

Esophageal diverticulum: A review

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A diverticulum is a sac or pouch arising from a tubular organ, such as the esophagus. This review focuses on diverticula of the esophagus. In practice, the Zenker diverticulum, a type of diverticulum that arises from the posterior hypopharynx, is the most frequent.

Esophageal diverticula are classified by location in the esophagus. Upper (pharyngoesophageal, Killian-Jamieson, or Zenker), middle, or lower (epiphrenic). Besides anatomical location, several other ways to classify diverticula of the esophagus and hypopharynx exist. Congenital diverticula are diverticula that are present at birth, while acquired diverticula develop later in life. Diverticula of the esophageal body can sometimes be difficult to classify as congenital or acquired.^[1]

Diverticula also may be classified on the basis of histopathology. True diverticula contain all layers of the intestinal tract wall. False diverticula, also known as pseudodiverticula, occur when herniation of mucosa and submucosa through a defect in the muscular wall occurs (eg, Zenker diverticulum).

Finally, acquired diverticula of the esophagus and hypopharynx also may be classified according to their pathogenesis as pulsion diverticula or traction diverticula. Pulsion diverticula form as a result of high intraluminal pressures against weaknesses in the GI tract wall. Zenker diverticulum occurs due to increased pressure in the oropharynx during swallowing against a closed upper esophageal sphincter. An epiphrenic diverticulum occurs from increased pressure during esophageal propulsive contractions against a closed lower esophageal sphincter.^[2] In contrast, traction diverticula occur as a consequence of pulling forces on the outside of the esophagus from an adjacent inflammatory process (eg, involvement of inflamed mediastinal lymph nodes in

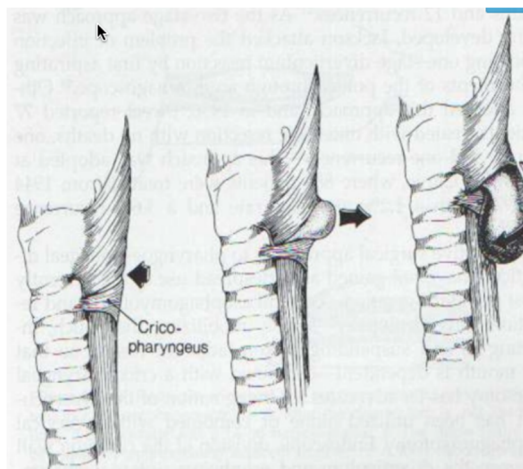
tuberculosis or histoplasmosis).

Most esophageal diverticula occur in middle-aged adults and elderly people. Presentation in infants and children is rarely seen.

Zenker diverticula typically present in people older than 50 years and especially present during the seventh and eighth decades of life.

Zenker diverticula

Zenker diverticula are an acquired pulsion-type of diverticula that probably develop because of the aging process. They form in the posterior hypopharynx at a point where a defect in the muscular wall, between the inferior pharyngeal constrictor muscle and the cricopharyngeal sphincter (Killian triangle), usually exists.



Zenker diverticula are believed to occur because of an outflow obstruction caused when loss of coordination of the buccal squirt (ie, swallowing movement of the tongue posteriorly with contraction of the oropharyngeal muscles) and opening of the cricopharyngeus (ie, the upper esophageal sphincter) occurs. The noncompliant cricopharyngeus muscle becomes fibrotic over time.

Killian-Jamieson diverticula originate in the anterolateral wall just below the cricopharyngeus (Killian-Jamieson space).^[3]



Oropharyngeal dysphagia, usually to solids and to liquids, is the most common symptom. Retention of food material and secretions in the diverticulum, particularly when diverticula are large, can result in regurgitation of undigested food, halitosis, cough, and even aspiration pneumonia. The patient may note food on the pillow upon awakening in the morning. With very large diverticula, a mass in the neck occasionally can be detected. Cancer rarely has been reported in association with Zenker diverticula.

Diverticula of the body and the distal esophagus are very rare with varied etiology

Findings on physical examination often are normal in patients with symptomatic esophageal diverticula. However, many patients relate a history of dysphagia, chest pain, or regurgitation.



Although the physical examination findings are often normal, a large Zenker diverticulum may present as a neck mass on physical examination. Halitosis also may be present and is secondary to accumulated food debris or medicines within the diverticulum.

Signs and symptoms of aspiration pneumonia may accompany the presence of large symptomatic diverticula.

References

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