

AKUT GASTRİK VOLVULUS BELİRTİSİ VEREN PARAOZOFAGEAL HERNİ "OLGU SUNUMU"

A LARGE PARAESOPHAGEAL HERNIA PRESENTING WITH ACUTE GASTRIC VOLVULUS "CASE REPORT"

Dr. Selman SÖKMEN Dr. Ahmet ÖNAL Funda OĞUZ Dr. Aydın TAŞDÖĞEN Dr. Zahide ELAR

ÖZET: Paraözefageal fıtıklar genelde ileri yaşlarda ortaya çıkan, bazen hayatı tehdit edebilen olgulardır. Gastrik volvulusa neden olmaları dolayısıyla cerrahi olanak tedavileri gerekir. Bu çalışmanın amacı, cerrahi tamin yöntemlerini gözden geçirmek ve Akut Karın sendromu belirtileriyle kliniğimize müracaat eden bir olguyu incelemektir. Cerrahi yaklaşımda seçilecek olan yöntem mevcut cerrahi metodların birini seçmekten çok hastanın operatif ve medikal bulgularına dayandırılmış, hastaya özgün bir yöntem olmalıdır. **Anahtar Kelimeler:** Paraözefageal herni, gastrik volvulus, cerrahi metod.

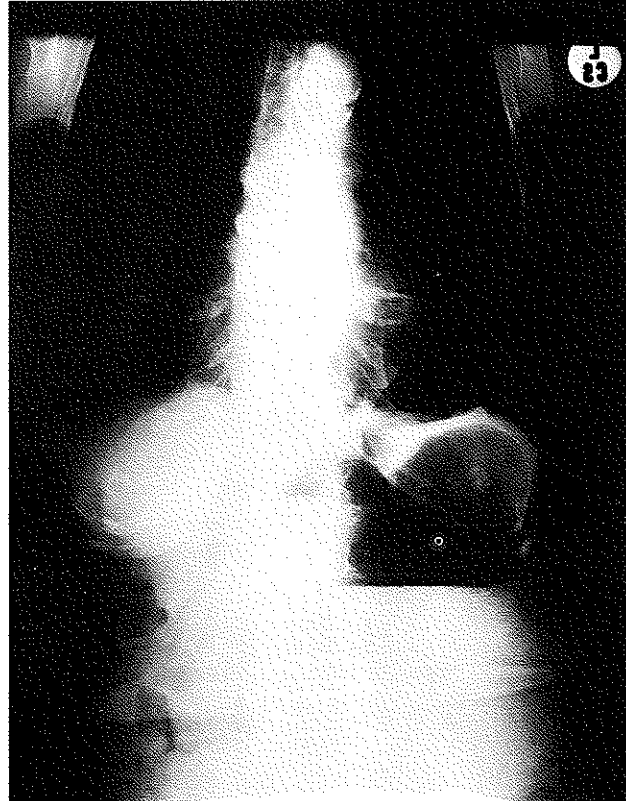
Paraesophageal hernias represent 5% of all hernias through the esophageal hiatus that may go unnoticed or neglected until severe mechanical complications of bleeding, infarction and perforation occur 1-6. They are distinguished from the more common sliding hiatal hernia by a relative preservation of the posterior intraabdominal fixation of the gastric cardia to the paraaortic fascia by the phrenoesophageal ligament 1,2,5. The true cause of paraesophageal hiatus hernias ("PHH") is unknown, however, structural deterioration of the phrenoesophageal membrane over time may explain the higher incidence of hiatal hernias in the older age groups 1,4. A still-unresolved controversy is whether to perform an antireflux operation in conjunction with closure of the diaphragmatic defect 1-6. We describe our clinical approach for the treatment of a large paraesophageal hiatal hernia case presenting with gastric volvulus.

CASE

A 85-year-old female on medical therapy for chronic obstructive lung disease and degenerative osteoarthritis who had numerous Emergency Room visits because of self-resolving intermittent attacks of vomiting, chest pain and upper abdominal pain was found on plain erect abdominal X-rays to have a large PHH presenting with

acute gastric volvulus (Fig.1). She gave a history of a

Fig.1: Posterior anterior chest roentgenogram demonstrating a large retrocardiac air-fluid level typical of massive intrathoracic gastric herniation with PH



Departments of General Surgery, Radiology, Anesthesiology,
Dokuz Eylül University, School of Medicine.

