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Congenital Para Esophageal Diaphragmatic Hernia with Sac - A Case Report

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Abstract

Congenital paraesophageal diaphragmatic hernia with sac is a rare anomaly. Herewith, we are reporting one year old male child presenting with recurrent episodes of chest infection, non bilious vomiting since early infancy and failure to thrive. Initial chest X-ray showed intra thoracic gastric outline. Barium upper GI study aided by CT chest, diagnosed as a left para-esophageal diaphragmatic hernia. Laparotomy revealed roomy oesophageal hiatus through which the entire stomach was seen herniating into thorax with a sac. Stomach was reduced and the sac was excised. The esophageal hiatus was narrowed and Nissen's fundoplication was done. The postoperative period was uneventful and the child was discharged on eighth postoperative day. The child is on regular follow-up and is thriving well. Any child presenting with recurrent episodes of non bilious vomiting, chest infection, failure to thrive and intra thoracic gastric outline, the late presentation of congenital diaphragmatic hernia should be considered in the differential diagnosis.

Keywords: Pneumonia, recurrent Vomiting, Hernia with sac, Failure to thrive

Introduction

Congenital diaphragmatic hernia (CDH) is a congenital disorder that affects about 1 in 2500 neonates and has a 67% overall survival rate. A diaphragmatic hernia allows peritoneal viscera to protrude into the pleural cavity [1]. The defect is more common on the left side (80%) and less common on the right side, bilateral ones are pretty uncommon [2]. The most common presentation of congenital diaphragmatic hernia is neonatal respiratory distress [3]. Late presentation of CDH have been observed in 2.5-20%.The risk factors for late CDH presentation are misunderstood [4]. Patients with prolonged respiratory and gastrointestinal symptoms of unknown etiology might be suffering from this disorder. Due to its variegated clinical presentation, late type of CDH poses a significant diagnostic dilemma [5]. This patient had a previous history of repeated hospital admissions elsewhere and was treated as aspiration pneumonia.

Case report

One year old male child, weighing 6.5kg admitted for lower respiratory infection at our centre. History revealed recurrent attacks of chest infections earlier associated with non bilious vomiting and failure to thrive. On examination the child with a height of 68cms had head circumference of 44cms. Basic investigations showed hemoglobin of 10.9 grams/dL, leukocyte count of 16,000 cells/µL, platelets 3,62,000/µL, normal renal function tests (sodium 137mmol/L, potassium 5.0mmol/L, creatinine 0.5 mg/dL) and viral screening tests for HBsAg, HIV and HCV were nonreactive. His blood group was B positive. Chest X-ray (Figures) revealed elevated left

dome of diaphragm with gastric air fluid level in the left thorax. Left diaphragmatic hernia was suspected. Hence CT chest (Figures) was done which revealed the possibility of paraoesophageal hiatal hernia with herniation of stomach into the mediastinum. Barium upper GI study showed retrocardiac stomach with doubtful organoaxial volvulus (Figures). Child was taken for surgery after resolution of chest infection. Laparotomy revealed very wide oesophageal hiatus with herniation of whole stomach into left thorax. Hernial sac was present and was excised (Figures). Oesophageal hiatus was narrowed posterior to oesophagus and Nissen's fundoplication was done. Post operative period was uneventful and the child was discharged on 8th post op day.

Discussion

The Diaphragmatic hernia is a general term used to indicate protrusion of abdominal viscera into the chest cavity through communication, which is congenital or acquired [6]. The congenital diaphragmatic hernia (CDH) is classified according to the location of the protrusion, including hiatal hernia, Morgagni-Larrey hernia and Bochdaleck hernia [7].The wide clinical spectrum of late-presenting CDH seems to be conditioned by two factors: timing of herniation and type of intraabdominal viscera displaced into the chest. The present case is a rare variety (left para oesophageal diaphragmatic hernia with sac) with entire stomach in the thorax. Previous case reports and series have described late-presenting CDH as being misdiagnosed as a pleural effusion, pneumonia, pneumothorax, pneumatocele, and abscess [8]. This child suffered with recurrent chest infections and vomiting, roaming around without proper diagnosis, receiving treatment as aspiration pneumonia till it reached our centre for the final solution. Late-presenting CDH with unusal findings can be a challenge in the diagnosis. Quite often radiographic misinterpretation/misreading leads to misdiagnosis and mismanagement. In the present case also chest X-ray showed left dome elevation with retrocardiac air fluid levels. Only after that CT evaluation and Barium study, the diagnosis was confirmed. It is also important to have a high index of suspicion for other associated malformations in any patient presenting with CDH.

Conclusion

Unusual, late clinical presentations of congenital diaphragmatic hernia pose a diagnostic dilemma. CDH should be included in the differential diagnosis of children presenting with recurrent respiratory infections, vomiting and intra thoracic gastric outline. Para oesophageal diaphragmatic hernia with sac is very rare and different methods of imaging studies are required to confirm the diagnosis.

