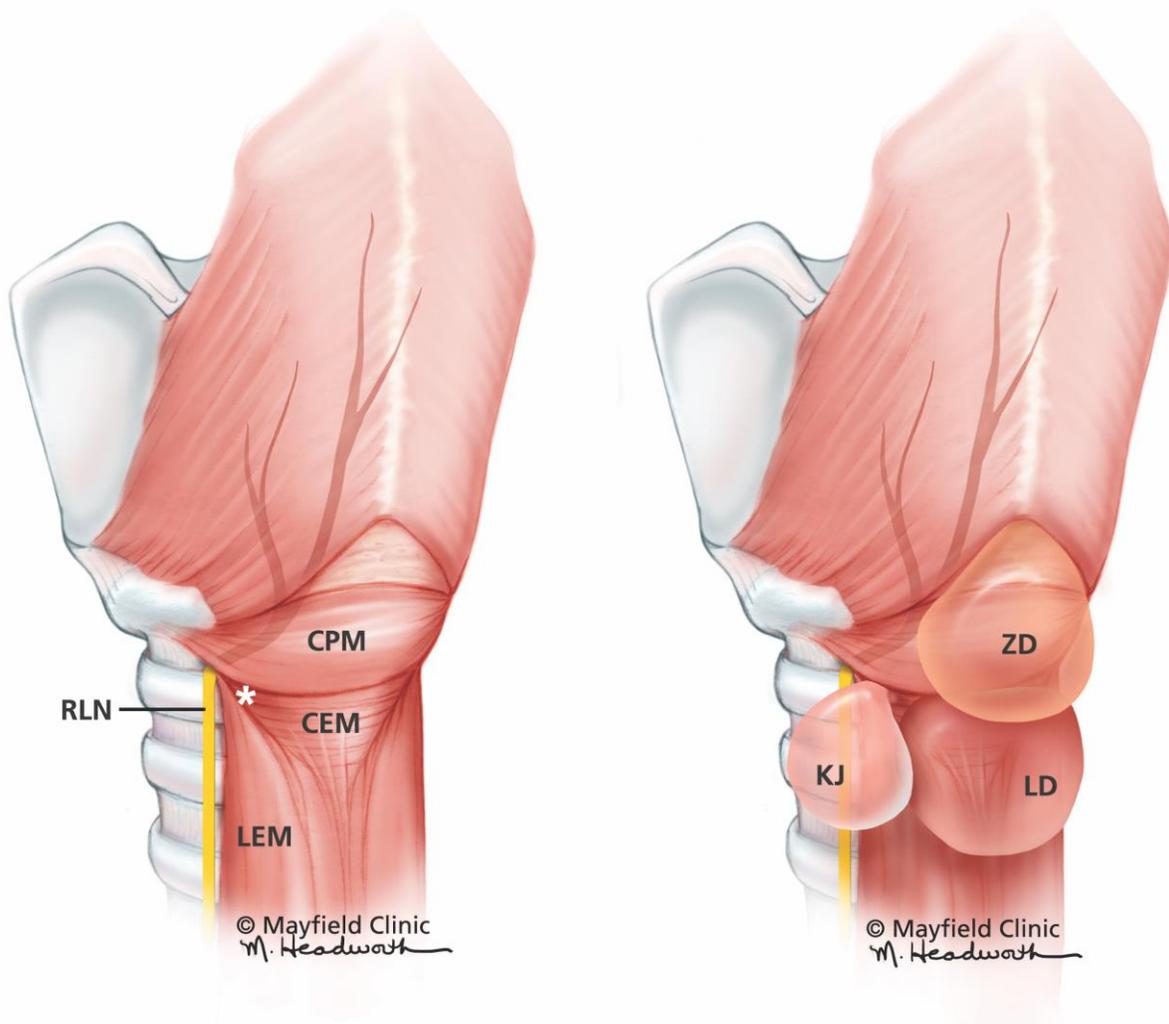




ZENKER'S DIVERTICULUM

Zenker's Diverticulum (ZD) is a swallowing disorder caused by the development of a pouch at the top of the esophagus, just above the upper esophageal sphincter. Patients experience difficulty swallowing, regurgitation and cough; left untreated the disorder can progress to weight loss and aspiration. The current standard of care is surgery, open trans-cervical surgery was the mainstay until the 1960s, while endoscopic surgery most commonly performed currently.

Anatomy and Physiology



- Anagiotos et al. describe the anatomic and muscular borders of the upper esophageal segment, also termed Killian's triangle where Zenker's diverticulum arise (ZD). Other (rare) esophageal pouches include Killian Jameson (KJ) and Laimer's diverticulum (LD).



- Anagiotos A, Preuss SF, Koebke J. Morphometric and anthropometric analysis of Killian's triangle. *Laryngoscope*. 2010;120(6):1082-1088.

Assessment

- Friedrich von Zenker was one of the first to describe and publish the esophageal pouch now known as Zenker's diverticulum.
 - Zenker F, von Ziemssen H. Dilatations of the esophagus. *Cyclopedia of the Practice of Medicine*. 1878(3):46-48.

Pathophysiology

- There is a paucity of data on pathophysiology of Zenker's diverticulum. Cook et al. demonstrated increased hypopharyngeal pressures and limited upper esophageal segment opening are likely important.
 - Cook IJ, Gabb M, Panagopoulos V, et al. Pharyngeal (Zenker's) diverticulum is a disorder of upper esophageal sphincter opening. *Gastroenterology*. 1992;103(4):1229-1235.
- New data on high resolution manometry and videofluoroscopy may further elucidate the pathophysiology of this disease.
 - Cock C, Jones CA, Hammer MJ, Omari TI, McCulloch TM. Modulation of Upper Esophageal Sphincter (UES) Relaxation and Opening During Volume Swallowing. *Dysphagia*. 2017;Apr;32(2):216-224.

Treatment

- The current standard of care is surgery, while there is a trend towards endoscopic methods, open transcervical surgery was the mainstay until the 1960s. The "best" approach is still unknown.
 - Howell RJ, Giliberto JP, Harmon J, Masch J, Khosla S, Postma GN, Meinen-Derr J. Open versus Endoscopic Surgery of Zenker's Diverticula: A Systematic Review and Meta-Analysis. *Dysphagia*. (Accepted).
 - Johnson CM, Postma GN: Zenker Diverticulum- Which Surgical Approach is Superior? *JAMA Otol-HNS*: 2016;142(4):401-403.