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Late presentation Bochdalek hernia complicated by mesentero-axial volvulus

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Abstract

A 5 year old with a history of recurrent chest infections and presumed asthma presented to the emergency department with acute severe abdominal pain, tachycardia and pallor.

Chest radiograph done to exclude pneumoperitoneum demonstrated a large gas filled structure occupying the majority of the left hemithorax. This was superimposed with several tubular gas filled structures.

CT showed a large left-sided diaphragmatic hernia of the Bochdalek type containing the pancreas, stomach, small bowel loops, small bowel mesentery with vessels and lymph nodes and some large bowel. Associated left pulmonary hypoplasia was present. In addition, the stomach was significantly dilated with an 'upside down' configuration. It's antrum and pylorus were above the diaphragm and gastro-oesophageal junction while its fundus and proximal body were below the diaphragm, appearances in keeping with mesentero-axial volvulus, necessitating urgent surgical management.

Introduction

Bochdalek hernia is an embryological defect in the posterolateral diaphragm that allows herniation of abdominal contents into the thorax. This causes mechanical compression of the developing lung parenchyma and resultant pulmonary hypoplasia [1]. As such, Bochdalek hernias usually present in the neonatal period with respiratory distress. However, less frequently they can present later in childhood and adulthood [1-3]. Presentations range from asymptomatic incidental finding on imaging, to acute and chronic respiratory (respiratory distress, chest pain, recurrent chest infections) and gastrointestinal symptoms (abdominal pain and vomiting, bloody stools, constipation) [1-3]. Complications include recurrent chest infections, chronic lung disease, volvulus, obstruction, and ischaemia of herniated stomach or bowel and other herniated organ dysfunction [1-3].

Misdiagnosis of Bochdalek hernia has often been reported and is associated with significant mortality and morbidity [1,3].

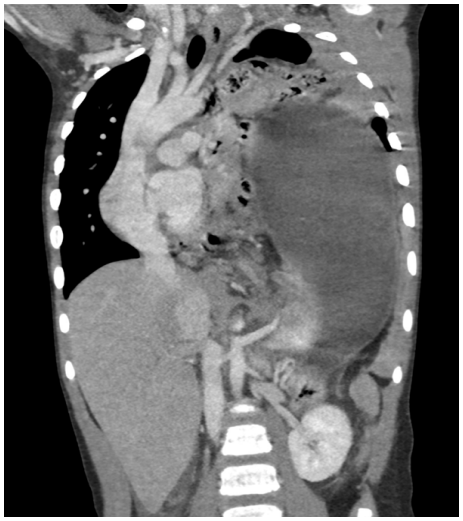

Figure 1: Resized coronal.

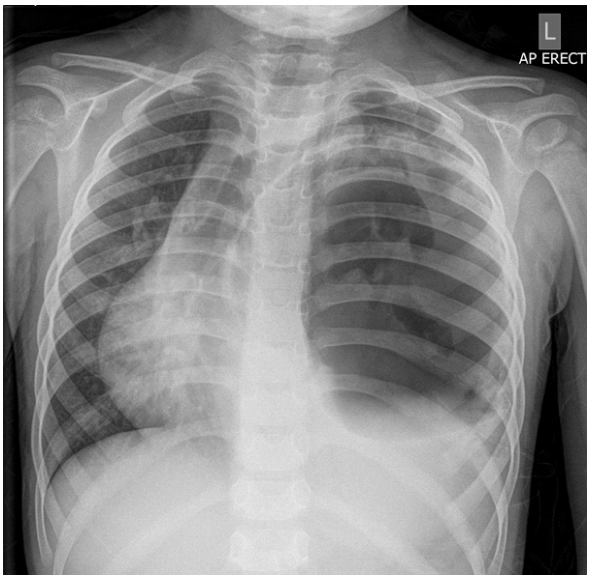

Figure 2: Resized CXR.

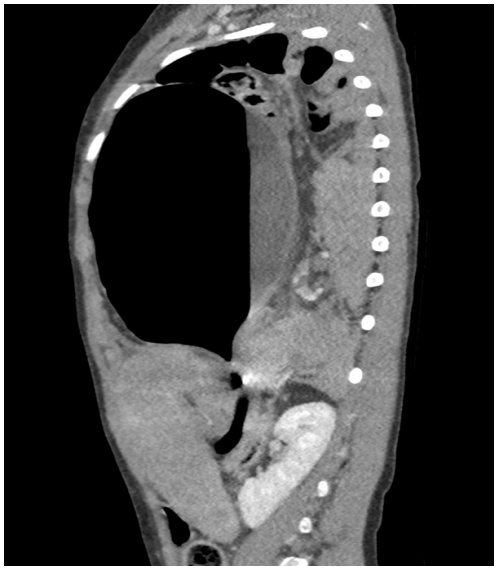

Figure 3: Resized sag.

Congenital diaphragmatic hernias should therefore be considered in the differential diagnosis whenever a child presents with respiratory distress, recurrent chest infections, bowel obstruction or chronic non-specific symptoms [1].

References

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