


## Cervical perforation due to a foreign body: Case report

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### ABSTRACT

Cervical esophageal perforations by foreign bodies are uncommon. Its surgical approach depends on the degree of injury to the cervical structures and the development of signs and symptoms of cervical-mediastinal infection<sup>3</sup>. Increased intraluminal pressure at anatomical sites of narrowing, as well as at sites narrowed by malignancy, foreign body, or physiological dysfunction, can lead to rupture of the esophagus. Patients often present with neck pain that may be accompanied by dysphagia, hoarseness, dysphonia, or subcutaneous emphysema.

**Keywords:** Cervical perforation, Esophageal perforation, Cervical abscess, Foreign body, Exploratory cervicotomy.

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## INTRODUCTION

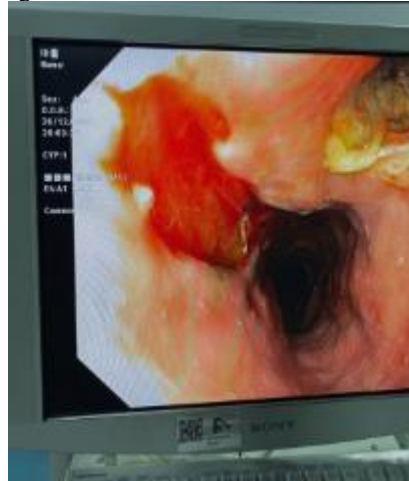
Cervical esophageal perforations by foreign bodies are uncommon. Its surgical approach depends on the degree of injury to the cervical structures and the development of signs and symptoms of cervical-mediastinal infection<sup>3</sup>. Increased intraluminal pressure at anatomical sites of narrowing, as well as at sites narrowed by malignancy, foreign body, or physiological dysfunction, can lead to rupture of the esophagus. Patients often present with neck pain that may be accompanied by dysphagia, hoarseness, dysphonia, or subcutaneous emphysema.

The study was approved by the Research Ethics Committee (REC) under opinion No. 6,202,077.

## PRESENTATION OF THE CASE

O.F.M., 64 years old, female, presented with no comorbidities. He sought care at the Santa Casa de Campo Mourão Hospital after choking on a meat bone in his residence approximately 3 days ago. During the consultation, she complained only of dysphagia. Emergency UDE was performed, and a longitudinal mucosal laceration of approximately 3 cm was visualized in the cervical esophagus. Presence of a perforation of approximately 1 cm with necrotic tissue and impacted foreign body, removal of the foreign body with forceps, and then exploratory cervicotomy was chosen.

Figure 1 - EDA with mucosal laceration.



Source: patient record.

During the procedure, a right oblique cervical incision was made under the medial border of the sternocleidomastoid muscle, platysma was opened by a field, and the prelaryngeal muscles were dissected, showing a cervical abscess associated with esophageal perforation, and cervical esophageal dissection was performed, with access to the prevertebral fascia.

Abscess drainage was performed, washing with 0.9% saline solution, placement of a tube-laminar drain with counter-incision exteriorization, hemostasis review, closure of the planes and dressing. It was necessary to pass a nasoenteral tube under direct vision by EDA.

Figure 2 - Foreign body.



Source: patient record.

The patient required care in the Intensive Care Unit, with cultures of the contents in a tube-laminar drain and prophylactic antibiotic therapy, requiring invasive ventilation through an orotracheal tube.

After stabilization and extubation, while waiting for culture results, the presence of *Klebsiella Pneumoniae* growth and a positive screening test for carbapenemase detection were evidenced.

Sensitivity to amikacin was shown in an antibiogram. The antimicrobial drug was then chosen. After use, the patient was significantly improved and discharged from the hospital after 30 days of hospitalization.

Figure 3 - Surgical site.



Source: patient record.



## DISCUSSION

The esophagus is located in the posterior mediastinum and extends from the level of the 7th cervical vertebra to the 11th thoracic vertebra. It is divided into regions, including the cervical esophagus, thoracic esophagus, and intra-abdominal esophagus, which have an influence on the diagnosis and treatment of esophageal injuries. The esophagus is composed of mucosa, submucosa, external muscle, and adventitia. The arterial supply includes the inferior thyroid artery (cervical esophagus), bronchial arteries, aorta (thoracic esophagus), branches of the left gastric artery, and inferior phrenic artery (abdominal esophagus). Venous drainage occurs through the inferior thyroid vein (cervical esophagus), the azygos vein, the hemiazygos vein or bronchial veins (thoracic esophagus), and the coronary vein (abdominal esophagus).

When esophageal injury is diagnosed by esophagoscopy or esophagography, or there is a strong suspicion in a hemodynamically unstable patient, the patient will require urgent surgical exploration and repair<sup>1</sup>. However, due to the multiplicity of associated lesions in this patient population, lesions should be screened according to severity and the surgical approach should be planned accordingly. Initial management includes airway protection, appropriate fluid resuscitation, and laboratory evaluation<sup>4</sup>.

The patient should remain fasting, i.e., "swim orally" (NPO), at the time of esophagoscopy, a nasogastric tube should be placed under direct vision to provide gastrointestinal decompression, if possible<sup>5</sup>. Blind insertion of a nasogastric tube should never be attempted in a patient with suspected oesophageal injury. Broad-spectrum intravenous antibiotics should be administered covering both aerobic and anaerobic antibiotics<sup>2</sup>. If the patient is on long-term therapy with a proton pump inhibitor, antifungal therapy should also be administered, particularly for lesions of the lower esophagus.



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