

A Case Report of Asymptomatic Large Congenital Diaphragmatic Hernia in a Young Female of 20 Years Age: A Rare Case

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Abstract: Delayed herniation of the abdominal contents through a congenital diaphragmatic hernia may occur beyond the neonatal period. This report describes a 20yr old-old female who presented with pain after intake of food and vomiting after meals since 4 months. Her USG abdomen, she was found to have hyper distended and thick fluid filled stomach in left upper quadrant of abdomen. She underwent surgical reduction of the hernia. She made an excellent recovery and was discharged a few days after the operation. This report aims to increase the awareness of this condition among physicians and surgeons to have a high degree of suspicion for diagnosis and management.

I. Introduction

Congenital diaphragmatic hernia (CDH) is a birth defect of the diaphragm. The most common type of CDH is a **Bochdalek hernia**; other types include **Morgagni hernia**, **diaphragm eventration** and **central tendon defects** of the diaphragm. Diaphragmatic defects allow abdominal viscera to fill the chest cavity. The abdominal cavity remains small and underdeveloped after birth. Both lungs are hypoplastic, with decreased bronchial and pulmonary artery branching. Between 70% and 90% of cases occur on the left.¹ It was first described in 1848 by the Czechoslovakian anatomist, Vicent Alexander Bochdalek.² It usually presents during the first hours after birth with severe respiratory failure.^{3,4} This condition is infrequent in adults, and there are 130 reported cases in the medical literature.¹

II. Presentation Of Case

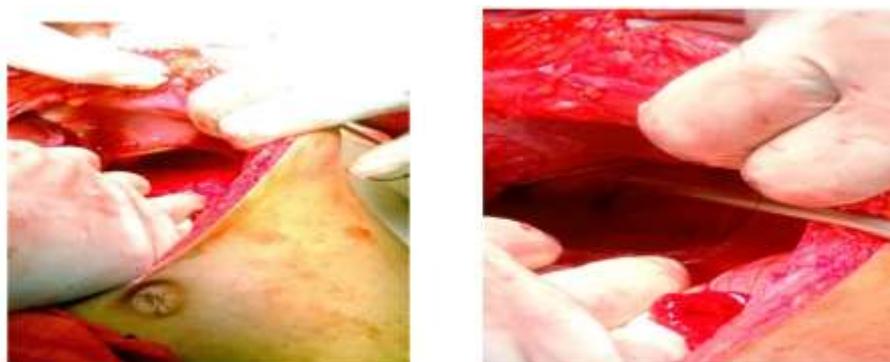
A 20 Year old female presented to the outpatient department with chief complaints of pain after intake of food and vomiting after meals since 4 months. The pain was intermittent, radiated to the ipsilateral dorsal region & was accompanied by nausea. She was also a post natal case with vaginal birth of her baby 20 days ago which was uneventful. Her vital signs were blood pressure 100/60, heart rate 82 beats per minute, respiratory rate 25 breaths per minute and temperature 37 °C. On further examination, she had decreased breath sounds on her left side. There was also auscultation of bowel sounds on her left side of chest. On her USG abdomen, she was found to have hyper distended and thick fluid filled stomach in left upper quadrant of abdomen and slightly decreased echogenicity of liver. While her barium meal showed evidence of herniation of gastric fundus into her left hemi thorax.

On her CECT abdomen, she was found to have herniation of fundus and body parts of stomach along with mesenteric fat into the left hemi thorax with Ryle's tube insitu s/o bochdalek's hernia.



Barium meal follow through showing fundus and body parts of stomach herniating into her left hemi thorax

She underwent left side diaphragmatic repair with Left side ICTD placement due to her large defect of approx. 10x6 cm and was discharged symptom free with removal of ICTD & Ryle's tube after 10 days and was followed for 3 months thereafter with no significant events.



Her intra-operative findings showing a large postero-lateral defect in her diaphragm approx. 10x6 cm in size

III. Discussion

Diaphragmatic hernias may be congenital or acquired secondary to thoraco-abdominal trauma like traffic accidents. Bochdalek hernia is a congenital disease characterized by protrusion of the abdominal organs into the thorax through the posterolateral defect in the diaphragm. The lungs remain hypoplastic on the affected site such that it is essentially non functional leading to respiratory distress. CDH may be discovered incidentally or diagnosed as part of the investigation of nonspecific gastrointestinal or respiratory symptoms in a small no of cases (0.3-0.4%) with small defects but in this case defect was large which was surprisingly asymptomatic.

The detection of incidental bochdalek hernia has increased due to increased availability of investigations over time like computed tomography. It is very rare in adult population to see diaphragmatic defects. Symptoms vary according to the affected organ: digestive symptoms include diffuse abdominal pain, dyspepsia and repeated vomiting while respiratory symptoms may include marked respiratory distress with tachypnea and tachycardiaⁱⁱ. In the case we presented. The diagnosis can be achieved through a simple chest X-ray, computerized axial tomographyⁱⁱⁱ or the barium meal follow through in which gas and organs were seen over the diaphragm. The typical findings in CT include presence of a posterolateral soft tissue density which is continuous through the defect in the diaphragm adjacent to the defect^{iv}. The differential diagnosis from other thoracic masses such as omental hernias through Morgagni's foramen or esophageal hiatus and mediastinal lipomatosis can be made easily on the basis of low-density fatty components of these structures, Transabdominal and transthoracic approaches have been recommended in Bochdalek hernia repair.

The abdominal approach is easily performed through an upper abdominal incision, when the patient has findings suggesting intestinal strangulation.; On the other hand, in an elective setting most authors recommend the thoracic approach. The current trend is to use minimal invasive surgical techniques such as laparoscopy which has been satisfactorily performed in adults.^{iv,v}

IV. Conclusion

Congenital diaphragmatic hernias is itself a rare entity and if diaphragmatic hernia is present among adult population, it is generally attributed to a traumatic cause because they are mainly recognized in infancy. Congenital Diaphragmatic hernias in adults are documented while they go through investigations for some nonspecific complaints like X-ray chest etc. If they are come across, one must be thoroughly prepared for this surgical emergency so as to identify as well as deal with it to avoid any future complications or correct them if found incidentally.

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