Gastric Volvulus in an Elderly Patient with Recurrent Hiatal Hernia Treated with Laparoscopic Surgery

Maria K Bejar*, Adolfo Leyva-Alvizo, Eduardo Gonzalez and Mario Rodarte
Department of Surgery, School of Medicine and Health Sciences TecSalud ITESM, Mexico

Abstract

Background: Gastric volvulus is an abnormal rotation of the stomach along its longitudinal or transverse axis. 80% to 90% occurs in adults after the 5th decade of life and have 30% to 50% mortality.

Methods: Case report of a patient with acute gastric volvulus treated with a successful laparoscopic surgery. IRB approval and written consent were not needed for this paper.

Results: We report a case of an organo-axial gastric volvulus in an elderly patient with history of previous hiatal hernia and Gastroesophageal Reflux Disease treated with laparoscopic fundoplication and cruroplasty. The volvulus was seen in a CT scan. A subtotal gastrectomy and an omega gastrojejunal anastomosis were performed due to an incidental perforation during gastric reduction. The postoperative course was uneventful.

Conclusion: Gastric volvulus is an uncommon condition; 70% are due to secondary causes. 60% are organo-axial volvulus. Borchadt’s triad occurs in 70% of the acute cases. The laparoscopic approach is the first choice of treatment for gastric volvulus, due to better results in terms of intrahospitalary stay, patient satisfaction and symptomatic resolution. A gastric resection is justified when there is ischemia, necrosis or perforation secondary to strangulation.

Keywords: Gastric; Volvulus; Laparoscopic; Hiatal; Hernia; Borchadt’s triad; Gastrectomy

Introduction

Gastric volvulus is an abnormal rotation of the stomach along its longitudinal or transverse axis. 80% to 90% occur in adults after the 5th decade of life and have 30% to 50% mortality.

Methods

This is a case report of a patient with acute gastric volvulus treated with a successful laparoscopic surgery. IRB approval and written consent was not needed for this paper.

Results

A 64 year old male with pathologic history of type II Hiatal Hernia (HH) and Gastroesophageal Reflux Disease (GERD), treated with laparoscopic fundoplication and cruroplasty. He attends the hospital due to intense thoracoabdominal pain for the past 12 h, nausea and dyspnea. He refers having occasional morning cough, pyrosis and dyspnea on exertion for the last two months. He has a BMI of 26 kg/m² and presents tachypnea, tachycardia, left lung base hypoventilation, epigastric abdominal pain, no peritoneal signs and diminished peristalsis. Laboratory tests were normal. The Chest X-ray (Figure 1) showed an air-fluid level in the left hemithorax. In the abdomen Computed Tomography (CT) (Figure 2) a type III HH was observed with total protrusion of the stomach through the diaphragm and rotation of the same in its longitudinal axis. Upper endoscopy was made, but the scope couldn’t advance. A laparoscopic approach was performed, herniated stomach was reduced and the previous fundoplication dismantled. During hernia reduction (Figure 3), a left tension pneumothorax was produced so a pneumo-kit was placed, resolving the problem. The greater curvature of the stomach was ischemic and it was incidentally perforated (Figure 4), having gastric material contaminating the abdominal cavity. A subtotal gastrectomy and an omega gastrojejunal anastomosis were made (Figure 5). The hermeticity of the anastomosis was verified through an air test, with no leaks observed. The postoperative course was uneventful.

Conclusion

Gastric volvulus is an uncommon condition; 70% are due to secondary causes. 60% are organo-
axial volvulus. Borchadt’s triad occurs in 70% of the acute cases. CT has 100% sensitivity. Upper endoscopy should be done in the operating room to try to detorse and reduce the volvulus. The current surgical technique includes dissection and excision of the herniary sac, reposition of the gastroesophageal junction 2 cm to 3 cm below the diaphragm to diminish recurrence and cruroplasty. Mesh placement is recommended except when there’s presence of contamination.

The laparoscopic approach is the first choice of treatment for gastric volvulus, due to better results in terms of intrahospitalary stay, patient satisfaction and symptomatic resolution. A gastric resection is justified when there is ischemia, necrosis or perforation secondary to strangulation.

**References**