

A Rare Case of Morgagni Hernia - A Case Report

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Abstract: Morgagni hernia is one of the Congenital Diaphragmatic Hernias. It is characterized by herniation through foramen of Morgagni (retro-xiphoid space on the right). When compared to Bochdalek's, Morgagni hernia is anterior, right-sided, small and rare. Only about 30% of patients are symptomatic. Newborns present with respiratory distress. Additionally, recurrent chest infections and gastrointestinal symptoms have been reported in those with previously undiagnosed Morgagni hernia. Here, I am presenting a video on a rare case of Morgagni hernia in a 65 year old female patient with history of breathlessness since 15 days with no gastro-intestinal symptoms or obstruction. Ultrasonography did not help to aid diagnosis. Chest X ray was the diagnostic investigation which showed hernia with bowel loops in the chest along with auscultatory clinical finding of bowel sounds in the right chest. On Diagnostic laparoscopy there was evidence of herniation of small bowel loops and omentum in the right chest. The defect was around 6 cm. Sac was identified and contents were reduced. Adhesiolysis done. Diaphragmatic defect closed using Prolene 1-0 RB. PROCEED composite mesh was placed at the defect and fixed using Prolene 2-0 RB and securestrap used for additional fixity. Post operative recovery was uneventful. Patient was discharged on post operative day 3 on full diet without any complications. Conclusion: Morgagni Hernia can be treated easily using laparoscopic approach.

Keywords: morgagni hernia, congenital diaphragmatic hernia, laparoscopic repair, composite mesh

1. Introduction

Morgagni hernia is one of the congenital diaphragmatic hernias. Also grouped under late onset or adult-onset Congenital diaphragmatic hernia as per the new classification. It is protrusion of abdominal contents in the right retro-xiphoid space also known as foramen of Morgagni or Morgagni gap. Just to add, the one of the left is known as Larrey's gap. The superficial epigastric vessels and fat are normal contents of this space. Surgical correction of the hernial defect is the definitive treatment. Traditionally, open surgical repair either by the transabdominal or transthoracic approach was done. Until Kuster et al, who tried the laparoscopic approach for the very first time in 1992. Countable few laparoscopically

repaired Morgagni hernia are reported in literature. We are reporting one such rare case.

2. Case Report

A 65 year old female patient presented with history of breathlessness since 15 days. Patient didn't complaint of any gastro-intestinal symptoms. Patient was non comorbid. Abdominal examination was unremarkable. Respiratory system examination revealed auscultatory clinical finding of bowel sounds in the right chest. All the biochemical tests were within normal limits. Posteroanterior radiograph of the chest showed localized elevation of right dome of the diaphragm with gas shadows within the chest. (Fig 1).



Figure 1: Chest X ray posteroanterior view with white arrow pointing bowel loops in right chest

An elective diagnostic laparoscopy was planned after pre-anesthetic workup. Patient was placed in supine position. The surgeon stood on the left side of the patient with the assistant on the opposite side. A 10-mm umbilical port for telescope was established and two other ports were placed (a 10-mm one in the epigastrium and a 5-mm port in the right lumbar region in the midclavicular line). Examination of the upper abdomen showed presence of a

defect of approximately 6 cm on the right side behind the sternum in the diaphragm anteriorly. There was evidence of small bowel loops and omentum as the content of the sac. After gently reducing the contents, it was observed that the falciform ligament also formed the content of the hernia sac. Hence, it was dissected and delivered out too. Sac excision was then carried out carefully after adequate adhesiolysis. We prefer to excise the sac so as to

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decrease the chances of recurrence and cyst formation if any.

The defect was closed using polypropylen 1-0 RB with intra-corporeal suturing. PROCEED composite mesh of 15 x 20 cm was anchored using monofilament polypropylene 2-0 RB. Securestrap aka Tacker used for additional fixity. The umbilical port rectus was approximated using vicryl 2-0 RB and the skin was sutured by using skin stapler. The operation lasted for 120 mins. Post-operative recovery was uneventful. Patient was discharged on post operative day 3 on full diet without any complications. At 3 years follow up, patient remains asymptomatic.

3. Discussion

Morgagni hernia was first described as a defect in the anterior diaphragm with herniation of abdominal contents into the thoracic cavity in 1769 by Giovanni Battista Morgagni. (1, 2) It is a rare type of Congenital Diaphragmatic Hernia (CHD) accounting only 2–3% of all CHD cases. (2) It usually presents in childhood with respiratory symptoms whereas, it is almost an incidental finding in adults. Symptomatic adult cases of Morgagni hernias are even rarer. (3) Its pathophysiology is still unclear. (4) Most Morgagni hernia cases are diagnosed late because patients are either asymptomatic or present with vague gastrointestinal and/or respiratory symptomatology (5), Ultrasonography is useful but CT is the most sensitive investigation as it gives better anatomical detail of its contents and its complications. (5) Once diagnosed, the requirement for surgery is largely dependent upon the presentation. (3, 4) Laparoscopy has gained an upper hand these days as it can help in confirming the diagnosis with better visualization. It provides the benefit of minimal tissue trauma with subsequent early recovery and superior cosmesis. (6) However, Laparotomy also is practiced at many centres. (3, 4) Kuster et al first used the laparoscopic approach in 1992. (7) We repaired the defect laparoscopically using composite mesh for reinforcement of the defect. Pericardial patch was also used by some as prosthesis.

4. Conclusions

This case represents adult Morgagni hernia with an unusual presentation of only 15 days of respiratory complaints without any gastrointestinal symptoms. It highlights the difficulties in diagnosis, prompting a need for a high index of suspicion when assessing patients with unexplained respiratory distress. A missed diagnosis can lead to life-threatening complications such as bowel obstruction or strangulation which warrants early surgical intervention. Larger and traumatic defects should be reinforced with prosthesis. Widely used prosthesis these days are composite meshes. Although laparotomy is widely used, laparoscopic repair should be considered by advanced laparoscopic surgeons.

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