Chapter 21: Esophageal Diverticula and Benign Tumors

ESOPHAGEAL DIVERTICULA

Diverticula of the esophagus are a rare entity, with a prevalence that ranges between 0.06% and 4%.[1,2] Esophageal diverticula are classified according to their location along the esophagus (pharyngoesophageal, midesophageal, or epiphrenic), and the mechanism of formation (pulsion or traction). Most common diverticula are those located in the pharyngoesophageal and epiphrenic locations. These are usually pulsion diverticula in which an increase of intraluminal pressure leads to herniation of mucosa and submucosa through the muscular layer resulting in a false diverticulum. Mid-esophageal diverticula are commonly traction diverticula. These are much less frequent and are the result of a focal traction of all layers (mucosa, submucosa, and musculature) of the esophageal wall by a periesophageal inflammatory process resulting in a true diverticulum.

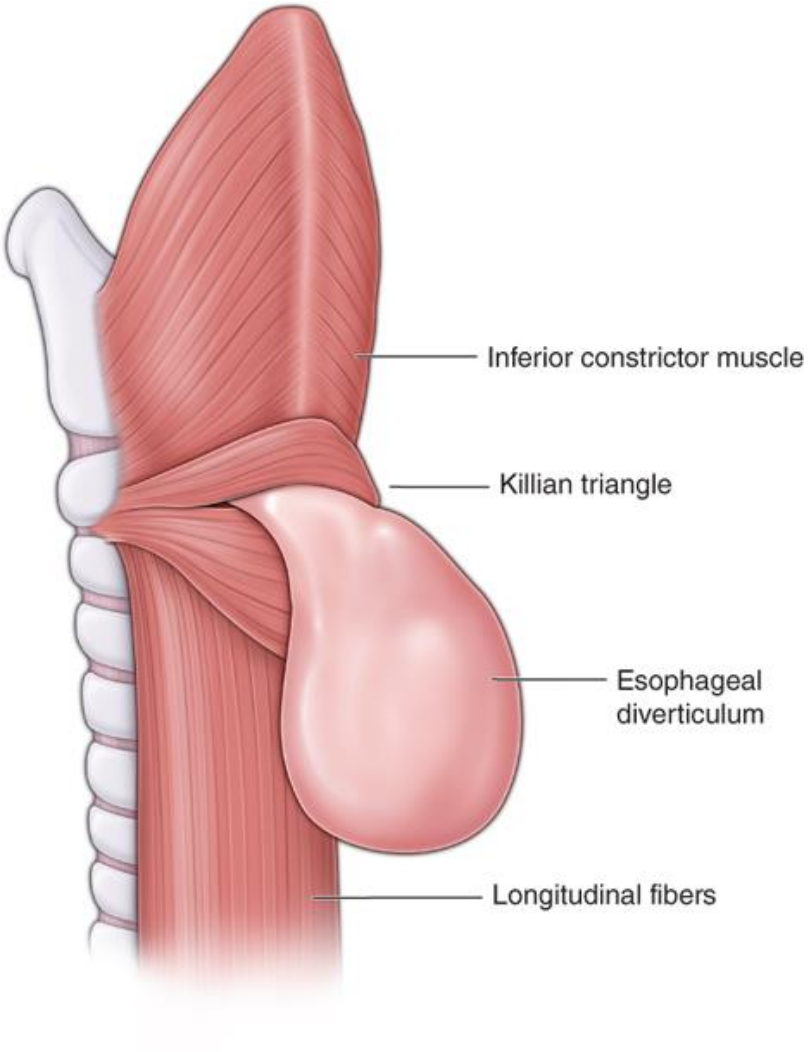
Pharyngoesophageal Diverticulum (Zenker Diverticulum)

PATHOPHYSIOLOGY

Zenker diverticula are the most common diverticula of the esophagus. These arise in an area of muscular gap at the transition of the cricopharyngeal muscle and the inferior constrictors of the pharynx (Killian triangle) (Fig. 21-1), and are more frequently found on the left side of the esophagus due to the slight convexity of the esophagus to the left. Pathophysiologic mechanisms for this condition include muscular weakness and upper esophageal sphincter (UES) dysfunction. UES dysfunction is characterized by incomplete relaxation of the UES, increased intrapharyngeal pressure, and discoordinated pharyngeal contractions.[3–5] Gastroesophageal reflux is present in up to 95% of patients and may be related to esophageal longitudinal muscle reflex contraction and consequent widening of the gap between pharyngeal constrictors and cricopharyngeal muscles[6] or spasm of the UES.[7]

Figure 21-1

Zenker diverticulum: anatomic and radiologic features. The radiologic image shows the presence of the pouch arising from the Killian triangle.



Source: Michael J. Zinner, Stanley W. Ashley, O. Joe Hines
Maingot's Abdominal Operations, Thirteenth Edition

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SYMPTOMS AND DIAGNOSIS

Cervical dysphagia is the most common presenting symptom and is often associated with regurgitation, halitosis, choking, chronic cough, hoarseness, gurgling, or aspiration pneumonia. Findings on physical examination may include the Boyce sign (a neck mass gurgling on palpation) and weight loss. The presence of progressive dysphagia, odynophagia, hemoptysis, and hematemesis is more suspicious for a malignancy and may be a squamous cell cancer arising from the diverticulum (incidence up to 1.1%).