Correspondence to: Selman SÖKMEN, MD.,

Department of Surgery, Dokuz Eylül University, School of
Medicine, Inciraltı 35340 İzmir, Turkey

"hiatus hernia" for several years: heartburn, dysphagia, postprandial chest pain and ineffectual retching were present. She had marked reflux symptoms in the recumbent position. A previous hospitalization to rule out coronary arterial and gallstone disease was noted prior to diagnosing the paraesophageal pathology. However, she had refused to be operated at the time the condition was diagnosed and elective repair was recommended. At admission, initial exam revealed that she had a clinical picture of tachycardia, hyperthermia, systolic hypotension, dyspnea, and diaphoresis. The diagnosis of PHH was suspected by the presence of a retrocardiac air-fluid level on the initial PA and lateral chest roentgenogram (Fig. 1) besides the urgent resuscitative measures. Abdominal discomfort, epigastric fullness and inability to vomit take us quickly to put nasogastric tube. After voluminous nasogastric decompression (about 2000 cc.) and immediate resuscitation, her general condition and hemodynamic functions improved and preoperative esophagoscopy was performed to avoid delays in surgical treatment and misdiagnosis: esophagitis (Grade 3) was the only clue that documented by the endoscopist. However, to our surprise, the entrapped stomach reduced spontaneously or probably, by the guide effect of preoperative passage of a nasogastric tube and/or endoscope (Fig. 2), the patient's general condition became better in minutes. Subsequent barium contrast studies revealed near-total intrathoracic displacement of the stomach which was in a cascade configuration (Fig. 3).

Fig. II: Successful repositioning of the entrapped stomach probably by preoperative passage of a nasogastric tube for gastric decompression

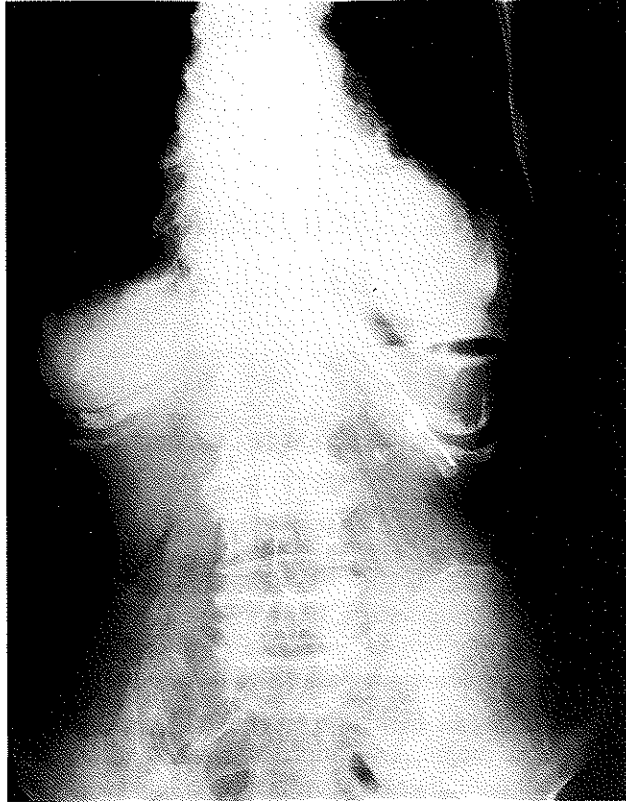
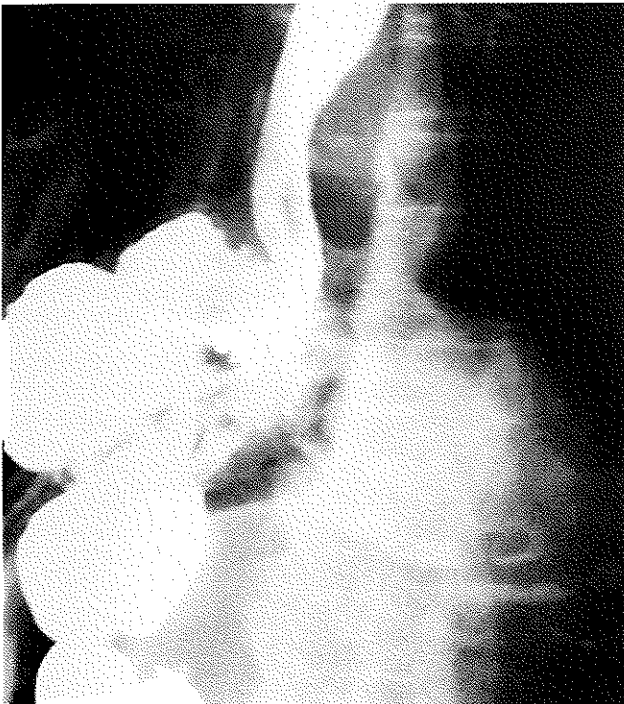


Fig. III: Barium swallow upper gastrointestinal film show PHH (Demonstrating gastric displacement within the intrathoracic hernia sac).



