



Radiologic Evaluation of Esophageal Diseases

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Marco G. Patti, Fernando A. M. Herbella, and Bernardo Borraez

Abstract

A barium swallow is an essential part of the workup of patients with esophageal disorders. This test defines the anatomy and is very useful for planning therapy. For instance, it is important preoperatively to distinguish a sliding from a paraesophageal hiatal hernia. In achalasia, it might also influence the decision for therapy depending on the size and shape of the esophagus. A CT scan and a PET scan are an essential part of the workup of patients with esophageal cancer to predict the response to neoadjuvant therapy. The goal of this chapter is to provide the reader with normal and pathologic reference images of the most common esophageal diseases and to illustrate how the radiologic evaluation is complementary, yet essential, for both the diagnosis and the surveillance of these disorders.

Keywords

Paraesophageal hernia • Gastric volvulus • Achalasia • Sigmoid esophagus • Diffuse esophageal spasm • Zenker's diverticulum • Epiphrenic diverticulum

A barium swallow (Figs. 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16, 2.17, 2.18, 2.19, 2.20, 2.21, 2.22, 2.23, 2.24, 2.25) is an essential part of the workup of patients with esophageal disorders. This test defines the anatomy and is very useful for planning therapy. A CT scan (Figs. 2.26 and 2.27) and a PET scan (Fig. 2.28) are an essential part of the workup of patients with esophageal cancer. The goal of this chapter is to provide the reader with normal and pathologic reference images of the most common esophageal diseases and to illustrate how the radiologic evaluation is complementary, yet essential, in diagnosis and surveillance.

M. G. Patti (✉)

Department of Surgery, University of Virginia, 111 Falcon Drive,
Charlottesville, VA, USA
e-mail: marco.patti@gmail.com

F. A. M. Herbella

Department of Surgery, Escola Paulista de Medicina, Rua Diogo
de Faria 1087 cj 301, Sao Paulo, SP 04037-003, Brazil
e-mail: herbella.dcir@epm.br

B. Borraez

Department of Clinical Sciences, Universidad Tecnológica de
Pereira, Pereira, Colombia
e-mail: b.borraez@utp.edu.co

