Epiphrenic Diverticulum as a Rare Cause of Dysphagia

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1. INTRODUCTION
Epiphrenic diverticula are acquired protrusion of mucosa through the muscular wall of the distal esophagus. Most of them are associated with underlying esophageal motility disorders. The cause of their is motor dysfunction of the esophagus (diffuse spasm or achalasia). Elevated intraluminal pressure is responsible for the prolapse of mucosa and submucosa through the muscle layer, and the consequently formation bag extensions (diverticula). The predominant symptoms is the dysphagia and regurgitation, and may occur retrosternal pain, if it is accompanied by spasm of the esophagus. Halitosis (foetor ex ore) due to undigested food is expressed in a lesser degree than Zenker’s diverticulum. In some patients disease is asymptomatic and discovered as incidental findings on chest radiography. Symptoms is sometimes difficult to distinguish from other functional esophageal disorders (diffuse esophageal spasm, achalasia, hiatal hernia or reflux esophagitis), and can sometimes mask a picture of esophageal neoplasms. Size varies from small ones who emptied spontaneously and does not constitute a big problem, to big ones that its size can be to perform compression on the esophagus and cause dysphagia (1, 2, 3).

Diagnosis is possible to set by contrast radiography, endoscopy and esophageal manometry.

Asymptomatic patients with a small diverticulum and a wide communications with the lumen of the esophagus, empted spontaneously and does not require any treatment. Progressive dysphagia, chest pain, increasing the diverticulum which is not emptied spontaneously, is indication for surgical therapy. Complexity of the surgical procedure is that it consists from 3 phases: diverticulectomy long esophagomyotomy and transthoracic antireflux procedure (Belsey Mark IV) (4, 5, 6, 7, 8, 9).

2. CASE REPORT
In our clinic since 2002 a total of 30 patients with benign causes of dysphagia had surgery (functional disorders and diverticula). Only in one case the cause of dysphagia was epiphrenic diverticulum.

Patient, 55 year old female had dysphagia, regurgitation and chest pain caused by retrosternal epiphrenic diverticula. Our patient had a diverticulum, which led to the development of progressive dysphagia, regurgitation, night cough due to retention of undigested food and aspiration. Dysphagia developed slowly and led to loss of body weight and avoid eating. The diagnosis was establish a year ago when the size by the X ray examination, radiography and CT scan was approximately 7 cm, but the patient has not adopted for surgical treatment. The pains were intensified, so that the size of the diverticulum in the surgery time was 9 cm in diameter (Figure 1).

Left thoracotomy approaches for

Figure 1. X ray of diverticulum
the distal thoracic esophagus is applied who mobilises and with preservation vagal nerve branches (Figure 2a).

After the preparation and presentation of diverticular sack, the same prepared carefully, making sure not to break the parietal pleura, than diverticulum is removed by mechanical sewing (TA-60, 4.8 mm stapling device), performed a long infraaortal myotomy on the contralateral side of the mouth of the diverticulum, and added antireflux procedure (modified Belsey Mark IV) (Figure 2b and 2c).

Early postoperative course was satisfactory. Contrast radiography after 6 and 12 months showed normal findings, and the patient has no symptoms, with normal body weight (Figure 3).

Histopathologic analysis confirmed the presence of leiomyoma in the diverticular sack.

3. DISCUSSION

Functional obstruction due to motility disorders resulting intracathageal increasing pressure, and this is the impetus for the development pulsion diverticula. Epiphrenic diverticulum is generally associated with supporting a motor disorder that is considered the cause of diverticula (1, 2, 3). More than 30-40% of epiphrenic diverticula are asymptomatic. The main symptoms are dysphagia, regurgitation or vomiting, chest pain and weight loss. Night cough, pneumonia and laryngitis may develop secondarily due to aspiration of undigested food (4, 5).

Diagnosis of diverticula is establish by chest radiography with barium, upper gastrointestinal endoscopy, manometry and computerized tomography (CT scan). However, most epiphrenic diverticula were incidentally diagnosed. The native chest radiography shows the level of shading in the middle part of the posterior mediastinum. Barium radiography was the primary modality in the diagnosis epiphrenic diverticula. Endoscopy helps to exclude other abnormalities of the esophagus. Stationary manometric examination of the esophagus is usually indicated regarding diagnostic motility disorders that may affect the decision on the modality of treatment. Clinical manifestations are unpredictable and not correlated with the size of the diverticula, but are correlated with primary motility disorders (6, 7). Dysphagia and regurgitation are the dominant symptoms, and respiratory symptoms, when present, indicate complicated disease. CT indicates the differentiation of diverticula from mediastinal abscess, tumor or even a hiatus hernia. Epiphrenic diverticulum usually appears on CT as a structure with thin walls, filled with air or air-fluid collection in communication with the lumen of the esophagus. However, diverticula are associated with distal esophageal obstruction may remain in a state of contraction and may therefore be invisible to CT (7, 8). Asymptomatic patients should be treated conservatively. Symptomatic patients should undergo surgical treatment. Surgical options include diverticulectomy, long myotomy and anti-reflux procedure (according to the results of manometry) (8). More recently, thoracoscopy, minimally invasive procedure and endoscopic procedures are become popular in the treatment of diverticular disease, but open approach only provides to handle all aspects of the disease (9, 10).

4. CONCLUSION

Open surgical approach adequately resolve the causes and consequences of diverticular disease, so that the optimal choice for the elimination of the causes and subsequent development of disease recurrence. It should be considered in patients who can tolerate such extensive surgery, because eliminating all aspects of the disease.
REFERENCES


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