



BOCHDALEK HERNIA : A RARE CASE REPORT OF ADULT AGE / A RARE PRESENTATION IN ADULTS AND ITS MANAGEMENT

Surgery

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KEYWORDS

INTRODUCTION:

Bochdalek hernia is the most common type of congenital diaphragmatic hernia and constitutes 85% of cases. Bochdalek hernia (BH) in adults is extremely rare.

Congenital diaphragmatic hernia (CDH) characterized by protruding abdominal organs into the thoracic cavity through the posterolateral diaphragmatic defect and has high mortality. The incidence of CDH is 1 in 2500 births and left congenital diaphragmatic hernias are more common than right-side hernias (85%–12%). Although CDH are diagnosed prenatally or in the immediate postnatal period, diagnosis in 5–25% of cases can be late, and could be detected during routine examinations or examination because of respiratory or gastrointestinal problems.

Bochdalek hernia (BH) is a congenital diaphragmatic hernia caused by the failure of the posterolateral diaphragmatic foramina to fuse properly; it results in the displacement of abdominal components into the thoracic cavity. This occurs mainly during the ninth or tenth week of fetal life. Bochdalek first described this anomaly in 1848. The incidence is reportedly 1 in 2200–12 500 live births, and Bochdalek hernia (BH) usually occurs (80%–90%) on the left side. Bochdalek hernia in adults is extremely rare; with less than 100 published cases in the literature. Larger defects in BH are associated with pulmonary hypoplasia on the affected side and respiratory distress syndrome after birth. Minor defects are not associated with a deficit in lung development and may be asymptomatic until herniation of abdominal contents into the thoracic cavity with respiratory consequences. Colon is the most common intra-abdominal organs migrating through the diaphragmatic defect and may cause large bowel obstruction.

Surgical repair of the defect is the recommended therapy for all patients with BH, regardless of the presence of symptoms.

Management of a BH includes reducing the abdominal contents and repairing the defect through laparotomy or thoracotomy. Surgical repair has been done by laparotomy, traditionally, laparoscopic repair can also be done. The procedure of choice depends on the surgeon's experience. Small defects are easier to repair, but larger defects may involve a reduction of the intra-abdominal contents and reinforcement of defect.

Bochdalek hernia should be in mind in case of patient presenting with intestinal and pulmonary symptoms.

CASE REPORT:

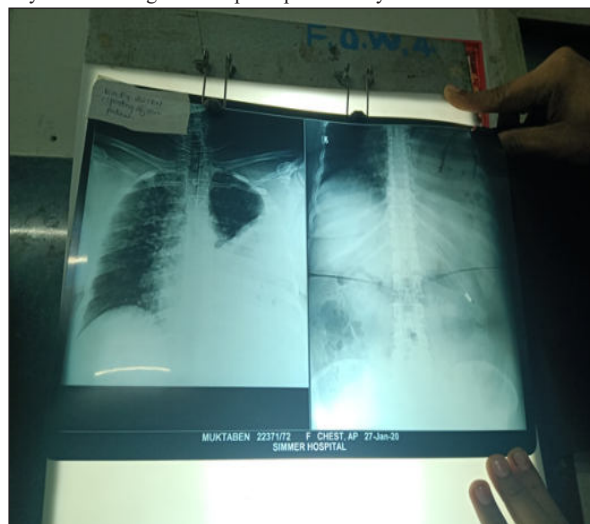
A 55 year old female patient admitted in SMIMER hospital with complain of Abdominal pain and Difficulty in breathing since 1 week.