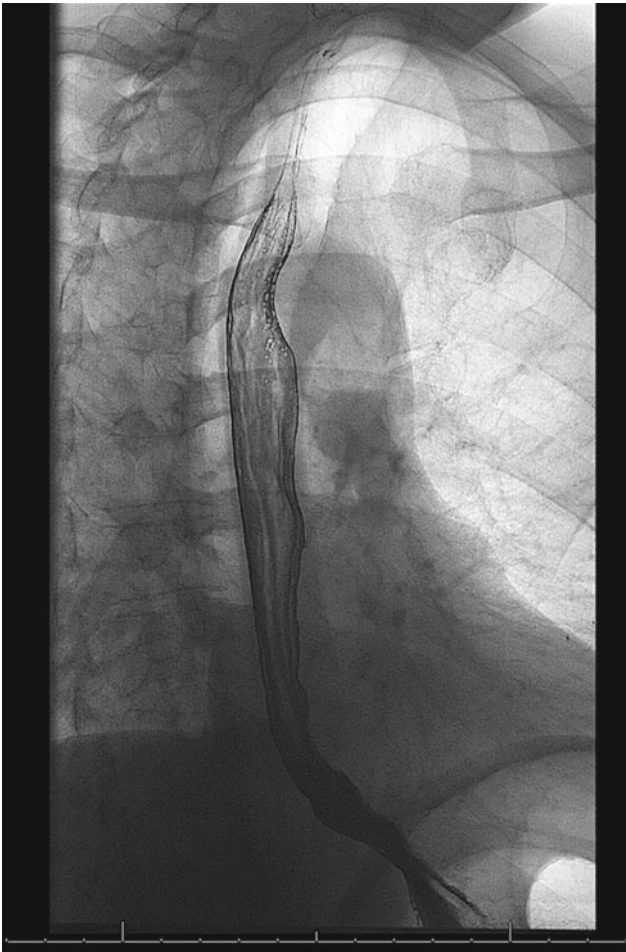


Fig. 2.1 Normal barium swallow

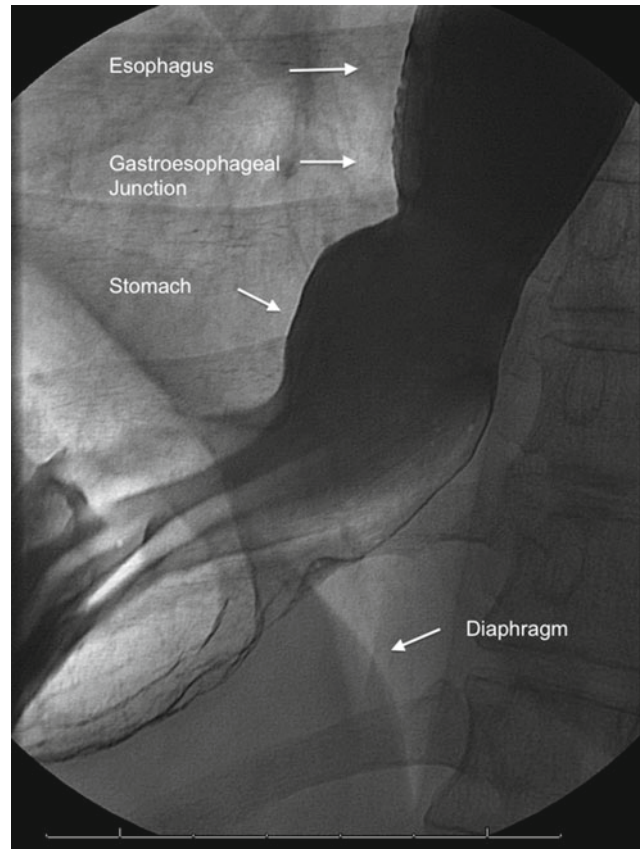


Fig. 2.2 Barium swallow. Sliding hiatal hernia

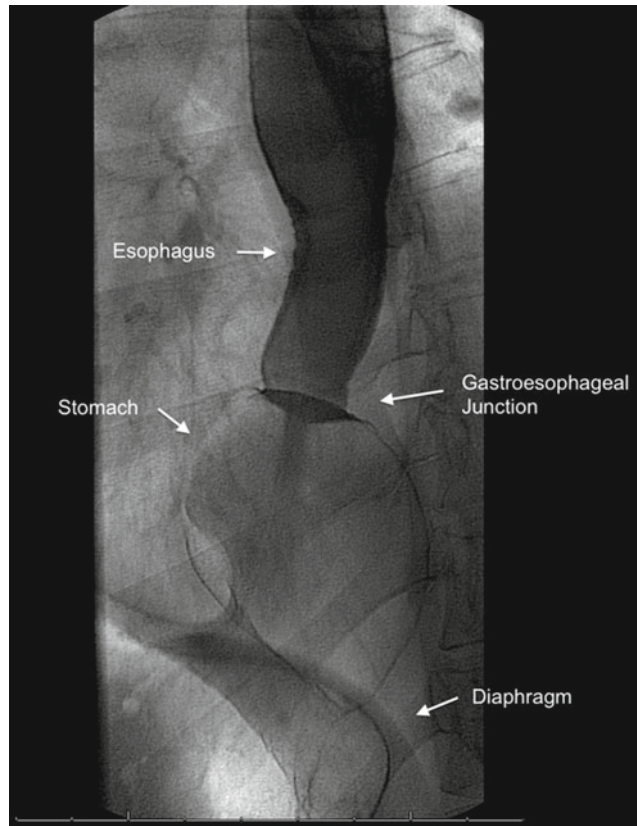


Fig. 2.3 Barium swallow. Sliding hiatal hernia

Fig. 2.4 Barium swallow.
Paraesophageal hernia

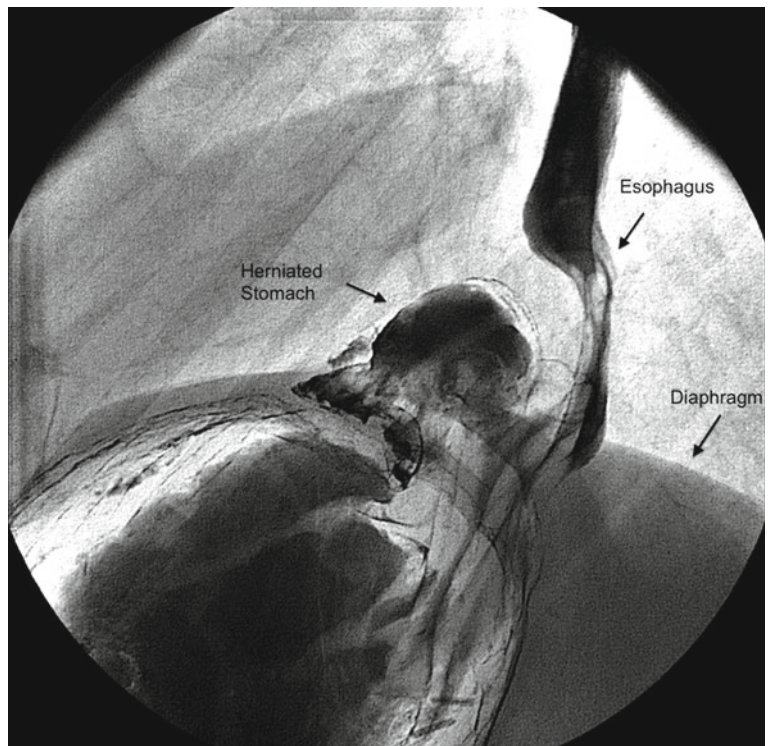


Fig. 2.5 Barium swallow.
Paraesophageal hernia

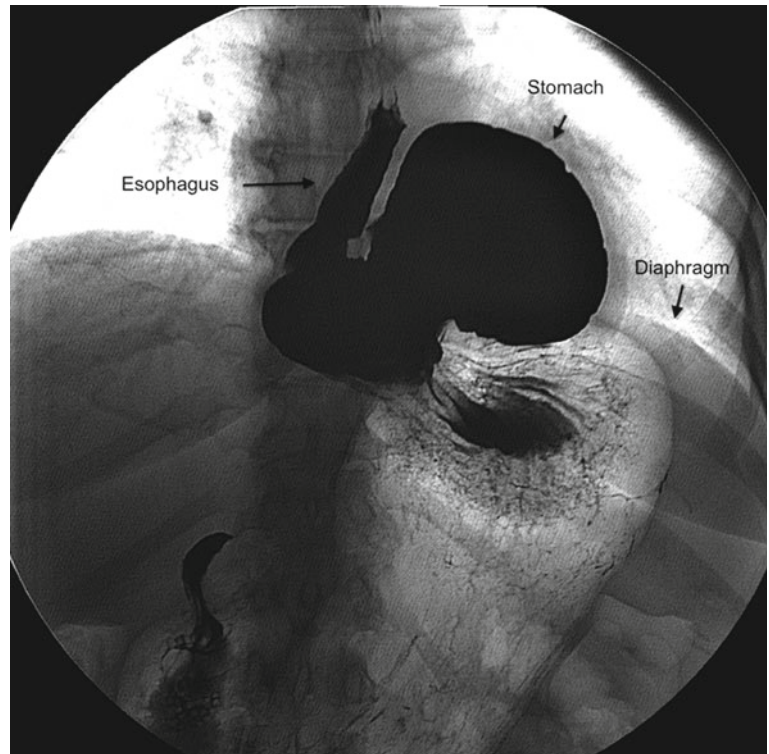


Fig. 2.6 Chest and abdominal
CT scan. Type IV hiatal hernia
with stomach and colon above the
diaphragm

