

CASE REPORT

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Successful laparoscopic management of paraesophageal hiatal hernia with upside-down intrathoracic stomach: a case report

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Abstract

Introduction: Paraesophageal hernia with intrathoracic mesentericoaxial type of gastric volvulus is a rare clinical entity. The rotation occurs because of the idiopathic relaxation of the gastric ligaments and ascent of the stomach adjacent to the oesophagus through the hiatus defect, while the gastroesophageal junction remains in the abdomen. The open approach remains the gold standard therapy for most patients. Here we report the case of a patient with such a condition who underwent a successful laparoscopic surgery. A literature search revealed that this is the first case report from Southeast Asia.

Case presentation: A 55-year-old Chinese woman presented to us with symptoms suggestive of gastric outlet obstruction for one year. A chest radiograph showed an air bubble with air-fluid level in her left thoracic cavity, where a diaphragmatic hernia was initially suspected. A computed tomography scan and barium swallow study demonstrated the presence of a type III paraesophageal hernia with intrathoracic upside-down stomach. A laparoscopy was performed and the herniated stomach was successfully reduced into the abdomen. The mediastinal part of the hernial sac was excised. Adequate intraabdominal length of oesophagus was achieved after resection of the sac and circumferential oesophageal dissection. A lateral releasing incision was made adjacent to the right crus to facilitate crural closure. The diaphragmatic defect and the hiatal closure were covered with a composite mesh. A Toupet fundoplication was performed to recreate the antireflux valve. She had an uneventful recovery. She had no relapse of previous symptoms at her six-month follow-up assessment.

Conclusions: Laparoscopic repair of such a condition can be accomplished successfully and safely when it is performed with meticulous attention to the details of the surgical technique.

Keywords: Laparoscopy, Upside-down stomach, Gastric volvulus, Hiatal hernia, Fundoplication

Introduction

Gastric volvulus is classified into three types according to the axis of rotation: organoaxial (rotation around the long axis connecting the cardia and the pylorus); mesentericoaxial (rotation around the short axis connecting the lesser and greater curvatures) and combined (rotation around both the short and long axis). The mesentericoaxial type, as in our case, is a less common variant, occurring in 29% of cases [1]. The combination of a mesentericoaxial type of gastric volvulus and an intrathoracic location of the stomach is a rare clinical entity.

Even though sporadic cases of intrathoracic gastric volvulus associated with paraesophageal hernia (PEH) have been reported in Europe and the United States, it is very rare in Southeast Asia. To the best of our knowledge, this is the first report from this region documenting this rare type of gastric volvulus entity with successful treatment using a laparoscopic approach.

Case presentation

A 55-year-old Chinese woman presented with a history of left hypochondrial pain for a duration of one year, associated with early satiety and postprandial vomiting. She did not report any reflux symptoms. Her physical examination did not reveal any significant abnormality. An upper endoscopy did not show any evidence of

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