

Hiatus hernia in a 6-year-old boy: A rare presentation

Abstract

Hiatus hernia refers to upward displacement of the stomach through the diaphragmatic esophageal hiatus into the thoracic cavity. It is rare in children and may be asymptomatic or may present with various symptoms. We are reporting a case of sliding hiatus hernia detected incidentally in a 6 year old boy.

Key words: Barium swallow, chest radiograph, computed tomography scan, hiatus hernia

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INTRODUCTION

In hiatus hernia abdominal viscera push up into thoracic cavity through the esophageal hiatus. In 1926, Akerlund *et al.*^[1] have reported that hiatal hernia was found in 2.3% of all upper gastrointestinal X-ray studies. With the improvement of radiographic techniques and a more systematic approach to their detection, more hernias were identified, such that by 1955 the reported incidence was 15%. Incidence of hiatal hernias increases with age; approximately 60% of individuals aged 50 or older have a hiatal hernia.^[4] It is a rare condition in the pediatric age group, which may be asymptomatic or it may present with a variety of symptoms or complications.^[6,7] We report a case of sliding hiatus hernia incidentally in a 6 year old boy.

CASE REPORT

A 6-year-old boy presented with the complaints of dyspnea, failure to thrive, off and on vomiting and left sided multiple scars in the region of left lateral chest wall with history of multiple attempts of pleural aspirations and an attempt of intercostal tube insertion [Figure 1a].

On examination, the boy was of poor built and malnourished. There were diminished movements in left hemithorax. On auscultation, there were diminished breath sounds in left hemithorax along with positive succussion splash sign. On investigation, except anemia and decreased serum albumin, rest of the biochemical parameters was within normal limits.

The postero-anterior chest radiograph revealed a fluid-filled cavitary lesion in the left hemithorax with ipsilateral collapse of lung with contra lateral mediastinal shift [Figure 1b]. On left lateral chest radiograph, there were two fluid levels [Figure 1c]. The boy underwent a barium swallow study, which showed herniation of the gastro-esophageal junction and entire stomach into thoracic cavity [Figure 2]. Subsequently, non-contrast and contrast enhanced computed tomography (CT) of the chest and upper abdomen confirmed these findings [Figures 3a-c]. There was no history suggestive of hiatus hernia or gastro-esophageal reflux disease in other family members. Medical management was given but patient did not improve so he was referred for corrective surgery but patient refused for surgery.

DISCUSSION

The term hiatus hernia was proposed in 1926 by Akerlund *et al.*^[1] Hiatus hernia is herniation of abdominal viscera into the thoracic cavity through the oesophageal hiatus.^[9] The incidence of hiatus hernia increases significantly with age and it occurs in about 10% of the adult population.^[8] Children with this condition usually have it since birth (congenital). Some cases may have an autosomal dominant type of inheritance.^[3] There are four major types of hiatus hernias. The most common one