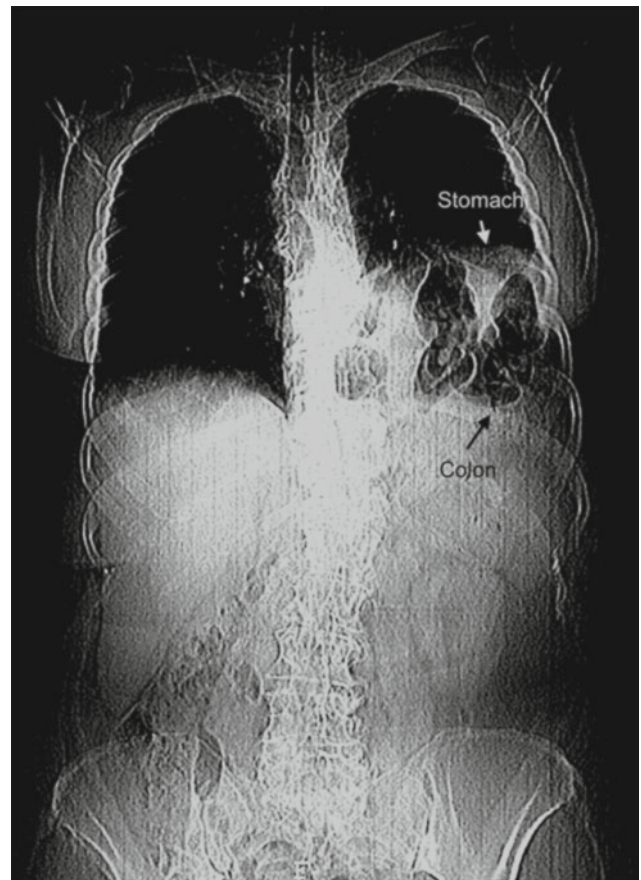


Fig. 2.7 Barium swallow.
Paraesophageal hernia with
gastric volvulus

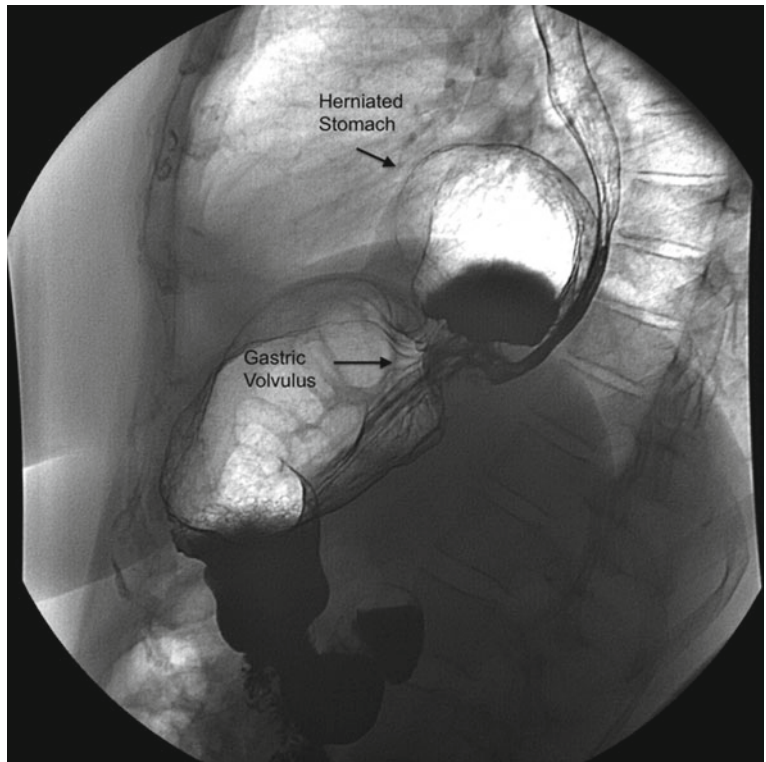
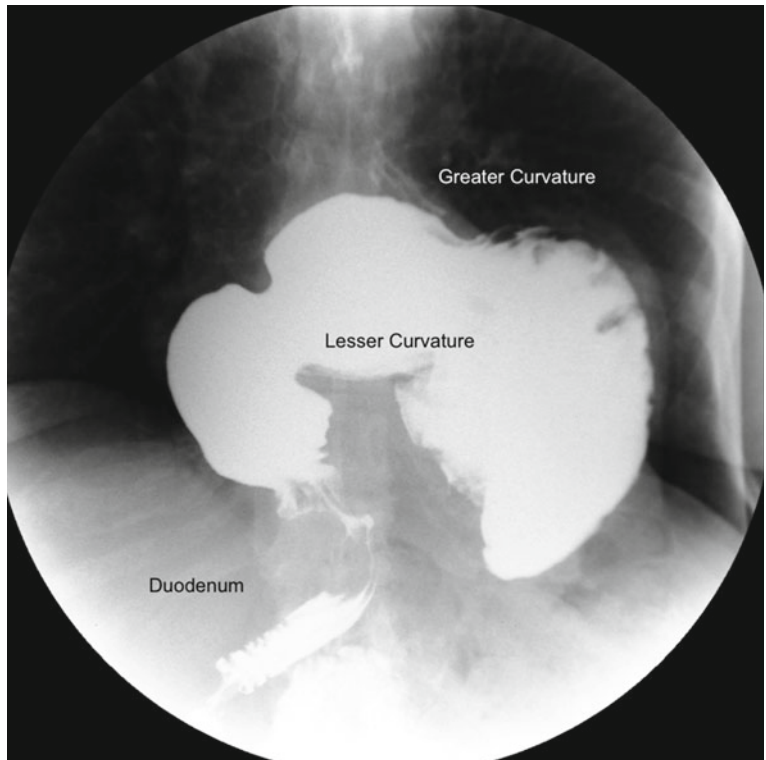


