A case of congenital diaphragmatic adult hernia presenting as acute intestinal obstruction

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Dear Editor,

Congenital diaphragmatic hernia in adult is very rare. Only 200 cases have been reported world wide. The incidence is 0.17%. The first description of a diaphragmatic hernia was made by Ambroise Pare in 1575. In 1848, Bochdalek described the embryology of the diaphragmatic hernia. Adult presentation is more frequent in males with ratio of 3:1. Bochdalek hernia is congenital defect in postero-lateral region of diaphragm, usually on the left side, it frequently presents in infants. We present a case of congenital diaphragmatic hernia in elderly male of 65 yrs presenting as acute intestinal obstruction.

A 65-yr-old male came to our emergency ward with complaints of generalized abdominal pain, abdominal distension, vomiting and obstipation of 2 days duration. Patient was absolutely asymptomatic before. He was not a known asthmatic, hypertensive or a diabetic. There was no previous history of recurrent respiratory tract infection and had no history of chest trauma. On examination patient was febrile, dehydrated, hypotensive with increase in pulse rate (tachycardia).

Abdominal examination revealed generalized distension with generalized guarding and rigidity with absent bowel sounds. Respiratory examination showed decreased air entry on the left side of the chest. Cardiac examination revealed normal heart sounds and apical impulse was in normal position.

X-ray abdomen showed multiple air fluid levels indicating intestinal obstruction. Chest x-ray showed bowel loops in the left hemi thorax. Ultra-sonogram of abdomen revealed dilated bowel loops with minimal free fluid. Patient blood investigation revealed normal hemoglobin, raised leucocytes count, elevated blood urea and creatinine indicating pre-renal uremia due to dehydration. Patient was posted for emergency laprotomy after improving the hydration status.

Laparotomy was performed by a vertical midline incision. Once the peritoneum was opened we found proximal part of stomach, entire omentum, splenic flexure of colon with spleen, transverse colon and 50 cm of small bowel with about 30 mL of dark brown fluid inside a large left sided diaphragmatic hernia. The defect measured about 10 x 6 cm, Adhesions were seen between the bowel loops and the adhesions were released. The bowels showed severe congestion with no signs of gangrene. The entire contents were reduced into the peritoneal cavity. The defect in the diaphragm was closed with 2.0 prolene in two layers. A left sided under water seal intercostal drainage was placed. Two peritoneal drains were placed, after a thorough peritoneal lavage. A laparostomy closure was done in order to prevent abdominal compartmental syndrome.

Usually in cases of congenital diaphragmatic hernia in adults, they present as chronic non-cardiac type of chest pain, intermittent abdominal pain or some may be asymptomatic (like our case). Osehold suggests that the rupture of pleura-peritoneal sac coincides with onset of symptoms. Some authors believe, increased intra-abdominal pressure due to obesity, pregnancy, trauma may produce symptoms in asymptomatic patients.

In our case, there was no history of trauma, recent weight gain and nearly the entire digestive tract was inside. In spite of this herniation patient was asymptomatic. This might

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occurred due to the wide neck of the diaphragmatic hernia which would have allowed free movements of the contents between the peritoneum and pleural cavity; symptoms could have occurred due to adhesions between bowel loops inside the hernia leading intestinal obstruction and also due to the prevention of movements of the contents between the two cavities.

In general the indication to repair diaphragmatic hernia is same as treating any hernia and should take into account medical condition and risk of ischemia to its contents. Although laparoscopy and thorascopic approach have been used for treatment of this disease, it is usually accepted by all authors that these need good surgical expertise and greater surgical time. Laprotomy is usually accepted by many authors as good approach for left sided diaphragmatic hernias as malrotations which is accompanied can also be treated. In our case the indication to emergency laparotomy was clear, given intestinal obstruction with signs of gangrene clinically.

In conclusion, despite it being a pathology predominantly diagnosed in newborns, congenital diaphragmatic hernia

in adults is a well-described entity and although uncommon, its presence should be suspected in adults who present with acute intestinal obstruction who were asymptomatic prior; and the importance of chest x-rays in diagnosis of this disease.

Conflict of interest The authors do not have any disclosable interest

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