Intrathoracic location of mixed-type acute gastric volvulus

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INTRODUCTION

Gastric volvulus is a rare condition. Two main forms have been described: an organo-axial type (60%), when the stomach rotates along its longitudinal axis and brings the esophagogastric junction and pylorus together, and a mesentero-axial type (29%), in which the stomach rotates around a transverse axis and brings the lesser and greater curvatures together. In mixed-type volvulus (2%) the stomach is rotated around both axis. Up to 10% of cases are unclassified forms of gastric volvulus.

CLINICAL CASE

A 63-year-old male with a known history of hiatal hernia was admitted to the Emergency Department complaining of abdominal distension and vomiting. On physical examination his general condition was good, there was no fever, his abdomen was distended, tympanic and generally tender with no signs of peritonitis. Bowel sounds were present. Laboratory tests were normal except for a white blood cell count of 11.760 x 10³/µl with a relative neutrophil count of 90%, and plasma urea of 55 mg/dl. Plain anteroposterior radiographs of the chest (Fig. 1) and the abdomen (Fig. 2) revealed massive gastric distension with an air-fluid level. Chest radiographs also showed an air bubble in the lower mediastinum. A nasogastric tube was inserted and continuous suction was applied through it. A large amount of gas and 3 liters of gastric fluid were drained providing rapid symptom relief. An upper gastrointestinal barium study (Figs. 3 and 4) showed a large paraesophageal hiatal hernia and a mixed-type gastric volvulus. Then, the patient underwent elective laparotomy and stomach reduction, hernial sac resection, diaphragmatic defect closure, and Nissen’s fundoplication.
Two thirds of gastric volvuli are associated with diaphragmatic defects. Other associated conditions include: diaphragmatic trauma, diaphragmatic paralysis, gastric tumors, gastric ulcer, and extrinsic compression. Acute gastric volvulus is an emergency, and the first treatment step is to insert a nasogastric tube to decompress the stomach. Endoscopic reduction can be attempted when no signs of ischemia are present in some cases of gastric volvulus. If ischemia occurs, immediate surgery must be performed with hernial sac reduction, closure of diaphragmatic defect, and gastropexy. Partial or total gastrectomy is indicated only for gastric tumor or necrosis.

RECOMMENDED REFERENCES