Fig. 2.8 Barium swallow.
Paraesophageal hernia with
gastric volvulus



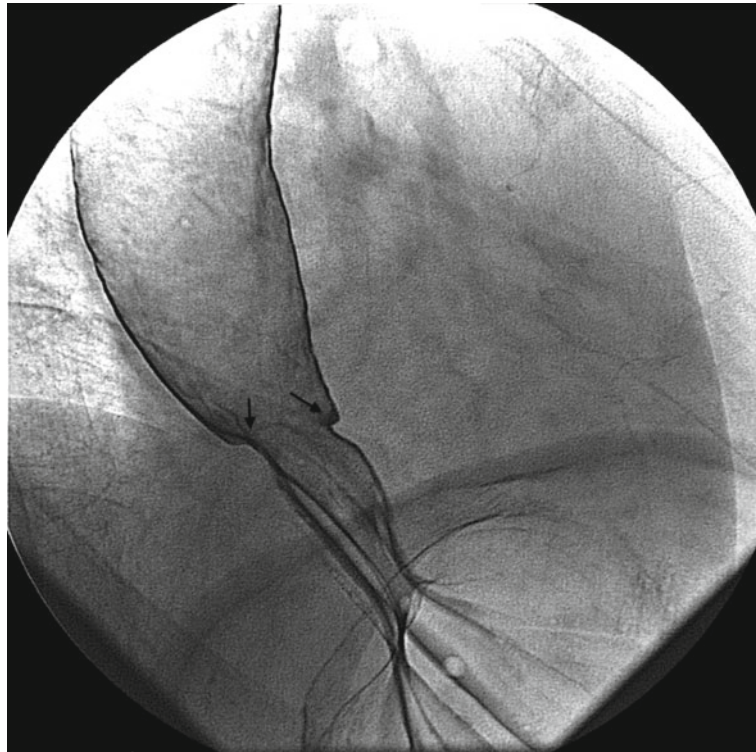


Fig. 2.9 Barium swallow. Schatzki's ring (*arrows*)

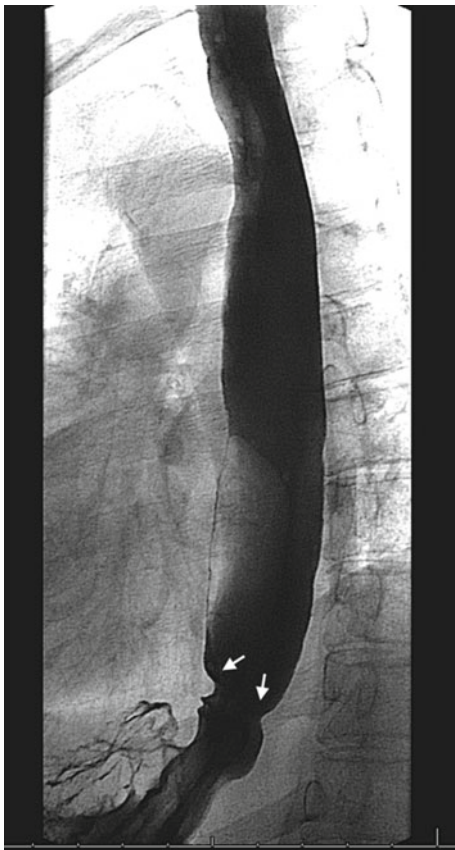


Fig. 2.10 Barium swallow. Schatzki's ring (*arrows*)

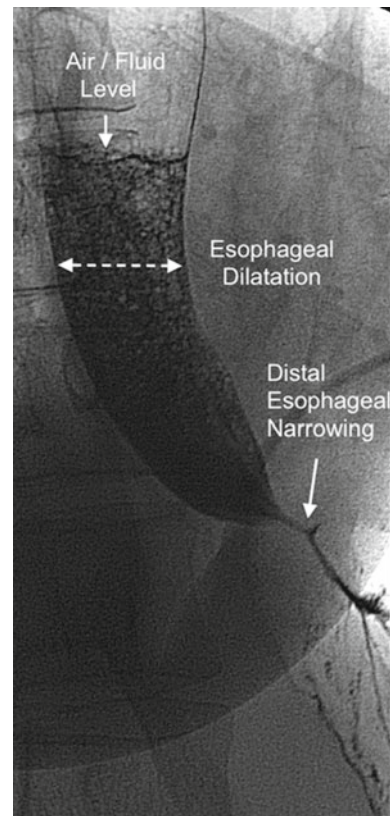


Fig. 2.11 Barium swallow. Esophageal achalasia

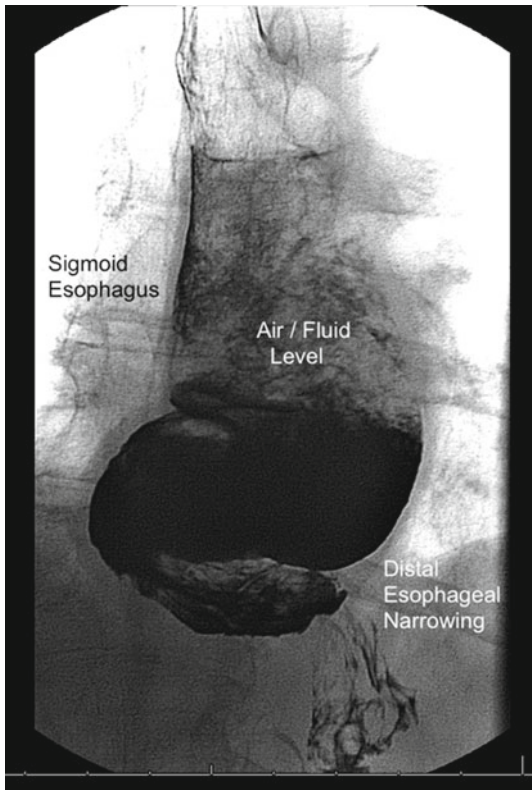


Fig. 2.12 Barium swallow. End-stage achalasia with dilated and sigmoid esophagus

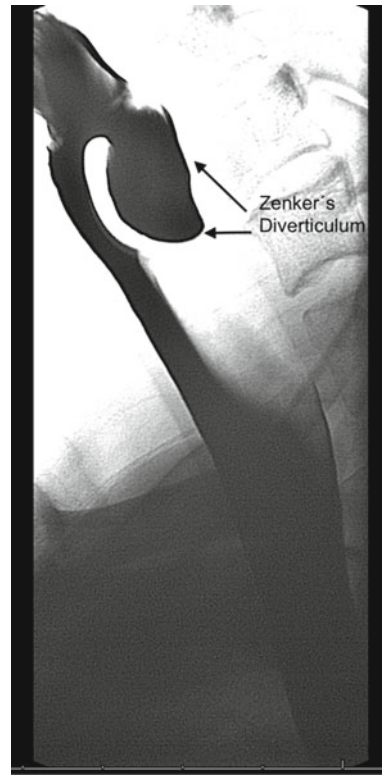


Fig. 2.14 Barium swallow. Zenker's diverticulum (*arrows*)



