CASE REPORT

A RARE CASE OF OBSTRUCTED MORGAGNI'S HERNIA PRESENTING IN A CHILD.

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CASE HISTORY: A 13 year old, obese girl weighing 76 Kg, with a height of 170 cm, who was asymptomatic till a week back, presented to the emergency department with a history of worsening abdominal pain, distension of abdomen, vomiting, and constipation on and off since 6 days. She had no significant past paediatric /medical /surgical or family history. She was admitted at a private hospital for these complaints for past two days and was referred to us.

At presentation, she was dehydrated with BP of 100/68 mm hg, pulse rate of 94/min and Respiratory Rate of 24/min. Her abdomen was distended with diffuse tenderness, but no guarding or rigidity. Abdominal X-ray showed multiple air fluid levels, with dilated bowel loop in right upper quadrant, X-ray chest showed space occupying density supradiaphragmatic near the right border of heart. Lab investigations revealed anaemia, leucocytosis, and hypokalemia with hypochloroemia. CT scan revealed-3.6x2.9 cm (ML x AP) sized defect in the anterior diaphragmatic aspect in midline below the xiphisternum through which a approximately 9 cm long loop of transverse colon and mesocolon was herniating in to the anterior mediastinum, causing widening of retrosternal space and compression effect and displacement of heart towards the left with atelectasis of Right Middle Lobe of the lung.

The patient was resuscitated with intravenous fluids, started on intravenous antibiotics, was transfused two packed RBC preoperatively. Then patient was taken up for emergency exploratory laparotomy. A finding of an obstructed transverse colon loop going in through a 4x3 cm defect in the diaphragm was confirmed. With gentle manipulations and adhesiolysis the bowel loop was negotiated into the abdomen from the defect. Sac was left in situ and defect was closed with intermittent nylon sutures. The sutured defect was then covered with polypropylene mesh and anchored all around with polypropylene sutures. On post-operative day two, the patient was started on oral sips and gradually, followed by, liquids and soft diet. With an uneventful post-op recovery, she was discharged on day six.

DISCUSSION: Hernia of Morgagni is the rarest of the four types of congenital diaphragmatic hernia (2%-3% of all cases). Hernia of Morgagni was first described by Giovanni Battista Morgagni, an Italian anatomist and pathologist in 1769, while performing a postmortem examination on a patient who died of a head injury. Hernia of Morgagni is located just posterolateral to the sternum. It has also been called retrosternal, parasternal, substernal, and sub costosternal. It is caused by a congenital defect in the fusion of septum transverses of the diaphragm and the costal arches. This weakness in the diaphragm later would be stretched by rapid rise in intraperitoneal pressure, giving

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rise to a hernia. Lev-Chelouche et al mentioned that it is for this reason that hernia of Morgagni is usually not discovered in children ⁽¹⁾.

According to the literature, total of 3 case reports in which patients presented acutely were found, out of 112 total publications on Morgagni hernia in children ⁽²⁾. In children, the majority presented with repeated chest infection. More than half are detected when patients are being investigated for unrelated problems. One of the study, mentions that 14% of children (seven out of 47) presented acutely ⁽³⁾. Patients with Down's syndrome have increased risk of hernia of Morgagni. Obese patients, as in our case report, may develop it later in life and sometimes it may follow trauma ⁽⁴⁾.

Computed tomography can be considered to be an accurate, non-invasive method of diagnosing hernia of Morgagni. Almost 90% of cases of hernia of Morgagni have a sac. As in our case report, in more than half of the cases reported, the sac was not removed. As described in Kuster et al it was recommended not to remove the sac as this may result in massive pneumo-mediastinum with potential respiratory and circulatory complications⁽⁵⁾. Ramachandran et al left the sac alone and repeat computed tomography a month later showed almost complete disappearance of the sac ⁽⁶⁾.

CONCLUSION: The incidence of Morgagni's hernia is rare, rarer in children, and acute presentation in children even rarer. CT scan is an important modality for early and accurate diagnosis of Morgagni's hernia. A delay in diagnosis can lead to life threatening complications such as strangulation of bowel and mortality.

CT scan showing hernial defect with colon herniating into the anterior mediastinum

Intra-operative picture showing omentum being withdrawn from the hernial defect

REFERENCES

1. Lev-Chelouche D, Ravid A, Michowitz M, et al. Morgagni hernia: unique presentations in elderly patients. J Clin Gastroenterol 1999;28: 81-2.
2. Gangopadhyay AN, Upadhyaya VD, Gupta DK, Sharma SP. Obstructed Morgagni's hernia . Indian J Pediatr. 2007 Dec; 74: 1109-10.

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3. Loong TP, Kocher HM. Clinical presentation and operative repair of hernia of Morgagni. Postgrad Med J. 2005 Jan; 81: 41-4.
4. Berman L, Stringer D, Ein SH, et al. The late presenting pediatric Morgagni hernia: a benign condition. J Pediatr Surg 1989; 24: 970-2.
5. Kuster GG, Kline LE, Garzo G. Diaphragmatic hernia through the foramen of Morgagni: laparoscopic repair case report. J Laparoendoscopic Surg 1992 ;2: 93-100.
6. Ramachandran CS, Vijay A. Laparoscopic transabdominal repair of hernia of Morgagni-Larrey: brief clinical reports. Surg Laparosc Endosc 1999; 9: 358-65.

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