PICTURES IN DIGESTIVE PATHOLOGY

Spontaneous esophageal rupture (Boerhaave's syndrome). An uncommon image

Juan Salvador Baudet¹, Ana Arencibia², Marta Soler¹, Ignacio Redondo² and Guillermo Hernández³

¹Department of Digestive Diseases. Hospital San Juan de Dios. Santa Cruz de Tenerife. Spain. ²Unit of Endoscopy and ³Department of Surgery. Hospital Universitario Nuestra Señora de Candelaria. Santa Cruz de Tenerife, Spain

CASE REPORT

A 76-year-old man was found lay down on the floor. After an acute alcohol intake he started vomiting. In the Emergency Room he was disoriented with lividity. Vital observation revealed low blood pressure and tachycardia, subcutaneous emphysema and basal rales on auscultation. Chest radiography with shadowing in the left lower zone. A water-soluble contrast esophagogram (Gastrograffin) revealed the location and extent of extravasation of contrast material in upper mediastinum (Fig. 1).

With a high degree of clinical suspicion of Boerhaave's syndrome, it was decided surgical intervention. Prior surgery, we performed an upper endoscopy that showed two ruptures in the esophageal wall with necrosis and dark fluid (Figs. 2 and 3).

The patient underwent surgery, during which it was found that there was mediastinitis and three esophageal perforations, two small in the back wall and another of 10 cm long in the side wall of middle third esophagus. Transhiatal esophagectomy with cervical esophagostomy was performed with a favorable evolution.

DISCUSSION

Boerhaave's syndrome is a spontaneous transmural perforation of the esophagus. It is postulated to be the result of a sudden rise in intraluminal esophageal pressure combined with a negative intrathoracic pressure produced during vomiting.

The classic clinical presentation of Boerhaave's syndrome usually consists of retrosternal chest and upper abdominal pain and subcutaneous emphysema (crepitation). Odynophagia, tachypnea, dyspnea, cyanosis, fever, and shock develop rapidly thereafter (1,2). The diagnosis is suggested on the clinical history and radiologic images; the chest radiograph and the water-soluble contrast esophagogram (Gastrograffin) are the best for the primary diagnostic study.

Computer tomography scan can reveal decisive criteria for diagnosis and sometimes may replace the esophagograms.

Fig. 1. Water-soluble contrast esophagogram (Gastrograffin) revealed the location of a cavity in the middle esophagus (arrow) not visible before contrast.

Fig. 2. Endoscopic image. Esophageal rupture with necrosis and perforation.

Endoscopy has no role in the diagnosis of spontaneous esophageal perforation, only if we want to exclude other causes of perforation. In our case it was performed immediately before surgery in order to decide the type of surgery to perform.

Surgical repair must be performed as soon as possible. If possible, it is useful to perform an esophagostomy that allows the wound to heal by secondary intention. In severe conditions, like the present patient, it is preferable to perform an esophagectomy (3-5).

REFERENCES

1. Jagminas L, Silverman RA. Boerhaave's syndrome presenting with abdominal pain and right hydropneumothorax. *Am J Emerg Med* 1996;14 (1):53-6.
2. Mur Villacampa M, Guerrero Navarro L, Cabeza Lamban F, Pérez Alfranca JM. Boerhaave syndrome, as a cause of acute abdomen. *Rev Esp Enferm Apar Dig* 1989;76(2):155-7.
3. Alamo Martínez JM, Galindo Galindo A, López Bernal F, Bernal Bellido C, Belda Laguna O, Sousa Vaquero JM, et al. Endoscopic treatment with biological glue of esophageal fistula after surgery of Boerhaave syndrome. *Rev Esp Enferm Dig* 2003;95:366-8.
4. Vallböhmer D, Hölscher AH, Hölscher M, Bludau M, Gutschow C, Stippel D, et al. Options in the management of esophageal perforation: analysis over a 12-year period. *Dis Esophagus* 2010;23:185-90.
5. Arconada JA, Hebrero J, Yangüela J, Milazzo A, Simón MA, Cabello J, et al. Non-excisional treatment of spontaneous rupture of the esophagus. *Rev Esp Enferm Apar Dig* 1989;75:545-52.

Fig. 3. Endoscopic image. Detail of the esophageal rupture.