

## Case 18

### Caso 18

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### CASE

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**Figure 1** - Esophagogram with barium sulfate, thoracoabdominal region, and patient at an angled position.

Female patient, 47 years old, born and resident in Belo Horizonte. Two years ago, presented intense retrosternal odynophagia and one year later, also presented dysphagia, heartburn, regurgitation, and involuntary weight loss of about 50 kg. She has a sedentary lifestyle and is morbidly obese at grade III without other comorbidities. Esophagogram was performed with barium sulfate.

Which is the most likely diagnosis according to the clinical history and examination?

- esophageal achalasia;
- esophageal cancer;
- Zenker's diverticulum;
- peptic stenosis.

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## IMAGE ANALYSIS



**Figure 2** - Esophagogram with barium sulfate, thoracoabdominal region, and patient at an angled position – dilation of the thoracic esophagus due to narrowing of the gastroesophageal junction - limits in red.

## DIAGNOSIS

- **achalasia:** unknown etiology disease in which there is loss of peristalsis in the distal esophagus and failure in relaxing the lower esophageal sphincter (EEL) at swallowing. Of insidious onset, it presents dysphagia and food regurgitation. The esophagogram with barium sulfate demonstrated narrowing of the gastroesophageal junction, which determines upstream dilation;
- **esophageal carcinoma:** it is the main differential diagnosis of achalasia and has dysphagia as the main symptom, but with late onset. Considering the time of evolution of symptoms, this would be the less likely diagnosis. The esophagogram usually shows asymmetric and irregular narrowing of the esophagus lumen, and may be associated with nodularity and irregularities in the local mucosa;
- **Zenker's diverticulum:** also called pharyngo-esophageal diverticulum, occurs from an area of weakness in the cricopharyngeal muscle in the posterolateral situation to the cervical esophagus. Its symptomatology is characterized by oropharyngeal dysphagia (difficulty initiating swallow-

ing), stasis of food, halitosis, and foreign body sensation in the cervical esophagus. The diagnosis is confirmed by esophagogram, which can show the sac-like formation in the cervicothoracic junction, and may present air-fluid level;

- **peptic stenosis:** is a complication of the gastroesophageal reflux disease, resulting from the healing of esophageal ulcers. There is segment narrowing at the gastroesophageal junction, which can present sacculations, regional pseudodiverticulosis, and upstream dilation. This stenosis can reach up to 4.0 cm in longitudinal extent and reduces the lumen of the esophagus to a few millimeters.

## CASE DISCUSSION

Achalasia is a disorder of esophageal motility in which there is a loss of peristalsis in the distal esophagus and failure of EEL relaxation. The clinical significance is the classic presentation of dysphagia for solids and liquids associated with regurgitation of undigested food or saliva. Substernal chest pain during meals and weight loss are also usually present. Heartburn can occur, which often leads to the misdiagnosis of gastroesophageal reflux disease. The achalasia, although rare, is the most common disorder of esophageal motility similarly present in men and women, usually aged between 25 and 60 years old. It is characterized by the loss of ganglion cells in the Auerbach plexus (predominantly idiopathic etiology worldwide) and/or the Meissner plexus (in Latin America is mostly secondary to Chagas disease).<sup>1,2</sup>

The diagnosis can be confirmed by esophageal manometry or esophagogram contrasted with barium sulfate or even through the research of esophageal transit by the scintigraphy method. The first method evidences esophageal aperistalsis, stiffness in the lower esophageal sphincter ( $p > 35$  mmHg), and its insufficient relaxation. The second method shows the increased esophagus diameter and minimum EEL opening. The diagnosis can be suggested during high digestive endoscopy by the retention of saliva and non-digested food in the distal esophagus and resistance to endoscope passage into the stomach in the absence of tumors. The third method highlights the alteration in the esophageal transit and its peristalsis.<sup>3</sup>

The treatment of achalasia aims at reducing the EEL pressure at rest to the level at which the sphincter does not prevent the passage of ingested material.

This can be achieved by mechanical disruption of EEI muscle fibers (for example, by endoscopic pneumatic dilatation, surgical myotomy of Heller, or endoscopic myotomy), or by biochemical reduction (e.g., injection of botulinum toxin, oral nitrates, or calcium channel blockers). The definitive treatment of achalasia is myotomy; other options are reserved for patients who do not wish or are unable to undergo such procedure.<sup>4</sup>

Food stasis subsequent to impaired esophageal emptying promotes mucosa chronic inflammation leading to dysplasia and high risk of developing carcinoma. Despite these risks, there is insufficient data to support routine screening for cancer.

## RELEVANT ASPECTS

- achalasia is the most common disorder of esophageal motility;
- its pathophysiology is due to the non-relaxation of EEI and aperistalsis;
- its symptoms stems from dysphagia for solids and liquids and regurgitation;
- diagnostic tests are barium esophagogram and esophageal manometry;
- the definitive treatment is surgical myotomy of the EEI.

## REFERENCES

1. Sabiston DC, Townsend CM. Sabiston Tratado de Cirurgia: a base biológica da prática cirúrgica moderna. 18a ed. Rio de Janeiro: Elsevier; 2010.
2. Fass R. Overview of dysphagia in adults. UpToDate, 2014. [Cited 2014 Sep 14]. Available from: <http://www.uptodate.com/contents/overview-of-dysphagia-in-adults>.
3. Spechler SJ. Clinical manifestations and diagnosis of achalasia. UpToDate, 2014. [Cited 2014 Sep 19]. Available from: <http://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-achalasia>.
4. D'Ippolito G, Caldana RP. Gastrointestinal. Rio de Janeiro: Elsevier; 2011.