

65-year-old Lady with Right Sided Chest Pain-Interesting Radiology

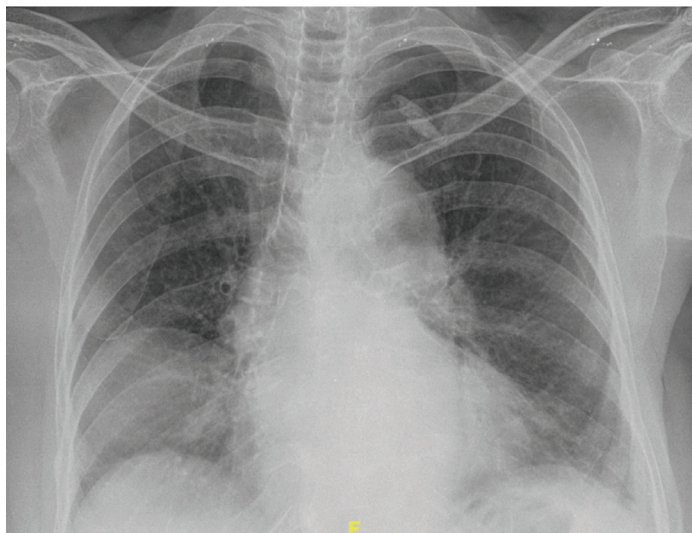
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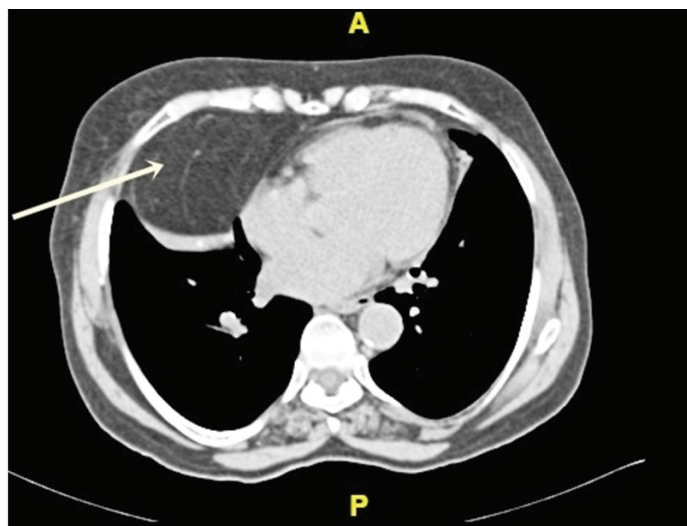
Congenital Diaphragmatic Hernia (CDH) are known to occur in 1 in 3000 to 1 in 5000 pregnancies [1]. Three types of diaphragmatic hernia are encountered, namely bochdalek hernia, Morgagni hernia and Para Oesophageal Hiatus Hernia. Bochdalek hernia is the most common type which results from defect in the posterior part of diaphragm. Morgagni hernias result from an anterior defect and are the least common type of CDH accounting for about 5% [2]. Although congenital, delayed presentation in adults are also reported.

We present the case of a 65-year-old homemaker who presented with a six month history of right sided chest pain and dry cough. No history of trauma was reported. She denied a past history of tuberculosis and had no co-morbid illness. On examination, respiratory system examination was normal. Electrocardiogram (EKG) showed sinus rhythm. Chest X-ray demonstrated a homogenous opacity at the anterior lung base in the right cardio-phrenic sulcus and gastro oesophageal junction [Table/Fig-1]. Possibilities of right lower consolidation and diaphragmatic hernia were considered. Computed Tomography (CT) of the chest was done which showed a defect in the anterior end of right diaphragm with herniation of omentum into the right chest [Table/Fig-2]. Diagnosis of Morgagni hernia was then established.

Morgagni hernia was first described by Giovanni Battista Morgagni in 1769 [3]. It is caused by a congenital defect during the fusion of septum transversum of the future diaphragm and the costal arches. The usual location is posterolateral to the sternum. During raise of intra-abdominal pressure, the defect is accentuated resulting in herniation of intra abdominal contents. Right side is commonly involved, however left sided and bilateral involvement have also been reported. Left sided Morgagni hernia is also called Morgagni-Larrey Hernia [4].



[Table/Fig-1]: Chest X-ray showing a homogenous opacity at the cardiophrenic angle.



[Table/Fig-2]: CT scan showing right sided anterior herniation of omentum into the thoracic cavity.

In right sided hernia, the most common content is omentum followed by colon and small intestine whereas, stomach is the most common content in left sided hernia [5]. Pre-disposing factor for herniation like obesity, chronic cough and chronic constipation are seen in only half of the reported cases [6]. About 1/3rd of patients are asymptomatic. The most common complaints are chronic gastrointestinal symptoms like epigastric pain, fullness, substernal pain and constipation [7]. Acute presentation like complete obstruction, incarceration or strangulation of herniated viscera are less commonly encountered.

Diagnosis is established by imaging studies. On a routine chest X-ray, a pericardiophrenic opacity is usually seen. Omental herniation causes opacification and an airfluid level is seen if the content is stomach or transverse colon [3]. A Computed Tomography (CT) scan is usually the diagnostic method of choice. CT not only shows the hernia content but also the location of the defect [8].

Roentgenological differential diagnosis includes right middle lobe collapse, neurolipoma, consolidation, lung sequestration, pericardial fat pad, lymphoma and thymic tumour [9].

Treatment is usually surgical to avoid potential incarceration and strangulation. Repair via trans-thoracic or trans abdominal approach are performed. Minimally invasive laparoscopic approach or video assisted thoracoscopic approach are also performed [4].

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