Figure 1a: Multiple scars in lateral chest wall

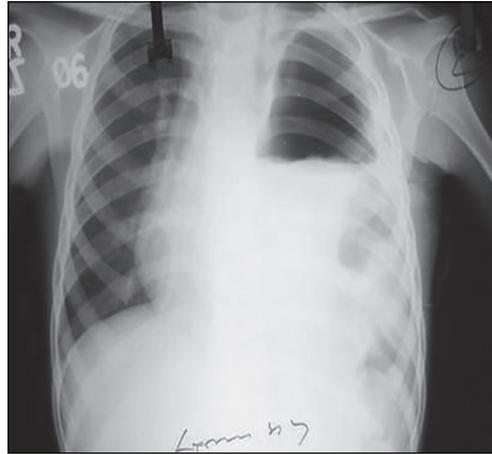


Figure 1b: Chest X-ray (PA) view showing air fluid level

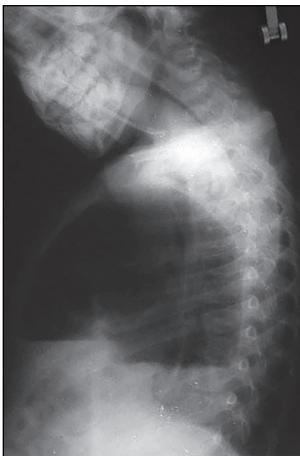


Figure 1c: Lateral view showing 2 air fluid interfaces

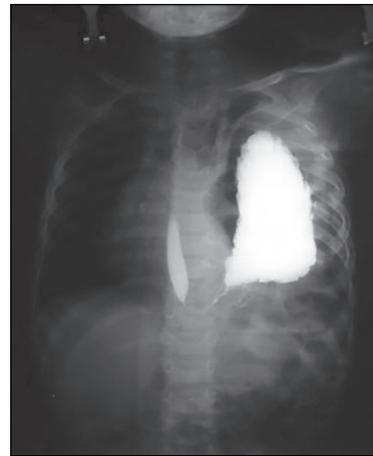


Figure 2: Barium swallow study herniation of whole stomach into thoracic cavity

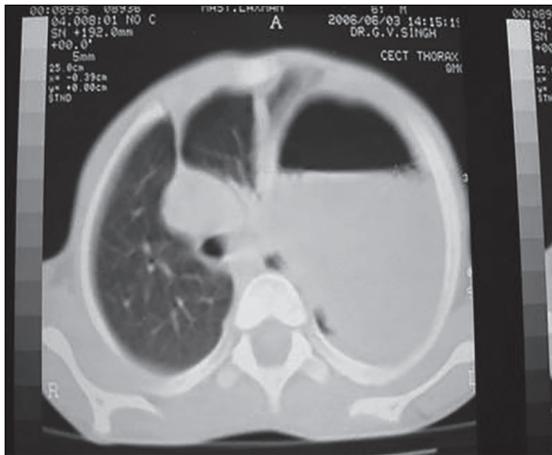


Figure 3a: Computed tomography scan confirming findings of barium study

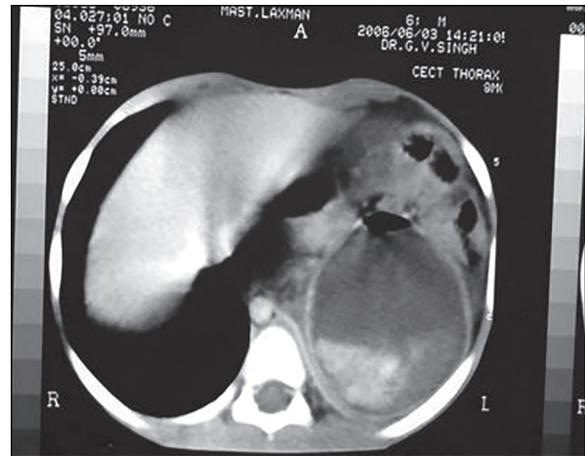


Figure 3b: Computed tomography scan confirming findings of barium study

is Type I (sliding) hernia, in which the gastro-esophageal junction with a portion of stomach herniates into the thoracic cavity. In a Type II (Rolling or para-esophageal) hernia, the gastro-esophageal junction remains at or below the level of diaphragm and the gastric fundus herniates superiorly in a para-esophageal location. Type

III hernia has features of both Type I and Type II hernias and it is more common than Type II. In Type IV hernias, all or part of the stomach herniates into the thorax, usually with organo-axial rotation of the stomach.^[2]

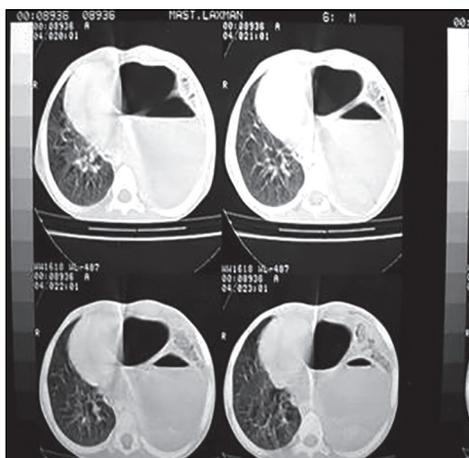


Figure 3c: Computed tomography scan confirming findings of barium study

Hiatus hernia may be asymptomatic and discovered incidentally on routine chest radiographs or CT scans performed for other purposes. While symptomatic, patients present with epigastric pain, heartburn, nausea, vomiting and regurgitation.^[11] Giant hiatus hernias can strangulate, leading to anemia or overt bleeding, and other symptoms such as chest pain or breathlessness after meals.^[5,6] Barium swallow examination, upper gastro-intestinal endoscopy and CT are routinely used to confirm the diagnosis of hiatus hernia. In addition, manometry, 24 h pH testing and gastric scintigraphy are used for pre-operative evaluation.^[2] Medical management includes antacids, H₂ receptor antagonists and proton pump inhibitors (PPIs). PPIs afford the highest levels of symptomatic relief.^[10] Patients who are refractory or have inadequate control with PPI therapy are considered for laparoscopic Nissen fundoplication.^[2] The purpose

of this case report is to draw attention to the fact that, although rare, hiatus hernia should be considered in the differential diagnosis of hydropneumothorax.

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