Incarcerated Morgagni hernia provoked by pregnancy
懷孕促成莫干尼疝的箝閉

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Morgagni hernias are rare diaphragmatic hernias, usually occurring on the right and located in the anterior mediastinum. Herniation of abdominal contents is typically caused by an increase in intraabdominal pressure secondary to trauma, pregnancy or obesity. In this article, a 35-year-old pregnant woman with a Morgagni hernia diagnosed on chest X-ray is presented. Emergency laparotomy was performed with reduction of the herniation and repair of the diaphragmatic defect. To our knowledge, this is the first reported case of hernia in a pregnant woman with incarcerated bowel presenting with respiratory and gastrointestinal symptoms from Turkey. (Hong Kong J Emerg Med. 2010;17:392-394)

莫干尼疝為罕有的橫隔膜疝，通常位於前縱隔的右方。典型地因創傷、懷孕或肥胖而令腹內壓力增加，引致腹內載物疝出。本文描述一名35歲孕婦從胸部X光診斷莫干尼疝。進行緊急剖腹手術，將疝突復位及修補橫隔膜的缺損。據我們所知，這是土耳其首個報導的孕婦箝閉腸臟疝個案；呈現呼吸及腸胃的症狀。

Keywords: Diaphragmatic hernia, pregnancy

關鍵詞：橫隔膜疝、妊娠

Introduction

Morgagni hernias are rare diseases in the general population. Morgagni hernia is the rarest type among all congenital diaphragmatic hernias. Most of the patients are female and 92% of the hernias have hernia sac. The majority of Morgagni hernias are right-sided; left-sided and bilateral occurrence are rare because of the protection provided by the pericardial sac. The majority of cases are detected in adulthood as an incidental finding in chest radiograph. However in some cases, bowel obstruction and abdominal pain may present and surgical repair has to be performed in order to prevent incarceration. Pregnancy provides additive factors of increased intra-abdominal pressure because of nausea and vomiting until the 16th week and the enlarged pregnant uterus from the second trimester onwards. We report a case of Morgagni hernia presenting as incarceration of the small intestine and caecum in a pregnant woman.

Case

In June 2009, a 35-year-old primigravida woman was
admitted to our emergency department at 21 week gestation. The patient had symptoms of shortness of breath and abdominal pain for two weeks. She presented with generalised abdominal pain, anorexia, nausea and shortness of breath. There was no significant past medical history or trauma. Her blood pressure was 110/60 mmHg; pulse rate was 78 bpm with regular rhythm, and respiratory rate was 20/min. The conjunctiva was pink, the sclera was anicteric, and the oral mucosa was moist with good skin turgor. There was no adenopathy. Auscultation revealed decreased breath sounds in the right lung. Tenderness on deep palpation in the right upper quadrant, guarding and rebound tenderness were present. The liver and renal function test results were within normal limits. After obtaining informed consent from the patient, a posteroanterior chest X-ray was taken with abdominal cover, and bowel shadows were detected in the right lower zone (Figure 1).

With the provisional diagnosis of acute abdominal condition, the patient was admitted to the surgical ward. During operation, it was found that in the right lower part of the sternum, there was a 10 x 4 cm Morgagni hernia in which the caecum and terminal ileum were both incarcerated. In addition, mobile and long mesocaecum was also detected. The defect and hernia sac were repaired with 2/0 Prolene. On postoperative day 2, the hernia sac in the right paracardiac region could not be detected at the coronal T1 and coronal T2 weighted sequences of thoracic magnetic resonance imaging. It was reported as having normal diaphragmatic continuity (Figure 2). The

![Figure 1. Posteroanterior chest radiograph at admission showing a right paracardiac hernia containing colonic segments.](image1)

![Figure 2. Thoracic magnetic resonance imaging on postoperative day 2 showing no hernia sac in the right paracardiac region at coronal T1 and coronal T2 weighted sequences.](image2)
postoperative course was uneventful and she was then followed up in our general surgery outpatient clinic. The pregnancy was allowed to continue until 40 weeks’ gestation, at which time elective Caesarean delivery was performed. She gave birth to a healthy boy.

Discussion

The findings of retrosternal herniation of abdominal contents into the thoracic cavity were first described by Morgagni in 1790. Morgagni hernia is a disease in which abdominal contents herniate into the thoracic cavity through a congenital parastratal defect of the diaphragm resulting from increased intra-abdominal pressure. Obesity, pregnancy, and history of trauma are considered predisposing factors of Morgagni hernia.1,5 Half of Morgagni hernia patients show no specific symptoms other than mild respiratory discomfort and vague gastrointestinal manifestations, such as shortness of breath, postprandial vomiting or gastroesophageal regurgitation, intermittent nausea/vomiting, abdominal distension, and dysphagia.1,5

In rare cases, herniated intestinal contents may get incarcerated.2-6 Pregnancy may increase intra-abdominal pressure, allowing ileum and caecum herniation into the chest as seen in our patient. Although Morgagni hernia usually lies on the right side and slightly posterior to the xiphoid process, it may present on the left side or bilaterally.1

Most Morgagni hernias have a hernia sac. Hernia sac frequently contains omentum, transverse colon and rarely stomach or liver.6,7 A hernia sac containing terminal ileum and caecum was present in our case.

Though Morgagni hernia is a congenital condition, it is rarely diagnosed during the early years of life. It is generally asymptomatic in adults and detected incidentally on chest X-ray.7 Plain chest roentgenogram, radiological studies with contrast of the gastrointestinal system, computed tomography and magnetic resonance imaging studies are helpful in diagnosis.

Conclusion

This case represents the first report from Turkey of right-sided adult Morgagni hernia of a pregnant woman with unusual presentation and significant bowel strangulation. Missing the diagnosis can lead to life-threatening complications such as obstruction or strangulation which warrants early surgical intervention. In conclusion, Morgagni hernia should be taken into consideration for patients presenting with abdominal pain and chest X-ray is helpful in diagnosis. In our opinion, urgent operation is crucial and should be performed promptly, even in pregnant females.

References