Competing Interests

The authors declare that there are no competing interests regarding the publication of this paper.

Ethical clearance

Hospital ethics committee approval was taken.

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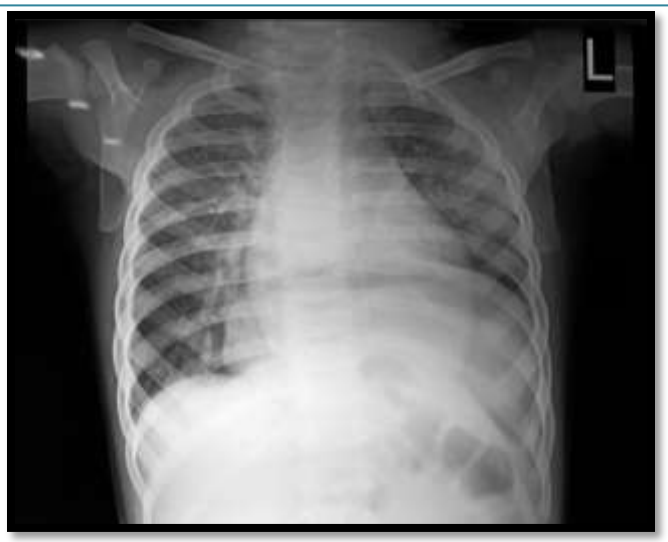

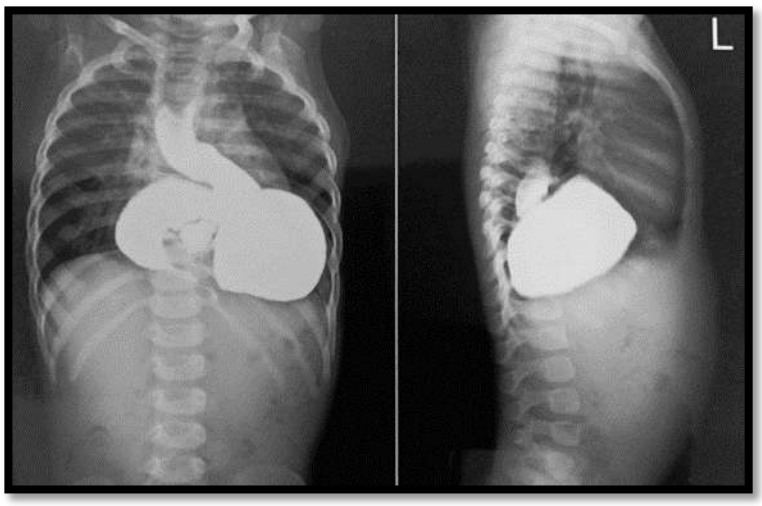

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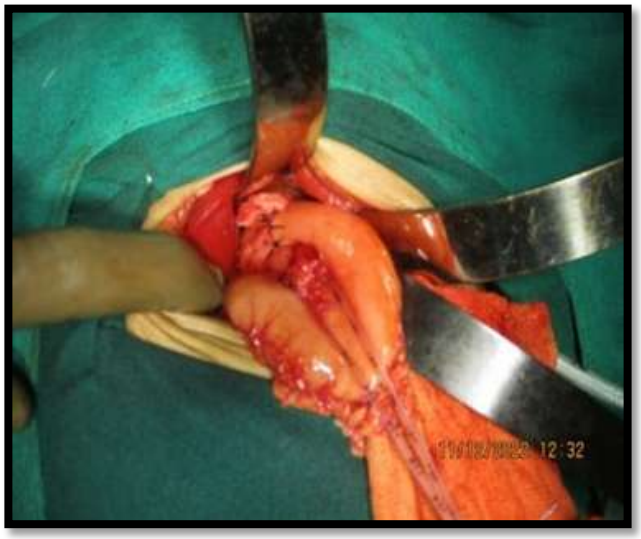

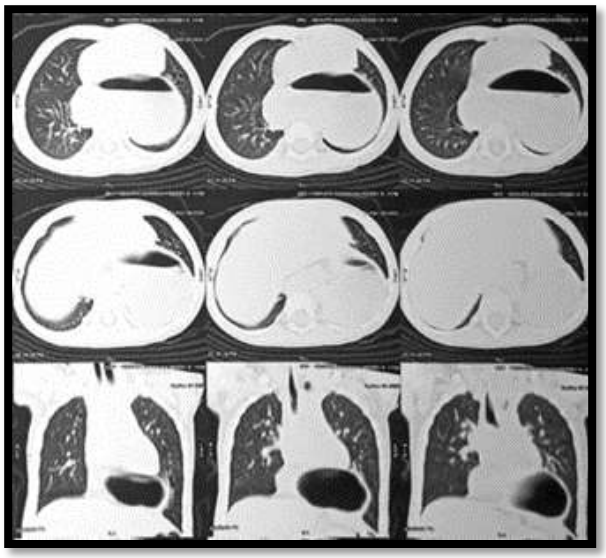

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