Fig. 2.13 Barium swallow. Diffuse esophageal spasm

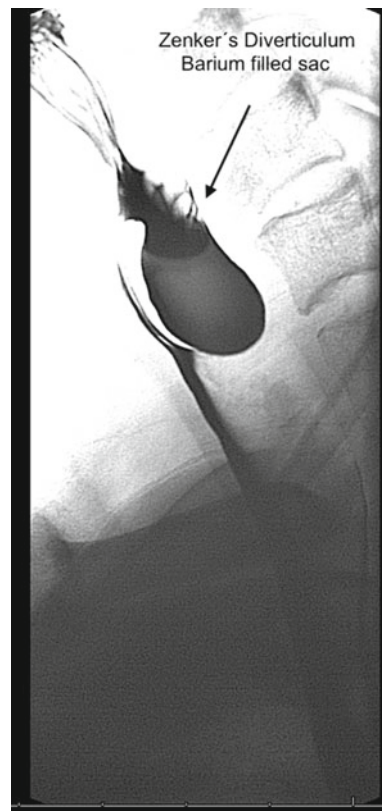


Fig. 2.15 Barium swallow. Zenker's diverticulum (*arrow*)

Fig. 2.16 Barium swallow.
Epiphrenic diverticulum

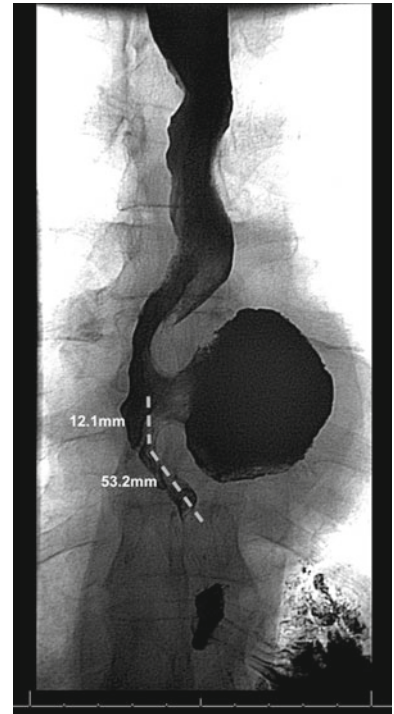
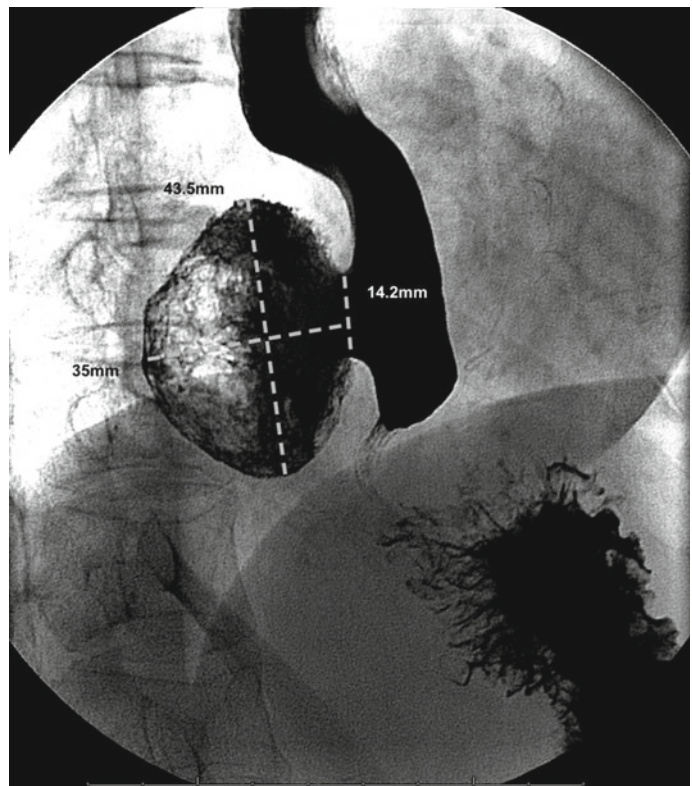


Fig. 2.17 Barium swallow.
Epiphrenic diverticulum



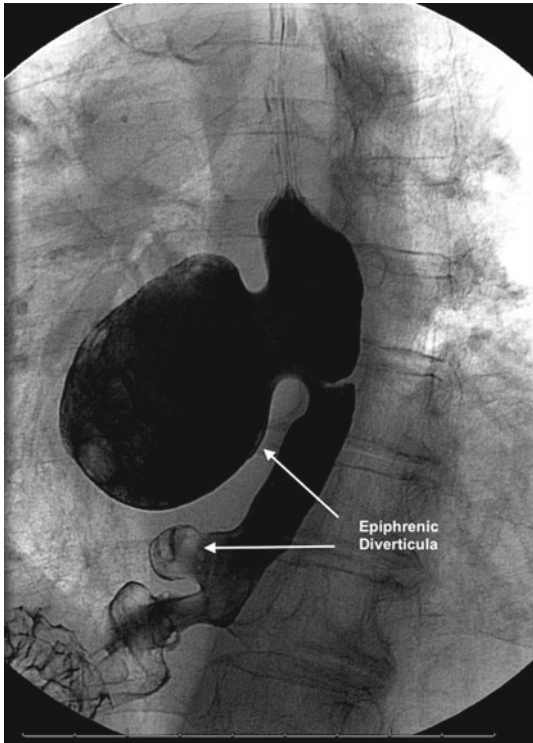


Fig. 2.18 Barium swallow. Epiphrenic diverticula (*arrows*)

