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CASE REPORT

FORAMEN MORGAGNI HERNIA AS A RARE CAUSE OF OBSTRUCTION

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A R T I C L E I N F O

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A B S T R A C T

Foramen Morgagni's hernia is an infrequently occurring congenital diaphragmatic hernia. Usually asymptomatic or discovered incidentally at early age or in adulthood and less commonly presents as acute intestinal obstruction. Timely diagnosis and intervention reduces morbidity and mortality in complicated cases. Surgical approach varies from transabdominal to transthoracic and laparoscopic to open. We present a rare case of Morgagni hernia in an elderly female with obstruction dealt by transabdominal approach.

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INTRODUCTION

Foramen morgagni's hernia is one of the rarest of the four types of diaphragmatic hernias and seldom present symptomatically. They are usually incidental findings on radiological investigations or sometimes present with vague symptoms like colicky pain, nausea and flatulence or rarely with features of acute intestinal obstruction. Timely diagnosis and management prevents both mortality and morbidity as in obstruction, strangulation or gangrene will result in contamination of thoracic cavity leading to high mortality. Hernia can be approached surgically from thorax or abdomen, in our case it was successfully managed by transabdominal approach.

Case Report

A formerly healthy, 60 year old lady was admitted to the emergency for absolute constipation and distention of abdomen since three days, sudden onset colicky abdominal pain for two day, which was diffuse and moderate in intensity, accompanied with one episodes of bilious vomiting and no associated fever. There was no history of trauma and previous surgeries. On examination patient was dehydrated with pulse rate of 100 per minute. Abdomen was distended and tenderness in right hypochondrium, with no guarding or rebound tenderness. Bowel sounds were exaggerated. Digital rectal examination and per vaginal examination did not reveal any abnormality. On chest examination bilateral vesicular breath sounds were present with absence of breath sounds in the right lower lung region. Laboratory investigations were within normal limits. Abdominal radiographs in standing and supine position showed multiple air fluid levels and dilated small bowel loops. On chest radiograph cardio phrenic and costophrenic angles were obliterated and lower lung field were opacified on the right side (Fig 1). Ultrasonography of the abdomen showed dilated small bowel loops with minimal interloop fluid. CT scan of showed pericardial homogenous fatty mass suggestive of right sided Morgagnia hernia.

Diagnosis of acute intestinal obstruction with diaphragmatic hernia on right side was suspected and patient was prepared for exploratory laparatomy. Intraoperatively small bowel, caecum, ascending colon and part of transverse colon was dilated. Approximately 200 ml of serous fluid was present in the abdominal cavity. Omentum, part of transverse colon and falciform ligament were entering into chest through a defect in the anterior part of right dome of diaphragm medially, which were reduced and the bowel was viable (Fig 2). Defect was closed with nonabsorbable interrupted sutures and intercostal chest tube drain placed. Patient recovered well and was discharged on 7th postoperative day.

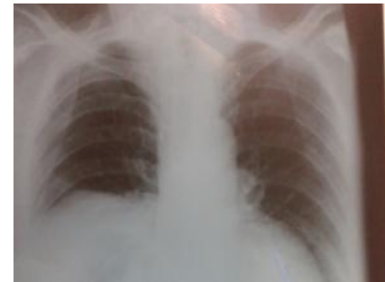

Figure 1 Chest radiograph

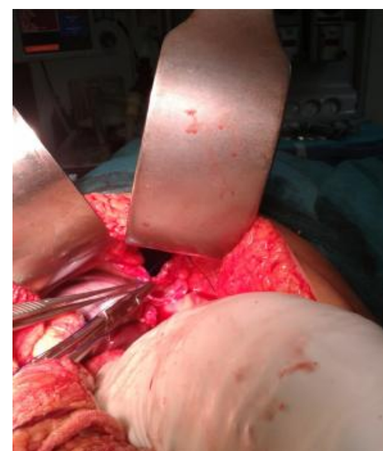

Figure 2 Right side Morgagni hernia intraoperatively

DISCUSSION

In 1761, Giovanni Battista Morgagni , an Italian anatomist and pathologist described this hernia as a defect through the triangular space (Larry's space or sternocoastal hiatus or foramen of morgagni) located between the muscle fibers from the xiphisternum and the costal margin fibers that insert on the central tendon. The reported incidence of hernia of Morgagni is 3-4 % of all congenital diaphragmatic hernias.[1-4]

These hernias are mostly congenital but can be acquired following trauma or in obese. Embryological failure of development or fusion of muscles of diaphragm can lead to its formation. Frequently seen on right side, may be bilateral and rarely on left side.[3] Association with Down's syndrome, Prader Willi syndrome, Turner syndrome, Ventral septal defects, Tetralogy of Fallot and Congenital abdominal wall defects has been seen with this anteromedial or Morgagni hernia.[4] Contents found in hernia sac are colon, omentum, stomach, liver or small bowel.[5]

In early life they can present as respiratory distress but in adults they are detected incidentally on radiological imaging, asymptomatic or present with vague symptom of colicky pain, flatulence or nausea. In rare instances, hernia may present acutely with signs and symptoms of acute obstruction necessitating an emergency operation.[6]

Diagnosis of Morgagni hernia can be made by chest radiograph or contrast gastrointestinal studies but CT with oral contrast is non invasive giving precise details of defect, contents and associated complications.[7] Differential diagnosis includes intrathoracic tumour, pneumonia, atelectasis, or pericardial cyst.[5]

Treatment of Morgagni hernia is surgical whether incidentally found, asymptomatic and uncomplicated or presenting with obstruction or strangulation. Surgical approach varies from transabdominal to transthoracic and laparoscopic to open transabdominal.[8] Video-assisted endoscopic techniques have also been described.[8,9] Uncomplicated cases of Morgagni hernia may be treated laparoscopicaly or endoscopically electively but open transabdominal approach is preferred in emergency situations.[10] Transabdominal approach is technically easier for repairing complicated and bilateral hernias and gives opportunity to assess entire abdominal cavity.[7,8,10] The defect can be closed directly with continuous or interrupted non absorbable sutures or reinforced with prosthetic mesh.[3,10,11]

CONCLUSION

Morgagni hernia is a rare entity can be safely and effectively dealt by various surgical approaches. The choice of surgical approach is based on patient condition especially in emergency situation where transabdominal approach is much favorable. It is important for surgeon to be aware of complicated Morgagni hernia as a rare cause of the acute abdomen so prompt diagnosis and treatment is instituted for better outcome.

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