Diagnostic tools include:

1. Barium esophagram is performed to assess size and location of the diverticulum and the size of the diverticular neck. In addition, it determines the distance from the diaphragm, therefore giving the surgeon the possibility of choosing between a laparoscopic or thoracoscopic approach.
2. Upper endoscopy is mandatory in order to rule out the presence of cancer or other esophageal diseases and to evaluate signs of reflux

3. Esophageal manometry is important to define the underlying esophageal motility disorder. We usually obtain this ...

Chapter 77: The Spleen

BACKGROUND

The spleen was regarded by Galen as "an organ of mystery," by Aristotle as unnecessary, and by Pliny as an organ that might hinder the speed of runners.[1] In many societies, the spleen was also thought to be affiliated with mood. The word *spleen* comes from a Greek word that has idiomatic equivalent of the heart in English, that is, to be good-spleened means to be good-hearted or compassionate. In contrast, the spleen has also been associated with melancholy, and in 19th-century England, women in bad humor were said to be afflicted by the spleen or the vapors of the spleen.

Until relatively recently, the spleen was considered expendable. The gradual realization of the valuable role of the spleen in host defense, beginning with reports of fulminant sepsis in children after splenectomy for hematologic disease, has increased interest in splenic conservation techniques.[2,3] The indications for splenectomy in both the emergency and elective settings continue to evolve. The introduction of laparoscopic approaches has decreased the morbidity of surgery, but a balance between the indications for splenectomy and the long-term consequences of splenectomy, particularly sepsis, must always be considered.

In this chapter, we review the anatomy, physiology, and pathology of splenic diseases, before addressing operative techniques and strategies, focusing on the laparoscopic approach.

RELEVANT ANATOMY

Gross Anatomy

The spleen arises by mesenchymal differentiation along the left side of the dorsal mesogastrium in juxtaposition to the anlage of the left gonad in the 8-mm embryo. The organ ultimately migrates to the left upper quadrant.

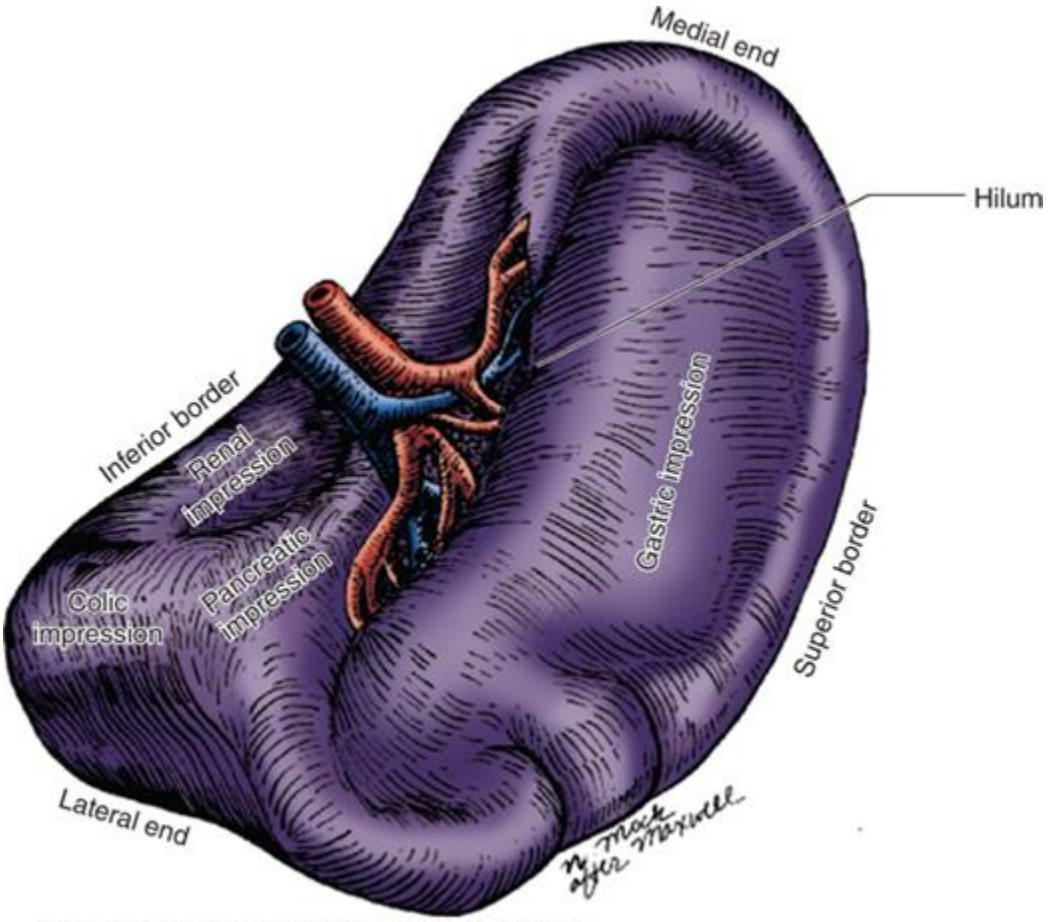
In the healthy adult, the spleen weighs 150 g (range, 75-250 g), although there are variations based on sex, age, and racial background.[4] Although the ultrasonographic upper limit of normal for spleen size is 12 cm, it is larger in men and taller or heavier people, and sex- and size-corrected normal values are available.[5] The spleen is not normally palpable in adults. When the spleen tip can be felt below the left costal margin, splenomegaly should be assumed and further investigated.

The spleen resides in the posterior portion of the left upper quadrant lying deep to the 9th, 10th, and 11th ribs, with its long axis corresponding to that of the 10th rib. Its convex superior and lateral surfaces are immediately adjacent to the undersurface of the left leaf of the diaphragm.

The configuration of the concave medial surface of the spleen is a consequence of impressions made by the stomach, pancreas, kidneys, and splenic flexure of the colon (Fig. 77-1).

Figure 77-1

Gross anatomy of the spleen.



The position of the spleen is maintained by several suspensory ligaments, which need to be divided during a splenectomy to allow full mobilization of ...