



A CASE OF A PATIENT WITH GASTRIC VOLVULUS

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ABSTRACT

Gastric volvulus is a rare, life-threatening condition, but its intermittent nature and vague symptoms may make diagnosis difficult. Imaging is usually only diagnostic if carried out when patients are symptomatic. In the acute scenario, severe epigastric pain, retching with or without vomiting and difficulty or inability to pass nasogastric tube, constitute the Borchardt's triad that may be diagnostic. Herein, we reported a case that presented lately to the emergency department in with severe abdominal pain, abdominal distension and vomiting. The hiatus hernia was present intra-operatively. Gastropexy with meshplasty and Toupet's fundoplication was done.

KEYWORDS : Gastric Volvulus, Borchardt's Triad, Gastric Gangrene, Organoaxial

INTRODUCTION

Gastric volvulus is an uncommon condition. Torsion occurs along the stomach's longitudinal axis (organoaxial) in approximately two thirds of cases and along the vertical axis (mesenteroaxial) in one third. Usually, organoaxial gastric volvulus occurs acutely and is associated with a diaphragmatic defect, whereas mesenteroaxial volvulus is partial (<180 degrees), recurrent, and not associated with a diaphragmatic defect. In adults, the diaphragmatic defects are usually traumatic or paraesophageal hernias, whereas in children, congenital defects such as the foramen of Bochdalek or eventration are involved. The major symptoms at presentation are abdominal pain that is acute in onset, distention, vomiting, and upper GI hemorrhage. The sudden onset of constant and severe upper abdominal pain, recurrent retching with production of little vomitus, and the inability to pass a NG tube constitute Borchardt triad. Plain films of the abdomen reveal a gas-filled viscus in the chest or upper abdomen. The diagnosis can be confirmed by barium contrast study or upper GI endoscopy. Acute volvulus is a surgical emergency. The stomach is reduced and uncoiled through a trans-abdominal approach. The diaphragmatic defect is repaired, with consideration given to a fundoplication in the setting of a paraesophageal hernia. In the unusual case in which strangulation has occurred (5% to 28%), the compromised segment of stomach is resected. Spontaneous volvulus, without an associated diaphragmatic defect, is treated by detorsion and fixation of the stomach by gastropexy or tube gastrostomy.[1]

CASE REPORT

- A 60 year old female patient presented with complaints of occasional vomiting immediately after eating a meal since the last 4 months. The history was given by the patient's caretakers since she was mentally retarded. No other history was available. Per abdomen soft nontender no lump was palpable.
- Chest X-ray- PA view was suggestive of an air-fluid level above the level of the diaphragm and lateral view s/o two air-fluid levels - one extending above the diaphragm.
- CECT abdomen thorax suggestive of paraesophageal hernia with mesenteroaxial volvulus of the stomach.

Intra-op findings

Patient operated electively upper Midline incision kept. The stomach was identified which was distended and was adherent to the diaphragm. The fundus and the antrum were

identified and were distended. There was dilatation of the 1st part duodenum as well. Only a part of the body of the stomach was visualized s/o rotation of a part of the body on its horizontal axis superiorly. The gastrocolic ligament was also visible arising from around the hiatus and attaching to the colon downwards. The stomach was decompressed - wall was thickened s/o chronic mesenteroaxial volvulus. The diaphragm was firmly adherent to the stomach which was separated all around. The right crus was identified which was lax and hypertrophied. Both the vagus nerves were seen. Short gastric vessels were tackled with vessel sealer. The left sided dissection was done and the left crus was identified which was relatively normal in comparison to the right crus. Left vagus seen. Posterior dissection done and the oesophagus was encircled with an IFT. The hiatus was large and about 40 percent of the stomach (body) was reduced back gradually during the dissection s/o giant paraesophageal hernia with chronic mesenteroaxial volvulus. Serosal tears repaired with silk 2/0. Crural repair with prolene 1/0 - 5 stitches taken. 11*6 cm sized mesh placed over the repaired crura for reinforcement and fixed to the crura and the central tendon. Toupet's fundoplication done.

Pre-operative x-ray



DISCUSSION

Gastric volvulus a rare clinical entity, first described by Berti (1866) [2]. It is an abnormal rotation of the stomach of more than 180°, along its axis [3]. Three types of volvulus have been described according to the axis of rotation. (i) Organoaxial (59%) axis of rotation passes through the pylorus and the oesophagogastric junction (the long axis of the stomach). This is the commonest type. (ii) mesenterioaxial (29%) torsion occurs around the short axis, which is at right angles to the long axis, passing through the greater and lesser curves. (iii) Combined is a mixture of the previous two types. It can be classified as sub-diaphragmatic or primary volvulus, which is not associated with diaphragmatic disorders, or supradiaphragmatic or secondary volvulus, which is associated with diaphragmatic Pathologies.

In almost 75% of cases the volvulus is secondary to Para-oesophageal hiatus hernia, traumatic diaphragmatic hernia, eventration of the diaphragm, abdominal bands or adhesions; most common is hiatal hernia, but the principal predisposing factor is ligamentous laxity [4,5]. Chronic gastric volvulus may present with vague abdominal symptoms or postprandial pain, abdominal distension, belching, vomiting, or gastrointestinal bleeding.

It is a diagnostic emergency and therapeutic challenge in acute forms, as it presents with Borchartd triad: Upper abdominal pain, vomiting and difficulty to pass a nasogastric tube; and may lead to gastric strangulation with a high risk of ischemia and necrosis. Chronic form presents with non-bilius emesis, epigastric distension. It is suspected when erect chest radiograph images show a high air-fluid level in the chest, but diagnosis can be made by barium-meal examination. Great care must be taken to exclude other upper abdominal abnormalities as volvulus may also be produced during a barium-meal examination [6].

Nonetheless, a computed tomography scan now provides a comprehensive description of the thoracic lesion, including stomach vitality. Many patients have only minimal symptoms and require no treatment. When the symptoms are disabling, surgical treatment should be directed depending on the underlying etiology of the volvulus [6]. Specifically volvulus reduction, reintegration of the stomach into the abdominal cavity in cases of intrathoracic migration, and correction of causal factors. Resection of the hernial sac and the role of gastropexy for preventing recurrence remain controversial. Advances in laparoscopic surgery have made possible a laparoscopic approach to most cases of chronic gastric

volvulus [5].

CONCLUSION

Chronic gastric volvulus is an uncommon cause of recurrent abdominal pain. Its diagnosis must be suspected in patients where no real organic etiology can be found in adults. It can be managed with conservative management and surgery if present in its acute form as in our case.

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