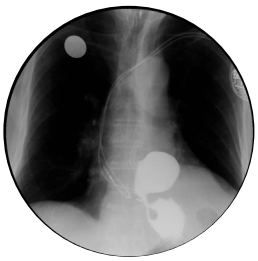

Development of an epiphrenic diverticulum as a complication of antireflux surgery: importance of fluoroscopy

Formación de un divertículo epifrénico como complicación de la cirugía antirreflujo: importancia de la fluoroscopia

Diana Romero Mayorga[1]
Julia Rodríguez Santos[1]
Felipe Aluja Jaramillo[2]
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Summary
This article demonstrates the radiological findings in the esophagogram of the epiphrenic diverticulum in a patient with solid dysphagia and weight loss with a history of antireflux surgery. In this case, a very tight plication was found and as a consequence the formation of the epiphrenic diverticulum, a rare entity Fluoroscopy techniques are still used for anatomical and functional evaluation of the gastrointestinal tract.

Resumen
En este artículo se muestran los hallazgos radiológicos en el esofagograma del divertículo epifrénico en un paciente con disfagia para sólidos y pérdida de peso, con antecedente de cirugía antirreflujo. Además, se encuentra una plicatura muy apretada y, como consecuencia, la formación del divertículo epifrénico, entidad de rara presentación. Las técnicas de fluoroscopia siguen vigentes para la valoración anatómica y funcional del tracto gastrointestinal.

Clinical history
87-year-old patient with a history of long-standing esophageal stricture and esophageal dilatations. During the last three months he has presented dysphagia for solids with weight loss, so he was evaluated by gastroenterology who requested upper gastrointestinal endoscopy and esophagogram. The patient also referred to antireflux surgery 20 years ago.

The esophagogram showed a dilatation of the distal segment of the esophagus with a 2 cm long stenosis zone that allowed the passage of the contrast medium with a filiform caliber. Above the area of stenosis and dependent on the left lateral wall of the esophagus, a saccular dilatation compatible with an epiphrenic diverticulum was identified (Figure 1).

In the upper endoscopy, a dilatation of saccular appearance was found in the distal esophagus, located 34 cm from the dental arch with a length of 4 cm.

Diagnosis
Epiphrenic diverticulum as a complication of antireflux surgery. With the findings in the esophagogram and upper endoscopy it was concluded that the area of stenosis corresponds to the known changes of plication, which is very tight and facilitates the increase of the intraluminal pressure of the esophagus in the proximal direction forming a pulsion diverticulum (1).

Discussion
Epiphrenic diverticulum is usually located in the 10 cm of the distal esophagus. The symptoms reported by patients are gastroesophageal reflux, dysphagia, chest pain, cough and bronchoaspiration (1, 2).

Esophageal diverticulum is of the pulsation type, originated by an increase in the intraluminal pressure of the esophagus due to a distal obstruction that causes herniation of the mucosa and submucosa. Its occurrence has been associated with motor disorders such as achalasia, lower esophageal sphincter hypertrophy, diffuse esophageal spasm, and complications of surgeries such as esophageal myotomy, gastric banding and antireflux surgery. In this case, the cause was antireflux surgery (fundoplication) (2-4).

The first line of treatment for gastroesophageal reflux is the use of proton pump inhibitors, but there are specific cases that benefit from antireflux surgery or Nissen fundoplication, a procedure that consists of creating a lower esophageal sphincter with the stomach surrounding the lower esophagus (2).

[1]Radiology Resident at Pontificia Universidad Javeriana. Bogotá, Colombia.

[2]Professor of Radiology at Pontificia Universidad Javeriana. Bogotá, Colombia.

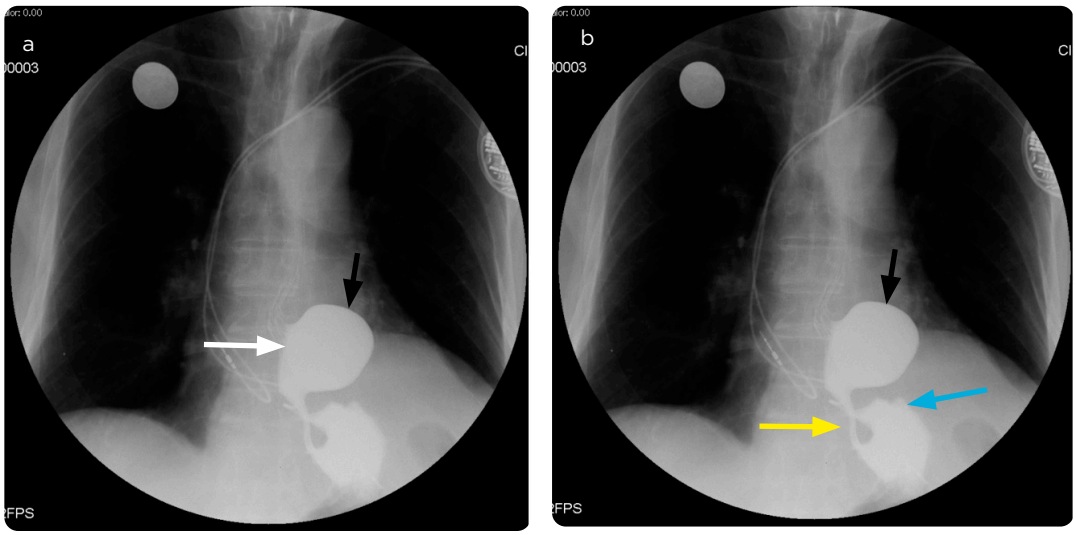

Figure 1. Esophagogram with barium contrast medium. a) Dilatation of the distal segment of the esophagus (white arrow) depending on the left lateral wall corresponding to epiphrenic diverticulum (black arrow). b) Depending on the left lateral wall of the esophagus a saccular dilatation is observed corresponding to esophageal diverticulum (black arrow). In addition, an area of stenosis of 2 cm in length with filiform passage of the contrast medium (yellow arrow) towards the gastric chamber is identified (blue arrow).

The main complications are: very tight plication, suture disruption and slippage of the fundoplication above the diaphragm; less frequently, diverticulum formation (2, 3).

A very tight plication generates obstruction of the distal esophagus. When this occurs, the finding in fluoroscopy is dilatation of the proximal esophagus with a decrease in the passage of contrast medium in a length that depends on the thickness of the plication, which generates a zone of stenosis and a slow passage of the contrast medium towards the gastric chamber (2, 3).

The findings of epiphrenic diverticulum in the esophagogram, according to Fasano et al. (1), who evaluated 27 patients in fluoroscopy, is that they have a rounded or oval shape, it is more frequent on the right side and there is a correlation between the size of the diverticulum and the intensity of the associated symptomatology.

The treatment of epiphrenic diverticulum is varied, it can include diverticulectomy, esophageal cardiomyotomy and fundoplication. Surgical intervention is performed in patients with severe esophageal symptoms (1, 4).

Conclusions

Esophagogram is an ideal diagnostic method for the evaluation of post-surgical complications of the gastrointestinal tract, especially in the esophagus. In this case, an epiphrenic diverticulum was found as a complication of antireflux surgery, which demonstrates the importance of conventional studies with contrast medium for the anatomical and functional evaluation of the gastrointestinal tract.

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Correspondence

Diana Romero Mayorga
Calle 106 # 19A-89
Bogotá, Colombia
dianaromm92@gmail.com

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