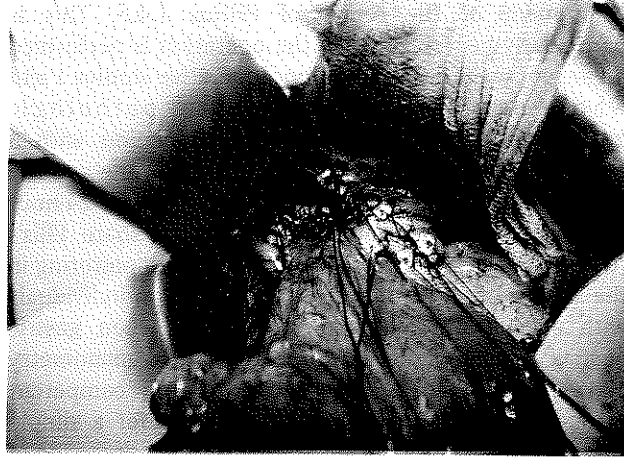
Because of the risks arising from her advanced age and co-existing diseases, a thorough pre-anesthetic evaluation was performed. The cachectic patient was classified as ASA IV for the risk of anesthesia and her physical status because of dyspnea on exertion, hypertension and diabetes mellitus; tachyarrhythmia (heart rate: 120/min), systolic murmur of 3/6° on the mitral valve, bilateral rales and ronchus; anemia established with the laboratory tests, atrial fibrillation, right bundle branch block, 3rd degree mitral insufficiency, 1st degree aorta insufficiency, 1st degree tricuspid insufficiency. She was treated to her optimal status as far as possible during the pre-anesthetic period, and was prepared for the elective open surgical intervention and anesthesia.

On the day of surgery, general anesthesia was induced with 2.5 mg dehydrobenzperidol, 0.1 mg fentanyl, 4 mg vecuronium, O₂/N₂O, isoflurane and endotracheal intubation was performed following central venous cannulation (Braun Certo 375, 16 G, 70 cm), radial artery cannulation (Braun vasofix, 20 G) and a peripheral venous line (Medikit, Medican 18 G) insertion and 5 minutes of pre oxygenation. The neuromuscular agent was antagonized and the patient was extubated at the end of surgical procedure and she was transported to the intensive care unit. No complication developed during the postoperative course of the patient, who was observed in the intensive

Fig.IV: A large paraesophageal "true" hernia, defect seen from the patient's left side.



Fig.V: Anterior crural approximation reinforced with teflon pledgets.



care unit with spontaneous ventilation for 30 hours.

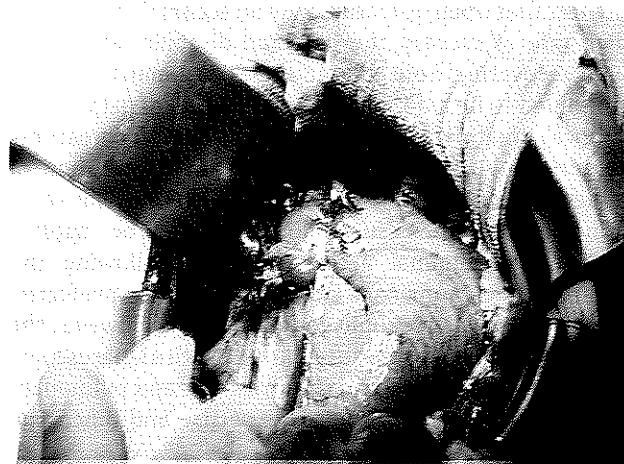
Operative technique

After the entire stomach was carefully reduced from its intrathoracic position using Babcock forceps, adhesions between the stomach and intrathoracic structures were divided using bipolar cautery, and the two or three short gastric vessels were divided between sutures. The excess hernia sac was excised to fully expose the edges of the diaphragmatic defect (Fig.4) and the gastroesophageal junction is carefully identified at the level of the hiatus. For a concomitant fundoplication, the posterior dissection of the esophagus was then carried out at that stage. Heavy polypropylene sutures buttressed with teflon pledgets were used in crural repair (Fig.5), and a conventional Nissen fundoplication was performed (Fig.6) The postoperative course was uneventful, the diet was advanced as tolerated. She was discharged on the 10th postoperative day, and, at 5-month follow-up, the patient was entirely remained symptoms free.

