



# Strangulated paraesophageal hernia: A case report

## Boğulmuş paraözefageal herni: Olgu sunumu

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### Abstract

Hiatal hernia has a risk for volvulus and strangulation. Paraesophageal hernia (type II hiatal hernia) is seen as the most risky group because of having a focal defect. In this study, we aimed to present a case with strangulated paraesophageal hernia which was surgically treated in an emergent basis.

**Keywords:** Hiatal hernia, Paraesophageal hernia, Strangulation

### Öz

Hiatal hernilerin volvulus ve boğulma riski vardır. Paraözofageal herni (tip II hiatal herni), fokal defekt nedeniyle en riskli grup olarak görülmektedir. Bu çalışmada, acil cerrahi tedavi gerektiren bir strangüle paraözefageal herni olgusunu sunmayı amaçladık.

**Anahtar kelimeler:** Hiatal herni, Paraözafageal herni, Boğulma

## Introduction

Paraesophageal hernia (PH), e.g., type II hiatal hernia, occurs due to focal weakness of pharyngoesophageal membrane and diaphragmatic crus. In this case, while the gastroesophageal junction and the cardia maintain their normal position under the diaphragm, a portion of the gastric fundus and/or large curvature travels through the pleural cavity, forming a hernia. In the advanced cases, most of the fundus deviates to the right hemithorax, and the small curvature and the pylorus which are fixed to the retroperitoneum by the duodenum stay intra-abdominally [1, 2].

Although they are seen rarely, the most frightening complication of paraesophageal hernias is volvulus and strangulation. PH is seen as the most risky group because of having a focal defect [1, 3]. In this study, we aimed to present a case of strangulated PH surgically treated in an emergent basis.

## Case report

A 56-year-old man admitted to the emergency department with a three-day history of abdominal pain and vomiting. His previous clinical record showed a cardiac surgery and no abdominal operation or trauma was present. On physical examination, he complained of moderate epigastric discomfort. Physical signs of acute abdomen was not detected. Chest and abdominal x-ray studies were performed, and revealed a big air-fluid level at the epigastric area (Figure 1 and Figure 2). The patient was diagnosed as strangulated paraesophageal hernia and he was informed for surgical necessity. After anesthesia preparation, he underwent open surgery.

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Figure 1: Chest x-ray



Figure 2: Abdominal x-ray

The fundus of the stomach was detected as herniated into the mediastinum over the hernia defect. It was reduced and seen viable, therefore no further procedure performed. The crural defect was repaired, and Nissen fundoplication was added. He discharged postoperative 8th day without any complication.

## Discussion

Paraesophageal hernia (PH) is a rare type of hiatal hernia. Four types of hiatal hernia are identified. The more common sliding hernia, type I, is characterized by an upward dislocation of the cardia in the posterior mediastinum. The PH, type II, is characterized by an upward dislocation of the gastric fundus alongside a normally positioned cardia. The mixed hernia, type III, is characterized by an upward dislocation of the cardia and the gastric fundus [1, 2]. The fourth one is defined as herniation of organs beside the stomach, i.e., omentum or colon.

Pain in the epigastric area is the most common symptom in patients with PH. Others include dysphagia, nausea, vomiting, hematemesis and dyspnea [2].

Common complications of PH include hemorrhage, ulceration, incarceration, obstruction, and strangulation [3]. A case of perforation of the ulcer in the hernia sac is reported [4]. These complications can be lethal [5].

The presence of stomach in the mediastinum shown by air-fluid levels on chest x-ray is diagnostic for PH. A barium swallow provides the diagnosis in virtually every case. Fiberoptic esophagoscopy is useful in the diagnosis and classification of a hiatal hernia [6].

All symptomatic patients with PH should be considered for surgical repair [7]. Untreated patients have a very high mortality rate because of complications. If surgery is delayed and repair is done on an emergency basis, operative mortality is higher than elective repair. Surgical repair of PH may be either transabdominal or transthoracic. Laparoscopic repair has proven to be effective in the treatment [8-11].

In conclusion, strangulated paraesophageal hernia may be seen in elder adults. Chronic herniation can be undetected for a long time. Emergent surgical treatment of incarcerated hiatal hernia should be performed due to risk of strangulation of the herniated organs.

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