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Original Research Paper

General Surgery

A RARE CASE PRESENTATION -MYSTERY ABOUT DIAPHRAGMATIC HERNIA

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ABSTRACT A rare case of congenital diaphragmatic hernia found incidentally in middle aged adult while evaluation for chest and abdominal trauma

KEYWORDS :

INTRODUCTION

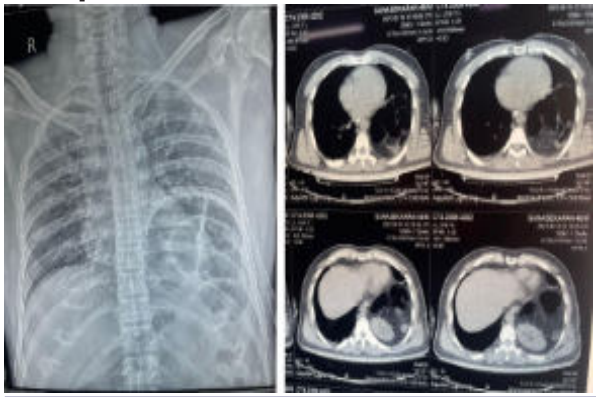
Congenital diaphragmatic hernia (CDH) is an extremely rare condition of about 1 in 2000-5000 live birth. Inspite it is rare entity most infants with CDH develop respiratory distress immediately after birth. Several genes share roles in diaphragmatic, pulmonary, cardiac and foregut development; consequently, congenital diaphragmatic hernias are associated with lung hypoplasia, pulmonary hypertension, cardiac defects and gastroesophageal reflux, with half having additional anomalies. The pulmonary hypoplasia is partly due to lung compression from herniated abdominal contents (mechanical etiology) and partly due to genetic causes (e.g. FOG2, GATA4). Pleuroperitoneal cavities become separated by the developing membrane during 8 to 10 weeks of gestation.

When the pleuroperitoneal canal persists, it leads to a posterolateral CDH defect. Commonly, there is a left posterolateral (84%) or Bochdalek defect, less commonly a ventral or Morgagni defect.

This case was asymptomatic till we found accidentally

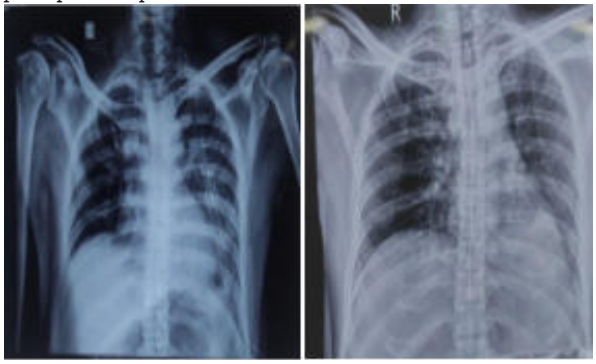
Case Presentation:

This case report is all about a 45 year old man who had alleged history of assault by 2 persons who was trampled over chest and abdomen, following which he was developed breathlessness, chest pain but all vitals were within normal range and he was subjected to radiological investigation, x-ray chest PA view shows left rasied diaphragm with bowel shadow present above the left diaphragm, slight right side tracheal shift, so we suspect left diaphragmatic hernia. On further evaluation to contrast ct abdomen and chest, diagnosed as left diaphragmatic hernia with herniation of left kidney, left half of transverse colon and splenic flexure in left thoraic cavity. Patient was planned for elective laparoscopic mesh repair of hernia

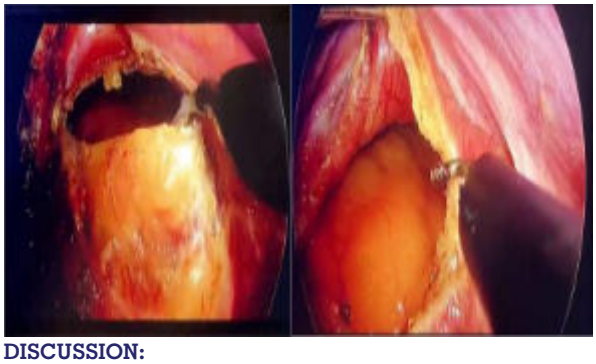


Intra-operative Finding:

We proceed for laparoscopic mesh repair, intraoperatively defect of 5*5cm is covered by fibrous layer which was opened and found left half of transverse colon and splenic flexure densely adhered to visceral pleura of left lung which was released. Lower leaflet of diaphragmatic defect was not able to approximate with upper leaflet of diaphragm and unable to reduce the left kidney to abdominal cavity, so we proceed with laparotomy. The content were reduced and defect was closed using 1 prolene and 15*15cm composite mesh fixation done, postoperative period was uneventful.



Postoperative x-ray becomes normal. Since intraoperatively we found fibrous layer which is a feature of chronicity so we conclude this defect was congenital and not due to trauma followed up the case after 1 month post operatively and x-ray becomes normal and all bowel content were below the left diaphragm



DISCUSSION:

Diagnosis of CDH can be made as early as 15 week of gestation antenatally through USG, but late onset herniation had better outcome and overall survival, If herniation of liver, stomach, polyhydrominos and associated anomalies had poor outcomes. The fetus with CDH should be delivered in the hospital with advanced neonatal care including ECMO facilities.

CONCLUSION:

There is many option available for treatment of CDH, Open fetal surgery, Fetal endoscopic tracheal occlusion (FETO), Tracheal Occlusion to Accelerate Lung Growth (TOTAL)

If baby develop PPHTN, then treatment of choice were Hypercapnia, Inhaled nitric oxide, Tolazoline, a nonselective -adrenergic blocking agent, pulmonary vasodilator Sildenafil, a phosphodiesterase-5 inhibitor were tried

Laparoscopic repair of the defect, abdominal or thoracic muscle flap were used for closure of defect,or prosthetic material such as GORE-TEX-PATCH, biodegradable patch-Surgisis and AlloDerm can be used. Early diagnosis and prompt intervention may prevent the unneseccary morbidities and mortality

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