DISCUSSION

After Postempski, in 1889, reported the first successful operative repair and with the advent of clinical roentgenology it became evident that a hiatal hernia was relatively common abnormality and was not always accompanied by symptoms 1-4. Elective repair of these "true" hernias of the esophageal hiatus is highly recommended, regardless of symptoms and even in elderly people with shorter life expectancies, will avoid the life-threatening complications of obstruction, perforation, bleeding and gastric strangulation, that are part of the natural history of the hernia in about 25% of patients 1-6. A policy of observation of these processes was unsuccessful due to progression of symptoms in 45% of PHH patients managed by Treacy and Jamieson 1. Additionally, elective observation resulted in death from

Fig.VI: A conventional Nissen fundoplication was created.



mechanical complications in 27% of PHH patients in the series of Shimmer and et al 1,2,5.

Postlethwait(1979) reported that if surgical intervention is delayed and correction is done on an emergency basis, there is a 19% operative mortality, compared with less than 1% for an elective repair 1,2,4,5.

The need to routinely include fundoplication with the primary PHH repair is very questionable. Although several patients with PHH may admit to having some gastroesophageal reflux symptoms when "carefully questioned", true pathologic gastroesophageal reflux with a hypotensive lower esophageal sphincter is less common 2,3,5. The risk of postfundoplication problems must outweigh the potential benefit of obtaining perfect control of reflux symptoms. Should the fundoplication be dysfunctional, the surgeon may indeed worsen the reflux symptoms in these patients 2,5. However, elegant studies by De Meester have documented that 60% of patients with PHHs had hypotensive lower esophageal sphincters and

an abnormal 24-h pH test 1. These data were felt to substantiate the need for routine antireflux surgeries a component of the repair of PHHas 1,4,6. This is particularly necessary when the operation is performed on an emergent basis without preoperative studies 1 and when managing patients with pathologic gastroesophageal reflux found in association with a "mixed" sliding and PH 1-6. If preoperative time and the patient's condition permits, evaluation with 24-hour esophageal pH monitoring- although we share Ellis's reservations about the accuracy of 24-h pH monitoring in the setting of a PHH that reflux can occur in individuals with a normally functioning sphincter when gastric obstruction is present 5 - and esophageal manometry allows the identification of patients with competent cardias 1-6. Such patients are candidates for a simple surgical correction, as it can be done without dissection of the cardia 2,3,5. If dissection of the cardia is necessary, an antireflux procedure should be added to the repair 1.

Despite unanimity on the need for surgical repair and the fact that open operation may be accomplished with a high rate of success, the pain and disability associated with recovering from a large upper abdominal incision continued to be a deterrent to the referral of patients for surgical treatment 2,3,6. The advent of laparoscopic surgery now seems to be changing the perception of patients and physicians toward surgery 3,6. The same principles of open surgical repair may be applied thorough a minimal access technique, allowing the laparoscopic approach to become the preferred technique for gastroesophageal surgery 3,6. However, the option of performing these repairs through a laparoscopic approach in patients with cardiovascular and pulmonary medical problems often needs expertise and functional

results of long-term follow-up 2,3,6.

In summary, patients with a PH must be counselled to have elective repair of their hernia regardless of the severity of their symptoms or the size of the hernia. The surgical approach chosen for repair was based upon the clinical urgency of the situation, the age and concurrent illness(es), and the pathology documented during the perioperative evaluation.

Repair of PHHas should be tailored to each patient's anatomic and pathophysiologic condition rather than applying one standard surgical management policy.

KAYNAKLAR

1. DeMeester TR, Bonavina L: *Paraesophageal hiatal hernia, in Nyhus LM and Condon RE (eds): Hernia, Philadelphia, J.B. Lippincot Company, 1989, pp. 684-693.*
2. Landreneau RJ, Johnson JA, Marshall JB, et al. *Clinical spectrum of paraesophageal herniation. Dig Dis Sci 37: 537-544, 1992.*
3. Paul MG, DeRosa RP, Petrucci PE, et al. *Laparoscopic tension-free repair of large paraesophageal hernias. Surg Endosc 11(3): 303-307, 1997.*
4. Minkari T, Ünal G, Alver O: *Hiatal Hernias, in Minkari T (ed): Esophageal Surgery, Istanbul, Ceylan Publishers, 1983, pp.218-264.*
5. Williamson WA, Ellis FH, Streitz JM, et al. *Paraesophageal hiatal hernia: is an antireflux procedure necessary? Ann Thorac Surg 56:447-452, 1993.*
6. Cuschieri A, Shimi S, Nathanson LK. *Laparoscopic reduction, crural repair, and fundoplication of large hiatal hernia. Am J Surg 163: 425-430, 1992.*