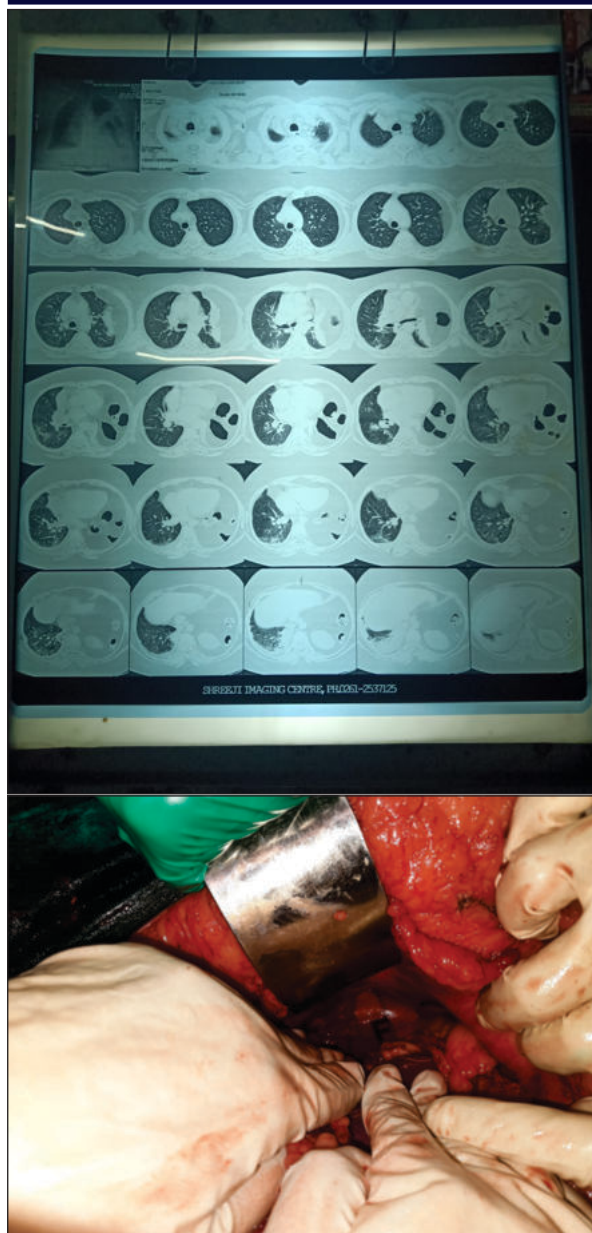
It was not associated with vomiting, Constipation, Fever.

The HRCT thorax report was suggestive of Defect in Left Posterior Diaphragm with herniation of omentum, transverse colon, descending colon and upper pole of left kidney into thoracic cavity represent large Bochdalek Hernia, resultant passive collapse of left lung parenchyma.

Patient was kept on Bipap support for 3 days when he was shifted to SMIMER where open repair with mesh reinforcement was done. Intraoperatively the patient was managed on general anaesthesia with

stable vitals. Post operatively the patient was kept prophylactically on IPPV support for 2 days with gradual tapering of FiO₂ which was then shifted to Bipap support for 3 days and later on to oxygen support for 3 days and discharged on 12th post operative day.





DISCUSSION:

Diaphragmatic hernia through the posterolateral foramen of Bochdalek is the commonest type of CDH and more common on the left side (85%) than on the right. Left sided hernia include spleen, stomach, small intestine and colon. Right sided hernia includes liver and intestine. Late presentation may be due to delayed rupture of peritoneal sac containing the viscera, or plugging of hernia defect by solid organ due to raised abdominal pressure in severe strain, obesity, pregnancy and during labour.

The diagnosis of congenital diaphragmatic hernias typically occurs prior to delivery, but 5–25% of cases are late presenting, after the neonatal period. The most frequently encountered type of CDH is posterolateral hernia, through the foramen of Bochdalek.

Many patients may remain asymptomatic until adulthood. Patients may present with chronic symptoms such as recurrent chest or abdominal pain and postprandial fullness or vomiting. Brown SR et al. searched the literature yielded 141 articles containing 173 cases from 31 countries. Only 14% of patients were symptomatic at the time of presentation.

Presenting symptoms were pain/pressure (chest or abdominal discomfort that was not related to a bowel obstruction) 69%, obstruction 39%, pulmonary symptoms (dyspnea, cough, and shortness of breaths) 37%, strangulated 28%, dysphagia 3%, bleeding 4%, GERD 4%, and other (HTN, fatigue, indigestion) 9%.

The diagnosis of a BH in adults is not easy and it is commonly misdiagnosed. Unlike infants who show with respiratory distress early, the most frequent symptom in adults is mild discomfort and 25% of adult patients are asymptomatic. Consequently, many patients are merely treated according to their symptoms. In the diagnosis of BH, direct chest and abdominal radiography, fluoroscopy, barium examinations, ultrasound, computed tomography, magnetic resonance imaging is available. But among them, multislice computed tomography of the sagittal and coronal images of diaphragmatic hernia was most commonly used. Contrast-enhanced CT is the most accurate imaging modality for detection of BH. It provides detailed information regarding the herniated viscera and the diaphragmatic defect. The presence of a soft tissue contour in the chest CT, in addition to opaque, filled, dilated bowel segments above the diaphragm, establishes definitive diagnosis.

The management of Bochdalek hernia includes reduction of hernial contents to the peritoneal cavity and repair of the diaphragmatic defect. Although laparotomy was the most widely used surgical approach (38%), minimally invasive surgical techniques have gained popularity since their first report in 1995. Many types of meshes are available for use in these types of repairs. Although polypropylene mesh has the benefit of support and excellent tissue growth.

CONCLUSION:

Adult BH is very rare and when confronted Open laparotomy or laparoscopic treatment with mesh fixation can be performed safely.

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