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Case Report

Congenital diaphragmatic hernia presenting in the sixth decade mimicking pneumonia

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Abstract

Congenital diaphragmatic hernia presentation in adults is extremely rare. Patients who present with late diaphragmatic hernias complain of a wide variety of symptoms and diagnosis can be difficult. We report a case of a 64 year old male who presented with a six month history of cough, shortness of breath and weight loss. The most common strategy to treat a Bochdalek hernia is via a thoracotomy or laparotomy or both. In our patient the repair was performed with a thoracotomy.

Keywords: Congenital diaphragmatic hernia; Sixth decade.

Introduction

The most common type of congenital diaphragmatic hernias occurs in the posterolateral portion of the diaphragm though the foramen of Bochdalek's. The prevalence of posterolateral diaphragmatic hernia has been estimated to be 1 in 2,500 live births.[1] A majority of the patients will be diagnosed either antenatally or will present with respiratory distress in the first few hours of life. However, about 5% to 25% of diaphragmatic hernias present beyond the neonatal period.[2]

We present a case of Bochdalek Hernia in a 64-year-old male.

Case Report

A 64 year old male presented with a 6 month history of cough, shortness of breath and weight loss. The patient had an insignificant past medical and family history. On the basis of chest X ray the patient was diagnosed as having pneumonia and received treatment likewise. Since the patient's condition did not improve, the chest x ray was repeated. A similar chest x ray was seen with a non homogenous shadow present in the left mid zone of the lung pushing the heart to the right side. The patient was advised to get a CT scan which revealed a congenital diaphragmatic hernia on the left containing transmitting omental fat, splenic flexure of the colon, stomach and spleen. The mass was causing compression on the undersurface of the left lung and shift of the heart to the right side.

The patient underwent thoracotomy. An incision was made and the thorax was entered at the level of the left sixth intercostal space. The herniated abdominal contents were replaced. The defect was closed and a prolene mesh was placed. Subsequent chest x rays after the operation were normal and the patient recovered completely without any post-operative complications.

Discussion

Congenital diaphragmatic hernias are usually found in neonates and around 10% of all reported cases occur in adults.[3] A Bochdalek hernia, resulting from inadequate closure of the posterolateral pleuroperitoneal membrane, is the most frequently seen congenital diaphragmatic hernia. The incidence of Bochdalek's hernia in routine CT scans has been reported to vary from as low as 0.17% to as high as 6%.[4] Thus, they are more common than assumed but the majority stay asymptomatic and only a small number present with complications.

Defects occur more frequently on the left side (70-90%) than on the right side of the diaphragm, and abdominal contents, including stomach, bowel loops, liver, spleen or fat tissues, can be displaced into the thoracic cavity.[4] In 73% of adults, the hernia involves only omentum or fat.[3] As we observed in our patient, the hernial contents, not only, included omentum and fat but also the splenic flexure of the colon, stomach and spleen.

In adulthood a congenital diaphragmatic hernia can present with gastrointestinal tract symptoms which can include intermittent abdominal pain, vomiting, and dysphagia. Respiratory symptoms usually include dyspnoea and chest pain.[5] Our patient presented with a constellation of respiratory symptoms such as cough and dypnoea. Symptoms may be intermittent or acute depending on the extent of herniation of abdominal viscera into the thorax. Acute presentation is usually due to incarceration, obstruction, or strangulation of the hernia.[6]

Diagnosis is ascertained by a combination of chest X-rays, computed tomography (CT), magnetic resonance imaging (MRI), as well as upper gastrointestinal and bowel double-contrast study. Previously normal chest X-rays do not rule out the presence of Bochdalek's hernia.[7] Typical findings on a CT scan would be the abuttment of fat or soft tissue along the upper surface of the diaphragm,

characteristic posterolateral location on the hemidiaphragm, diaphragmatic discontinuity adjacent to the mass, and density continuity above and below the diaphragm through the defect.[8] Bochdalek hernia can be misdiagnosed as pleural effusion, pneumonia,[9] tension pneumothorax,[1] lung cysts, and atelectasis.[10] In another case report, a late Bochdalek hernia, which presented at the age of 15 years in Peshawar, Pakistan, was initially misdiagnosed as pulmonary tuberculosis.[11] Bochdalek hernia can also simulate neoplastic disease, pulmonary sequestration,foreign material aspiration, or pleuritis.[1,12]

Management of a Bochdalek hernia includes reducing the abdominal contents and repairing the defect through a laparotomy or thoracotomy. Successful laparoscopic and thoracoscopic repairs of Bochdalek hernias have both been described. Right-sided defects are usually dealt with by a thoracic or thoracoabdominal approach because of the presence of the liver. For left-sided hernias some suggest a transthoracic approach while others advise a transperitoneal approach.[2] The indications to repair congenital diaphragmatic hernia are the same as those to treat any hernia, and should take into account the patient's overall medical condition.

Outcome of adult patients having Bochdalek hernia depends on the type of clinical presentation. The mortality rate for elective surgery has been reported at less than 4%.[13] However, when the patient presents in an acute state, mortality can be as high as 32%, when diagnosis is delayed or complications have developed.[14]

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