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Symptomatic Right side Bochdalek hernia (with Chilaiditi's syndrome): A Rare Case Report

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Abstract: Congenital diaphragmatic hernia (CDH) is commonly present as Bochdalek hernias are usually asymptomatic but our patient present as gastrointestinal symptoms due to Chilaiditi's syndromes. A patient was admitted with complain of abdominal pain with near normal routine investigation but flat plate x-ray shows diaphragmatic hernia with Chilaiditi's sign. Pt was operated for this hernia and uneventful recovery was done. Bochdalek hernia with Chilaiditi's signs is a rare in children's and usually found asymptomatic and incidental finding, as our pt have GI symptoms so surgical correction is necessary. Here we operate the pt to prevent all these complication and done surgical repair of hernial defect by prolene 1/0 with prolene mesh reinforcement. Symptoms and clinical findings may vary from mild to severe GI problems so clinicians should consider in their routine practice to rule out chilaidaiti syndrome with Bochdalek hernia to avoid complication.

Keywords: Congenital diaphragmatic hernia, Bochdalek hernia, Chilaiditi's' sign.

INTRODUCTION

Congenital diaphragmatic hernia (CDH) are commonly present as Bochdalek hernia – that is defect located in posterior lateral side of diaphragm due to incomplete obliteration of foramen situated in this region. It was first described by the anatomy professor Bochdalek in 1848 [1].

These are diagnosed in neonatal period with clinical features related to respiratory symptoms [2]. In contrast to our patient gastrointestinal symptoms were more than respiratory problems. Chilaiditi's sign is in which radiolucency finding is present due to interposition of intestine between liver and diaphragm, and when it is associated with GI symptoms it is called Chilaiditi's syndrome [3, 4].

The aim of our case report to present study of CDH as presenting as gastrointestinal symptoms which was diagnosed on routine x-ray flat plate abdomen.

CASE PRESENTATION

A 13 yr old girl visited in our surgery department for continuous pain abdomen and nauseating feeling since long time. She was treated at periphery conservatively without any basic investigation protocol. On routine investigation in our hospital as chest x-ray and flat plate abdomen showed markedly elevated diaphragm and radiolucency between liver and diaphragm on right side. We got CT scan immediately of this patient that showed small intestine herniation in to the right thorax cavity by 7×8 cm defect in posterior lateral side in diaphragm and transverse colon lying above the liver as Chilaiditi's sign (Figure-I).

So this pt was diagnosed as congenital diaphragmatic hernia with Chilaiditi's syndrome. Laboratory investigation of this pt was as shown Hb 11.6%, TLC 10700 cells/ cumm and other routine investigation as RFT LFT were normal in range and HBsAg, HIV was negative.

Exploration laparotomy was performed that show hole of 7×8 cm defect in Rt hemidiaphragm at post lateral side (Figure-II) and major length of small intestine is herniating through this defect to right side of thorax cavity through with normal lung parenchyma is also visible. As the same site we also confirmed that ascending colon with illeocecal junction and transverse colon lying over the superior surface of liver as showing Chilaiditi's 'sign.(Figure- III) There was some adhesion of transverse colon to the margin of hole/defect which was dissected by sharp dissection.

Than whole of small intestine, ascending colon and transverse colon were repositioned back to

abdominal cavity safely and caecopexy was also done. Hernia was closed by prolene 1/0 and also prolene mesh reinforcement was done (Figure-IV).

Two separate drain as one abdominal and other chest drain was placed properly. Abdominal sheath was closed with PDS no 1. On D2 pt orally sips allowed but postoperatively on D3 pt develop a small abscess pocket in right thoracic cavity which was cleared with some higher systemic antibiotics.

Abdominal drain on D4 and chest drain on D7 removed without any difficulty. Post-operative chest x-ray showed almost full expiation on D7. Pt was discharged on D8 on full oral diet without any complain and with beautiful and thankful smile on face that child.

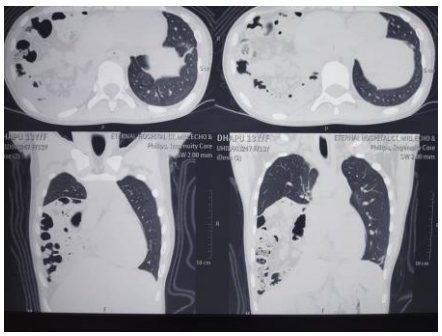

Fig-I: CT scan showing Bochdalek Hernia with Chilaiditi'Sign

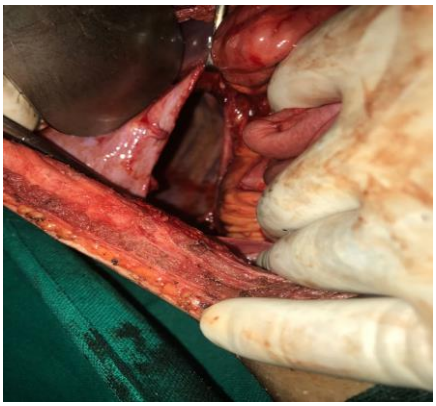

Fig-II: Hernia Defect in Right side of Diaphragm

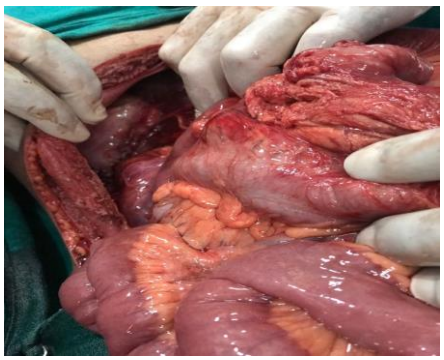

Fig-III: Chilaiditi's' sign with Congenital Diaphragmatic Hernia

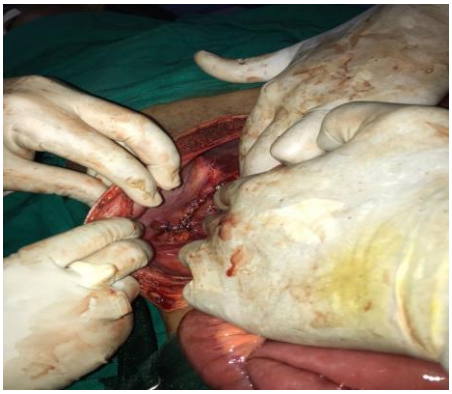

Fig-IV: Defect is repaired

DISSCUSION

Bochdalek hernia with chilaiditi signs is a rare in children's and usually found asymptomatic and incidental finding. It sometimes occurs with abdominal pain, distention and nauseating feeling as seen in our case. Treatment is surgical management as required [5, 6]. Most congenital Bochdalek Hernias (BH) is associated with respiratory problems like dyspnoea [7] which become evident few weeks after birth. As in adults most BH are usually asymptomatic and their detection is incidental [8] or pt may present as respiratory problems or GI symptoms [9] as our pt have GI symptoms so surgical correction is necessary. After diagnosis of CDH surgical correction is necessary because it may lead to complete intestinal obstruction, strangulation, pneumotharax or intestinal necrosis [10, 11].

Here we operate the pt to prevent all these complication and done surgical repair of hernial defect by prolene 1/0 with prolene mesh reinforcement.

CONCLUTION

Our case report is rare case of right side BH associated with chiladiti' sign who was operated as described. CDH which present as chilaiditi syndrome are usually asymptomatic, and the disorder may manifest eventually. Symptoms and clinical findings may vary from mild to severe GI problems so clinicians should consider in their routine practice to rule out chilaidaiti syndrome with Bochdalek hernia to avoid complication.

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