LETTER TO THE EDITOR

A Growing Mass in the Mediastinum: Hiatus Hernia

Bowditch first published a description of a hiatus hernia (HH) in 1853. In 1919, Soreni was the first to surgically reduce a HH. During the first half of the 20th century, the association between gastroesophageal reflux disease (GERD) and HH was established. HHs are classified into four types: type I indicates sliding hernia; type II, paraesophageal hernia (incidence <5%); type III, mixed sliding and paraesophageal hernia; and type IV, herniation of additional organs (colon, omentum, and spleen). A giant HH is a hernia that includes at least 30% of the stomach in the thorax, and most commonly is a type III hernia. There are two potential mechanisms of giant HHs: (1) GERD leads to esophageal scarring and shortening with traction on the gastroesophageal junction and gastric herniation; and (2) chronic positive pressure on the diaphragmatic hiatus with a propensity to herniation leads to gastric displacement into the thorax, resulting in causing GERD. We report an elderly patient with a growing mass in the mediastinum on the roentgenogram, who was already treated for erosive esophagitis.

An 85-year-old female patient presented herself with a large mass in mediastinum on the chest roentgenogram. The patient had already received both treatments with a proton pump inhibitor for erosive esophagitis and a calcium channel blocker for hypertension. She had neither chest oppression nor respiratory distress. Her physical examination results showed that she was neither anemic nor febrile. Her blood pressure indicated 125/70 mmHg on the supine position. In fact, her chest roentgenography revealed a large mass overlapping with the heart (Figure 1A, arrows), which included the air-fluid level (arrowheads), with a pulmonary scar in the right lower field. Retrospective analyses using the chest roentgenograms showed that the mass was found on the film obtained 2 years ago (Figure 1B, arrows), and that it was not detected on the film 4 years ago (Figure 1C). Chest computed tomography indicated a large HH with intrathoracic stomach located behind the left atrium (Figure 1D) as previously described. A diagnosis of HH type III was made. At follow-up 1 year later, the patient was asymptomatic, although she received no further treatment.

Lim et al have recently reported a unique case of a massive HH in a 93-year-old woman patient, compressing on the left atrium, mimicking a left atrial mass. A massive HH and the thoracic stomach were also illustrated by barium swallow as images in cardiovascular medicine during left atrial catheter ablation for atrial fibrillation. Echocardiography is an investigational tool for identifying cardiac masses. However, detection of extracardiac masses using echocardiography may lead to a misdiagnosis. The result from another asymptomatic patient with a paracardiac mass in the right lower lobe suggests the remarkable accuracy of chest computed tomography for diagnosing a massive HH containing the whole stomach and fatty omental tissue. A case of massive HH masquerading as a tension pneumothorax was also reported. Clinicians should consider a large HH when examining patients with a mass that is located behind the heart in the mediastinum on the roentgenogram. Our images concerning HH appear to be instructive for clinicians.

References


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Figure 1  Chest roentgenography reveals (A) a large mass overlapping with the heart (arrows), which includes the air–fluid level (arrowheads), with a pulmonary scar in the right lower field. Retrospective analyses using the chest roentgenograms show that (B) the mass was found on the film obtained 2 years previously (arrows), and that (C) it was not detected on the film 4 years ago. (D) Chest computed tomography indicates a large hiatus hernia with intrathoracic stomach located behind the left atrium.