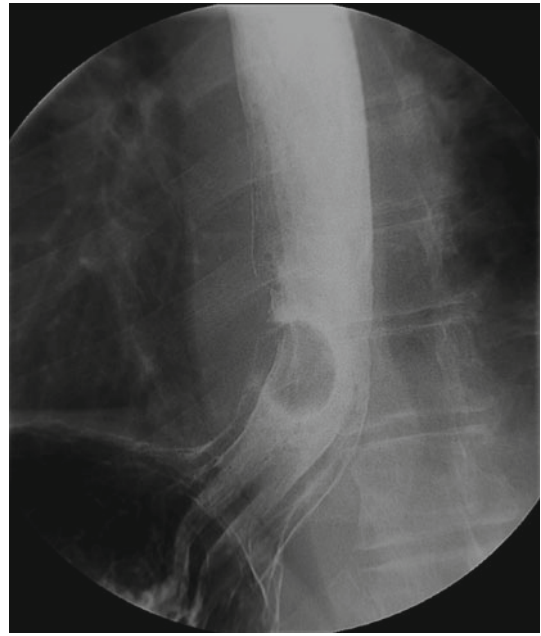


Fig. 2.19 Barium swallow. Esophageal fibrovascular polyp

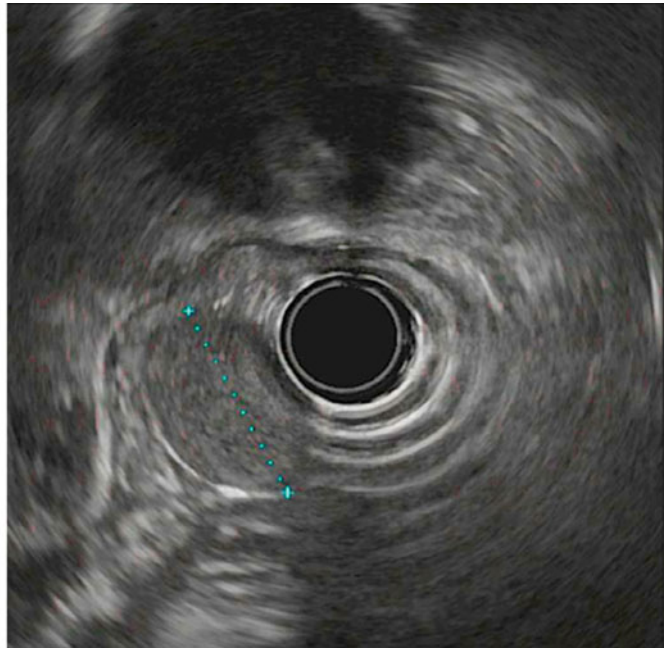


Fig. 2.20 Endoscopy (*left*) with endoscopic ultrasound (*right*). Esophageal fibrovascular polyp

