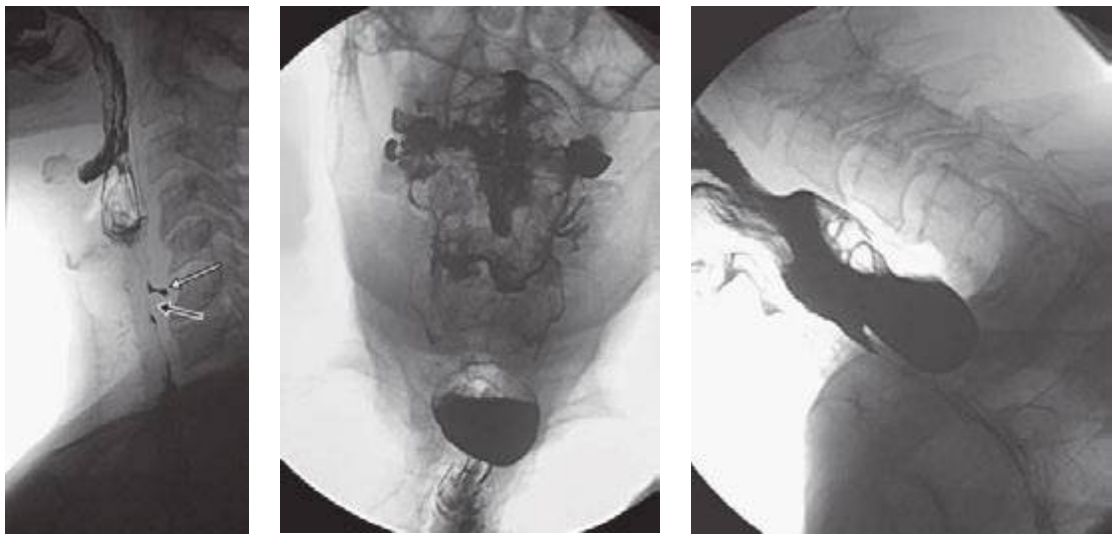

FIGURE 347-3 Examples of small (*A*) and large (*B, C*) Zenker's diverticula arising from Killian's triangle in the distal hypopharynx. Smaller diverticula are evident only during the swallow, whereas larger ones retain food and fluid.

cause intermittent dysphagia to solids similar to Schatzki rings and are similarly treated with dilatation. The combination of symptomatic proximal esophageal webs and iron-deficiency anemia in middle-aged women constitutes Plummer-Vinson syndrome.

DIVERTICULA

Esophageal diverticula are categorized by location with the most common being epiphrenic, hypopharyngeal (Zenker's), and midesophageal. Epiphrenic and Zenker's diverticula are false diverticula involving herniation of the mucosa and submucosa through the muscular layer of the esophagus. These lesions result from increased intraluminal pressure associated with distal obstruction. In the case of Zenker's, the obstruction is a stenotic cricopharyngeus muscle (upper esophageal sphincter), and the hypopharyngeal herniation most commonly occurs in an area of natural weakness proximal to the cricopharyngeus known as *Killian's triangle* (Fig. 347-3). Small Zenker's diverticula are usually asymptomatic, but when they enlarge sufficiently to retain food and saliva they can be associated with dysphagia, halitosis, and aspiration. Treatment is by surgical diverticulectomy and cricopharyngeal myotomy or a marsupialization procedure in which an endoscopic stapling device is used to divide the cricopharyngeus.

Epiphrenic diverticula are usually associated with achalasia or a distal esophageal stricture. Midesophageal diverticula may be caused by traction from adjacent inflammation (classically tuberculosis) in which case they are true diverticula involving all layers of the esophageal wall, or by pulsion associated with esophageal motor disorders. Midesophageal and epiphrenic diverticula are usually asymptomatic until they enlarge sufficiently to retain food and cause dysphagia and regurgitation. Symptoms attributable to the diverticula tend to correlate more with the underlying esophageal disorder than the size of the diverticula. Large diverticula can be removed surgically, usually in conjunction with a myotomy if the underlying cause is achalasia. Diffuse intramural esophageal diverticulosis is a rare entity that results from dilatation of the excretory ducts of submucosal esophageal glands (Fig. 347-4). Esophageal candidiasis and proximal esophageal strictures are commonly found in association with this disorder.

FIGURE 347-4 Intramural esophageal pseudodiverticulosis associated with chronic obstruction. Invaginations of contrast into the esophageal wall outline deep esophageal glands.

TUMORS

Esophageal cancer occurs in about 4.5:100,000 people in the United States with the associated mortality being only slightly less at 4.4:100,000. It is about 10 times less common than colorectal cancer but kills about one-quarter as many patients. These statistics emphasize both the rarity and lethality of esophageal cancer. One notable trend is the shift of dominant esophageal cancer type from squamous cell to adenocarcinoma, strongly linked to reflux disease and Barrett's metaplasia. Other distinctions between cell types are the