



ORIGINAL RESEARCH PAPER

Anatomy

SILENT INTRUDER: CADAVERIC DISCOVERY OF A HIATUS HERNIA DURING ROUTINE DISSECTION

KEY WORDS: Hiatus Hernia, Cadaveric Finding, Dissection, Gastroesophageal Junction

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ABSTRACT

Hiatus hernia is a pathological condition characterized by the herniation of a part of the stomach through the esophageal hiatus of the diaphragm into the thoracic cavity. While commonly diagnosed clinically and radiologically in living patients, its incidental discovery during cadaveric dissection remains uncommon. This paper reports the cadaveric finding of a hiatus hernia during routine dissection in the anatomy department and highlights its anatomical, clinical, and educational significance. **Objective:** To report and document the incidental finding of a hiatus hernia during routine cadaveric dissection, describe its anatomical features, and discuss its clinical relevance in the context of gastroesophageal pathology. **Materials and Methods:** During routine dissection of the abdominal cavity in the Department of Anatomy, a large protrusion was observed in the region of the esophageal hiatus of the diaphragm. Careful dissection was performed to delineate the stomach, esophagus, and diaphragmatic hiatus. Morphological features were noted, and photographic documentation was obtained for record and analysis. **Results:** A portion of the gastric fundus and proximal body was seen herniating through the esophageal hiatus into the thoracic cavity. The gastroesophageal junction was displaced superiorly, suggesting a sliding type of hiatus hernia. The esophageal hiatus appeared wider than normal, with thinning of the surrounding diaphragmatic muscle fibers. No gross adhesions or pathological ulcerations were noted. This observation corresponds to a sliding hiatus hernia (Type I). **Conclusion:** The incidental discovery of a hiatus hernia during cadaveric dissection underscores the importance of anatomical teaching in understanding clinical conditions. This rare finding provides a valuable learning opportunity to appreciate the relationship between diaphragmatic anatomy, gastroesophageal junction integrity, and the pathophysiology of gastroesophageal reflux disorder. Further documentation of such cases can enrich the anatomical literature and support medical education.

INTRODUCTION

Hiatus hernia is defined as the protrusion of the abdominal contents, most frequently the stomach, into the thoracic cavity through the esophageal hiatus of the diaphragm. Stomach is the most widest part of the alimentary canal. It occupies a recess beneath the diaphragm and anterior abdominal wall that is bounded by upper abdominal viscera on either side⁽¹⁾. The prevalence of hiatus hernia in the general population ranges from 10–50%, with higher incidence among the elderly due to weakening of diaphragmatic and phrenoesophageal ligaments. Townsend⁽²⁾ described severe symptoms, including chest pain, dysphagia, and respiratory problems, such as shortness of breath. Clinically, hiatus hernia is associated with gastroesophageal reflux disease (GERD), epigastric pain, and dysphagia. Ullal et al⁽³⁾ explained that hiatus hernias are incidental findings during routine imaging or endoscopy and are typically associated with only minor symptoms such as gastroesophageal reflux or discomfort in the epigastrium.

Cadaveric discovery of hiatus hernia is uncommon but serves as an important teaching tool for medical students and highlights the anatomical basis of related clinical symptoms. This report documents a cadaveric case of hiatus hernia identified during a routine undergraduate dissection.

MATERIALS AND METHODS

During routine dissection of the abdominal cavity in the Department of Anatomy, a large swelling was observed in the region of the esophageal hiatus. Careful dissection was carried out to trace the stomach, esophagus, and diaphragm. Photographic documentation was done, and relevant measurements of the herniated stomach segment and diaphragmatic hiatus were recorded.

RESULTS

The cadaver was of an adult male, aged approximately 65 years. A large portion of the gastric fundus and proximal body was seen herniating through the esophageal hiatus into the thoracic cavity. The gastroesophageal junction appeared

displaced superiorly. No gross evidence of ulceration or adhesions was noted. The diaphragmatic opening was wider than normal, with thinning of surrounding muscular fibers.



Figure 1: The Cadaveric Hiatus Hernia As Documented During Dissection



Fig 2: Specimen Of Hiatus Hernia After Removal



Fig 3: Herniated Stomach Into Thorax- Left Dome Of Diaphragm Are Seen

DISCUSSION

Hiatus hernia is categorized into four types:

1. Sliding hernia (Type I) – most common, with displacement of gastroesophageal junction.
2. Paraesophageal hernia (Type II) – gastric fundus herniates beside the esophagus.
3. Mixed (Type III) – combination of sliding and paraesophageal.

4. Complex (Type IV) – herniation of other viscera (colon, spleen) along with stomach.

Roy et al concluded that type -I hiatus hernia is most common and the rarest being type-IV. Etiology includes weakening of the phrenoesophageal ligament, increased intra-abdominal pressure (obesity, chronic cough, pregnancy), and age-related degeneration. Shifting of lower esophageal sphincter from high pressure zone of abdominal cavity to low pressure zone of thorax which in turn impairs the activity of the sphincter leading to gastroesophageal reflux disorder as stated by Alvarez et al⁽⁶⁾. Respiratory symptoms highlight the importance of early detection and treatment as suggested by Mittal et al⁽⁶⁾.

Hiatus hernia may remain asymptomatic but is often associated with GERD, heartburn, and regurgitation. Chronic cases can lead to Barrett's esophagus and predispose to adenocarcinoma. Bohmer et al⁽⁷⁾ noted that hiatus hernia is associated with more frequent occurrence of transient lower esophageal sphincter relaxation. In this case, the cadaver demonstrated features are suggestive of a sliding hernia. With age, the quantum of elastic fibres in the phreno-esophageal ligament diminishes, making the ligament lax and therefore increases the risk of developing hiatus hernia as narrated by Kahrilas et al⁽⁸⁾. This study highlights the cadaveric importance bridging the clinical medicine with gross anatomy and providing medical students with a direct visualization of structural pathology. This also emphasize the anatomical correlation with clinical symptomatology of upper gastrointestinal disorders.

CONCLUSION

The incidental discovery of a hiatus hernia during routine cadaveric dissection is both rare and educationally significant. It not only reinforces the importance of dissection in uncovering hidden pathological conditions but also provides a tangible link between structural anatomy and clinical practice. By correlating gross anatomical changes with the pathophysiology of gastroesophageal disorders, such findings enrich the learning experience of medical students and emphasize the invaluable role of body donors in advancing medical knowledge. Careful documentation and reporting of these observations contribute to anatomical literature, encourage clinical-anatomical integration, and highlight the continuing relevance of cadaveric studies in modern medical education.

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