Fig. 2.21 Barium swallow.
Esophageal leiomyoma



Fig. 2.22 Barium swallow.
Esophageal leiomyoma

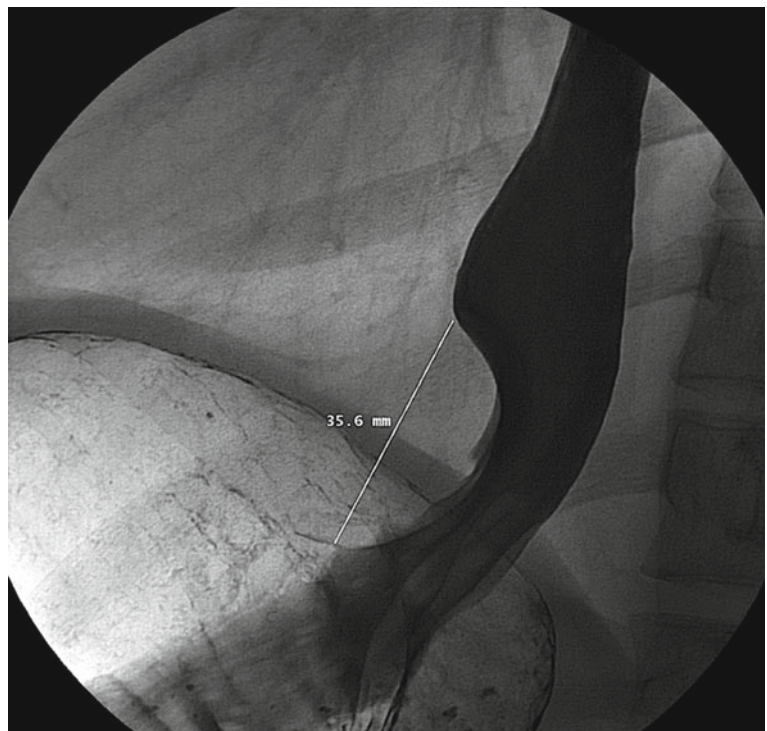


Fig. 2.23 Barium swallow.
Distal esophageal
adenocarcinoma

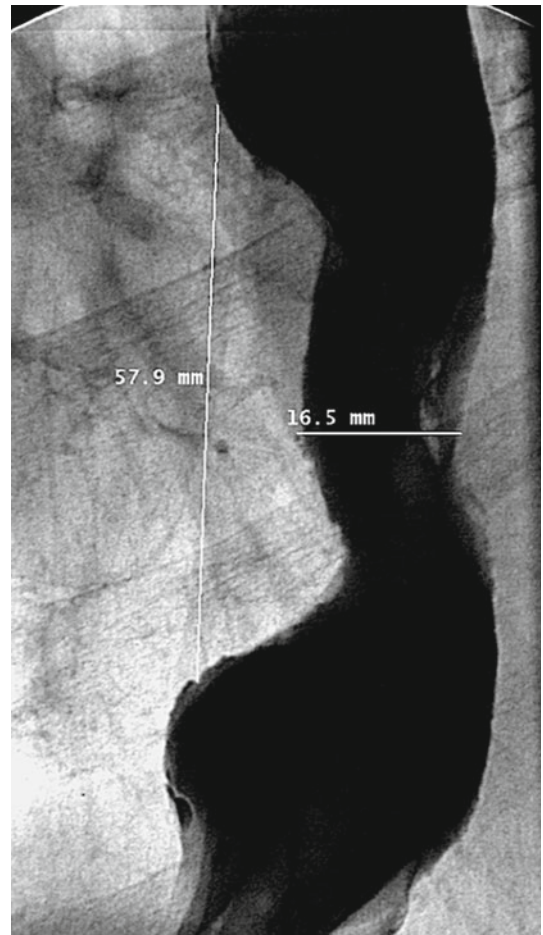
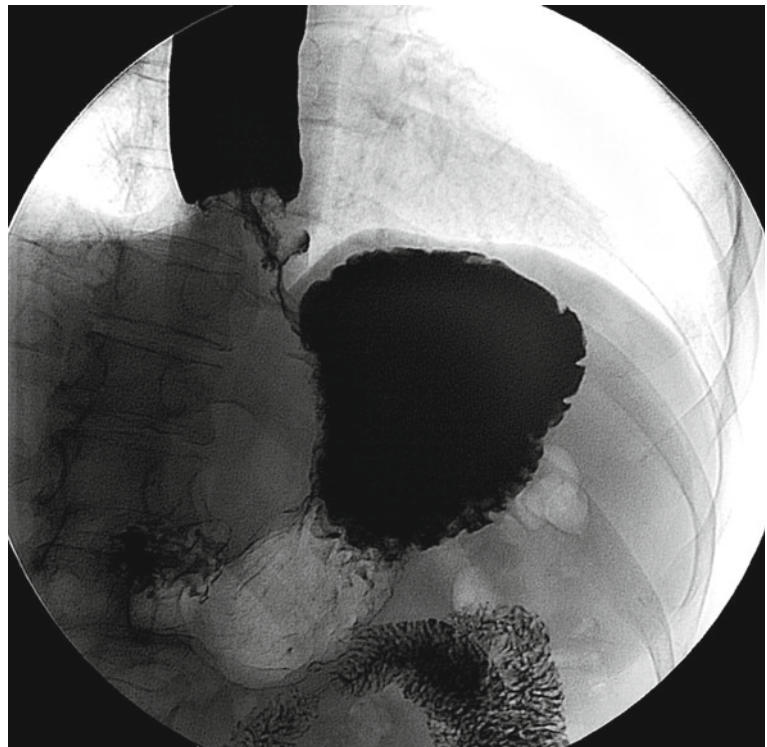


