonia (Figure 1).

In symptomatic or clinically suspected adult patients, CT scan is preferred to confirm the diagnosis. It is the most sensitive diagnostic tools as it provides anatomical details of hernia contents and its complication (1). In this case, CT scan provides essen-

tial information regarding ascending colon and small intestine herniation at the right hemi thorax to confirm the diagnosis of Morgagni hernia (Figure 2).

Because of the rarity of the case, there is no exact guidelines for Morgagni hernia treatment. Our case was managed with thoracic-abdominal approach. The most common surgical approach is open laparotomy, due to the convenience to reduce hernia content and evaluate the intestine for any sign of injury or complication such as strangulation and ischemia (8,9) Thoracotomy approach is preferable for its extensive exposure and easier repair of the diaphragm defect (9). Thoracic-abdominal approach is used in patient with huge Morgagni hernia (10). We use thoracic-abdominal approach for its convenience to reduce the hernia content and repair of the diaphragm defect. The usage of prosthetic patch to close the defect is not a mandatory. Patch is used when the defect is more than three cm (11).

Hernia sac excision was not done in our case. Hernia sac excision in Morgagni hernia case is still a controversy, however it is considered to be safer to left the hernia sac unresected due to possibility to cause pneumomediastinum and injury to the lung, pericardium, or other mediastinal organ (12).

CONCLUSION

Symptomatic adult cases of Morgagni hernias are rare, non-specific in symptoms, and difficult to diagnose. Radiologic investigation using CT scan can be used to confirm the diagnosis. The thoracic abdominal approach is preferable due to better exposure for defect repair and easier hernia content reduction.

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REFERENCES

1. *Arora S, Haji A, Ng P. Adult morgagni hernia: the need for clinical awareness, early diagnosis and prompt surgical intervention. Ann R Coll Surg Engl 2008; 90: 694-5.*
2. *Kadian YS, Rattan KN, Verma M, Kajal P. Congenital diaphragmatic hernia: misdiagnosis in adolescence. J Indian Assoc Pediatr Surg 2009; 14: 31-3.*
3. *Bianchi E, Mancini P, de Vito S, Pompili E, Taurone S, Guerrisi I, et al. Congenital asymptomatic diaphragmatic hernias in adults: a case series. J Med Case Rep 2013; 7: 1-8.*
4. *Loong TP, Kocher HM. Clinical presentation and operative repair of hernia of Morgagni. Postgrad Med J 2005; 81: 41-4.*
5. *Çolakoğlu O, Hacıyanli M, Soytürk M, Çolakoğlu G, Şimşek I. 2005. Morgagni hernia in an adult: atypical presentation and diagnostic difficulties. Turk J Gastroenterol 2005; 16(2): 114-6*
6. *Eren S, Gümüs H, Okur A. A rare cause of intestinal obstruction in the adult: morgagni's hernia. Hernia 2003; 7: 97-9.*
7. *Aghajanzadeh M, Khadem S, Jahromi SK, Gorabi HE, Ebrahimi H, Maafi AA. Clinical presentation and operative repair of morgagni hernia. Interact Cardiovasc Thorac Surg 2012; 15: 608-611.*
8. *Yılmaz M, Işık B, Çoban S, Söğütlü G, Ara C, Kırımlıoğlu V, Yılmaz S, Kayaalp C. Transabdominal approach in the surgical management of Morgagni hernia. Surg Today 2007; 37:9-13*
9. *Horton JD, Hofmann LJ, Hetz SP. Presentation and management of Morgagni hernias in adults: a review of 298 cases. Surg Endosc 2008; 22:1413-20*
10. *Kılıç D, Nadir A, Döner E, Kavukçu S, Akal M, Özdemir N, Akay H, Ökten İ. Transthoracic approach in surgical management of Morgagni hernia. Eur J Cardiothorac Surg. 2001. 20; 5: 1016-9*
11. *Griffiths EA, Ellis A, Mohamed A, Tam E, Ball CS. Surgical treatment of a Morgagni hernia causing intermittent gastric outlet obstruction. BMJ Case Rep 2010; 2010: bcr0120102608*
12. *Thoman DS, Hui T, Phillips EH. Laparoscopic diaphragmatic hernia repair. Surg Endosc 2002; 16:1345-9*

OLGU SUNUMU-ÖZET
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Lobar pnömoniyi taklit eden seyrek morgagni hernia

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ÖZET

Morgagni fıtığı, konjenital diyafragma fıtıklarının nadir bir formudur, yaşamın ilk birkaç saatinde ya da doğum öncesi dönemde bulunur. Yetişkinlerde çok yaygın değildir ve çoğunlukla asemptomatik bir hastada tesadüfen teşhis edilir. Semptomatik yetişkin vakaları, çok çeşitli semptomlarla bile daha nadirdir. Burada bir yıllık kronik tekrarlayan öksürük ve dispne öyküsü olan, Morgagni fıtığı tanısı konmadan ve tedavi edilmeden önce tekrarlayan pnömoni olarak tedavi edilen bir hasta sunuyoruz.

Anahtar Kelimeler: Yetişkin, konjenital diyafragma hernia, pnömoni

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