Hiatus Hernia in a Ten Year Old Boy

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Introduction

Hiatus hernia is herniation of abdominal viscera into the thoracic cavity through the oesophageal hiatus [1]. Hiatus hernia is a rare condition in the paediatric age group, which may be asymptomatic or it may present with a variety of symptoms or complications [2]. We report a case of sliding hiatus hernia in a 10 year old boy, which was detected incidentally.

Case Report

A 10 year old boy presented with complaints of small nodular swellings on both sides of neck. There was no history of fever, cough, chest pain, haemoptysis or weight loss.

On examination, the boy was averagely built and nourished. Examination of neck revealed bilateral level I and II, 1-2 cm discrete and non-tender nodes. His haemogram, blood biochemical parameters and urine analysis were within normal limits. The posteroanterior chest radiograph revealed a homogenous opacity in the right paraspinal region, extending from 9th to 11th dorsal vertebrae. On lateral radiograph, the opacity was localized in the posterior mediastinum. The boy underwent a barium swallow study in

supine and standing positions, which showed herniation of the gastro-oesophageal junction and portion of fundus of the stomach into the lower thoracic cavity (Fig. 1). Subsequently, non-contrast and contrast enhanced computed tomography (CT) of the chest and upper abdomen confirmed the findings. The diaphragmatic crura were separated by 16 millimeters which qualified for a diagnosis of type I (sliding) hiatus hernia (Fig. 2).

Fine needle aspiration cytology from the lymph nodes showed reactive lymphadenitis. The boy was given a course of oral antibiotics, which resulted in resolution of the lymphadenopathy. The boy is presently asymptomatic for hiatus hernia with no symptoms of epigastric pain, heartburn,

Fig. 1 : Barium swallow examination showing herniation of portion of fundus of stomach into the lower thoracic cavity.

Fig. 2 : Coronal reconstruction of CECT chest and abdomen showing herniation of portion of fundus of stomach into the right lower thoracic cavity.

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nausea or vomiting and is on a regular follow up. There was no history suggestive of hiatus hernia or gastro-oesophageal reflux disease in other family members.

Discussion

Although congenital and post traumatic diaphragmatic hernias were described as far back as the 16th century, hiatus hernia was not recognized as a significant clinical entity until the first half of the 20th century. The advent of radiography was the first most important step in the diagnosis and management of hiatus hernia [1]. Akerlund et al [3], proposed the term hiatus hernia in 1926. The incidence of hiatal hernia increases significantly with age and it occurs in 10% of the adult population [4]. Children with this condition usually have it from birth (congenital). Some cases may have an autosomal dominant inheritance [5].

There are four types of hiatus hernias. The most common is Type I (sliding) hernia, in which the gastro-oesophageal junction with a portion of stomach herniates into the thoracic cavity. In a Type II (para-oesophageal) hernia, the gastro-oesophageal junction remains at or below the level of diaphragm and the gastric fundus herniates superiorly in a para-oesophageal location. Type III hernia is more common than Type II and has features of both Type I (sliding) and Type II (para-oesophageal) hernias. In Type IV hernias, all or part of the stomach herniates into the thorax, usually with organoaxial rotation of the stomach [6].

Hiatus hernia may be asymptomatic and discovered incidentally on routine chest radiographs or CT scans performed for unrelated symptoms. When symptomatic, patients present with epigastric pain, heartburn, nausea, vomiting and regurgitation [7]. Giant hiatus hernias can strangulate, cause anaemia or overt bleeding, and other symptoms such as chest pain or breathlessness after meals [2,8].

Barium swallow examination, upper gastro-intestinal endoscopy and computed tomography are routinely used to confirm the diagnosis of hiatus hernia. Manometry, 24 hour pH testing and gastric scintigraphy are used, in addition, for pre-operative evaluation [6]. Chest radiographs may show opacity in the posterior mediastinum, with or without an air-fluid level. Barium swallow examination shows three or more gastric folds above the diaphragmatic hiatus and a pouch of stomach

more than two cm above the hiatus. On CT scan, the diaphragmatic crura are separated by more than 15 mm and the hernia produces a mass of soft tissue density that protrudes above the diaphragmatic hiatus, which may be surrounded by mesenteric fat [6].

Medical management include use of antacids, H₂ receptor antagonists and proton pump inhibitors (PPIs). PPIs afford the highest levels of symptomatic relief [9]. Patients who are refractory or have inadequate control with PPI therapy are considered for laparoscopic Nissen fundoplication [6].

Hiatus hernia, though a common condition, is not so frequent in children and its incidence increases with age. The purpose of this paper is to draw attention to the fact, although rare, hiatus hernia should be considered in the differential diagnosis of right paraspinal opacity in the posterior mediastinum.

Conflicts of Interest

None identified

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