Fig. 2.24 Barium swallow.
Distal esophageal
adenocarcinoma



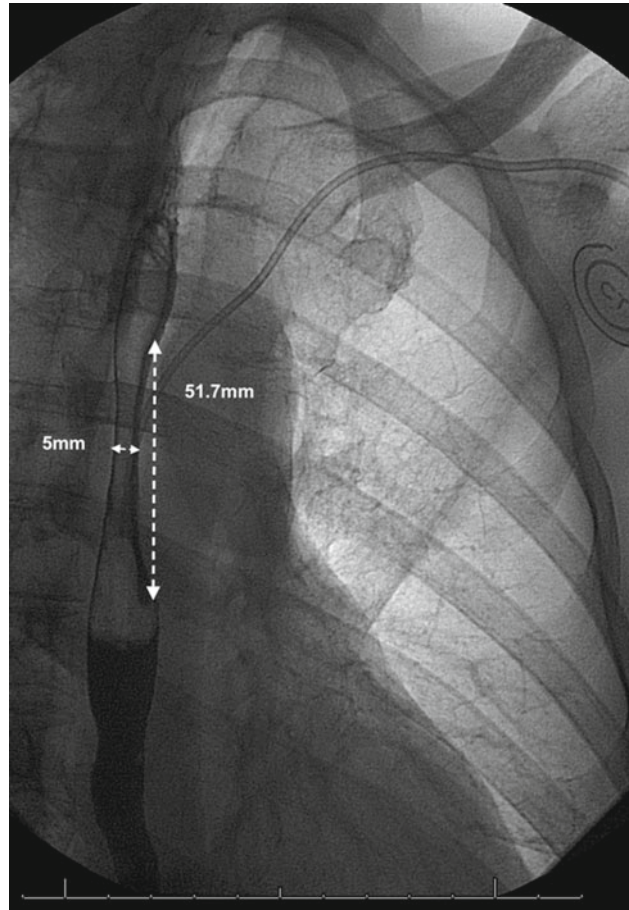


Fig. 2.25 Barium swallow. Midthoracic esophageal squamous cell cancer

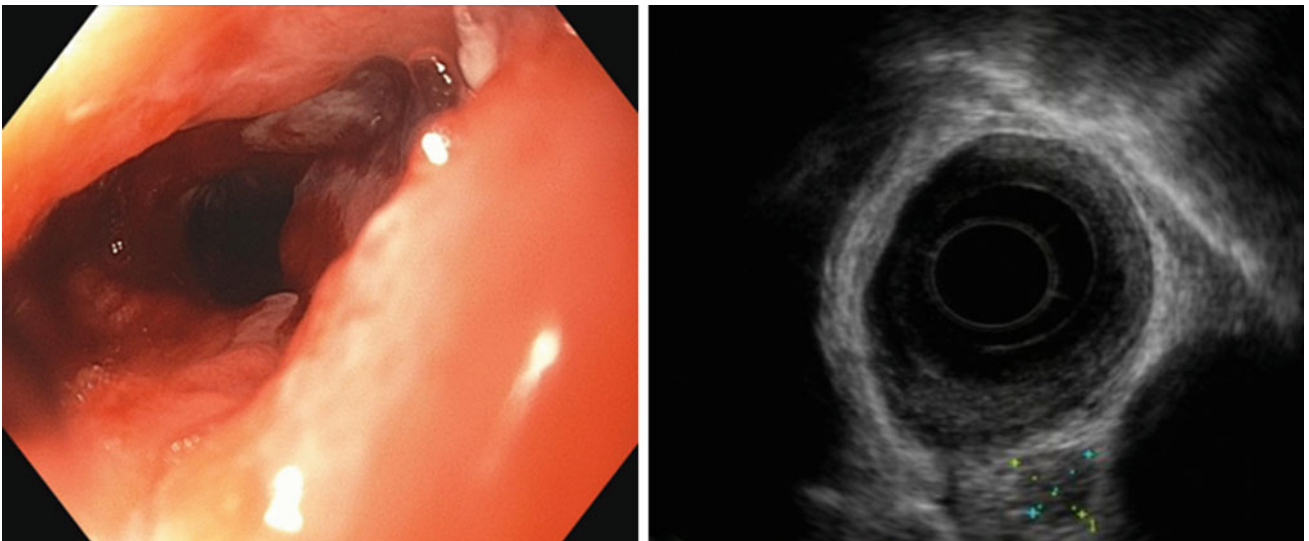


Fig. 2.26 Endoscopy (*left*) and endoscopic ultrasound (*right*). Midthoracic esophageal squamous cell cancer

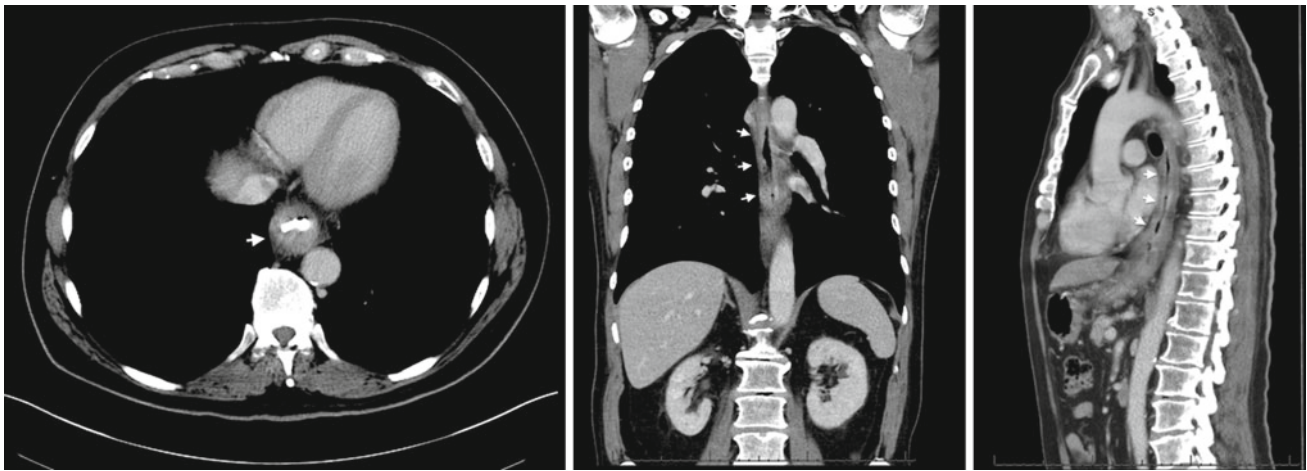


Fig. 2.27 Chest CT scan. Midthoracic esophageal squamous cell cancer (arrows)

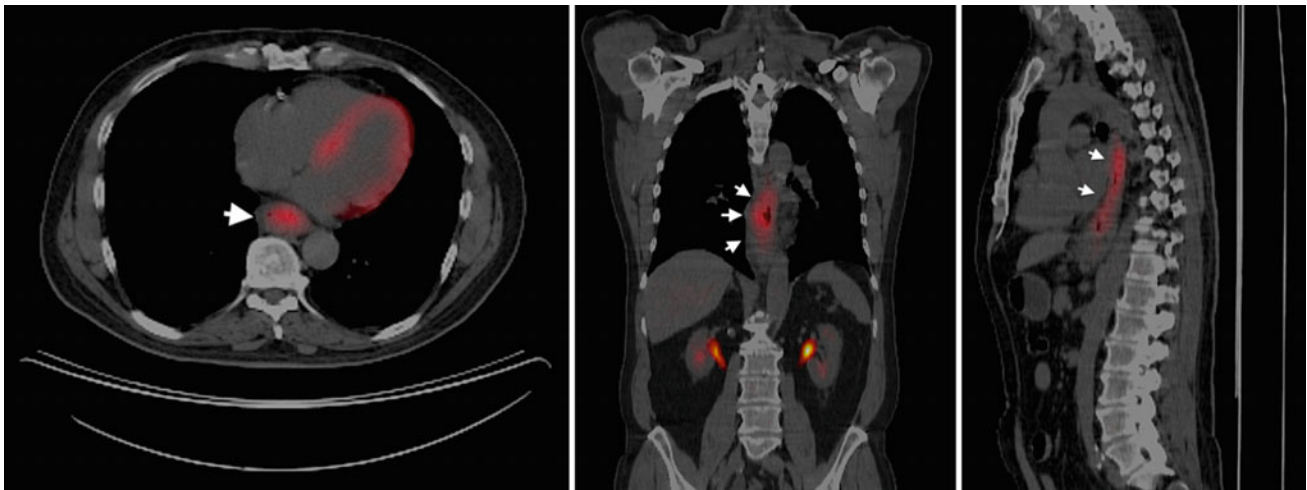


Fig. 2.28 PET scan. Midthoracic esophageal squamous cell cancer (arrows)

Suggested Reading

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