

# Cervicotomy for Removal of a Foreign Body from the Upper Esophagus: Case Report

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**Abstract:** The objective of the study was to report the case of a patient transferred for management of a foreign body in the upper esophagus at the University Clinics of Kinshasa. This is a 62-year-old patient who ingested her dentures while taking medication, consulted for dysphagia and hyper sialorrhea, explorations revealed a high esophageal location of the foreign body (CE). It was a three-toothed prosthesis with hooks. The esophagus was closed at separate points and the wall in three planes after installation of a drain. The postoperative period was marked 48 hours later by fever and polypnea. The haematological workup performed showed moderate anemia. The frontal chest x-ray revealed superior bile-lobar pneumonia. The diagnosis of an ENT and / or pulmonary entry-gate Sepsis is made and the patient is treated with triple antibiotic therapy (3rd generation cephalosporins, tazobactam and imidazoles). The clinical course was good with thermal lysis. After an unsuccessful endoscopic extraction attempt, a cervicotomy was performed allowing the extraction of the said foreign body. This extraction was carried out by a multidisciplinary team made up of digestive surgeons, ENTists and Gastroenterologists. The follow-up after the intervention was satisfactory and the patient had resumed his digestive function without handicap and survival.

**Keywords:** Foreign Body, Esophagus, Ingestion, Endoscopy, Cervicotomy

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## 1. Introduction

Esophageal foreign bodies are a medico-surgical emergency because of the clinical manifestations and the risk of perforation they present [1-7]. The frequency and nature vary according to age and terrain. However, they are the prerogative of children, the most frequently encountered CE being the coin [1, 4, 5]. Only 1% of ingested foreign bodies are treated surgically [2, 3, 8-10]. We report here the specific observation of a 62-year-old lady who ingested her dentures while taking oral medications.

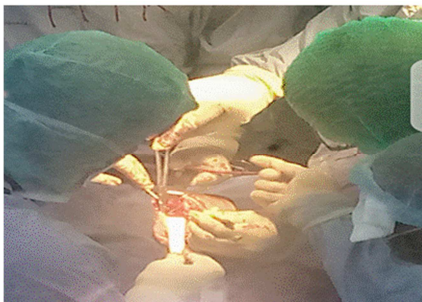
## 2. Case Description

Y. L, 62, consults the general referral hospital of LODJA, capital of Sankuru province, a few hours after the incident for painful dysphagia and hyper sialorrhea. The on-site neck x-ray revealed a hook-shaped foreign body in the cervical esophagus. The patient received treatment mainly with analgesics. Faced with a limited local technical platform, it was decided to transfer to the University Clinics of Kinshasa 3 weeks later for further treatment. On arrival, she is admitted to the multi-purpose intensive care unit where a nasogastric tube is placed and antibiotic, anti-inflammatory and anti-secretory treatment as

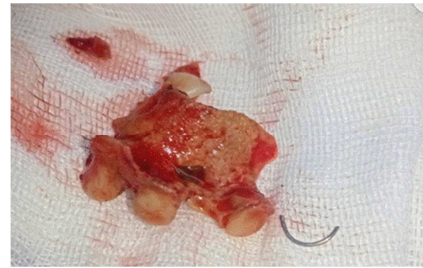
well as a rehydration regimen initiated. Six days later, an upper digestive endoscopy under general anesthesia with orotracheal intubation was performed by the gastroenterology team, allowing the visualization of the said prosthesis enclosed below the esophageal mouth with peri-lesion inflammatory reaction and ulcer of the posterior part. An attempt at endoscopic extraction was unsuccessful due to the isolation of the EC under the esophageal mouth and a lack of adequate extraction equipment. A second attempt to extract the CE under fluoroscopy by the anesthesia-resuscitation team had hardly any better result, particularly because of an excessively high risk of tearing of the soft tissues and therefore of mediastinitis (Figure 1). A left cervical esophagotomy will then be indicated and performed by the ENT and digestive surgery teams. A 10 cm lateral incision along the anterior edge of the mastoid sternocleidomuscle followed by dissection of the underlying soft tissue allowed access to the esophagus (Figure 2). The latter presented a perforation in its posterior part of about 1 cm in large diameter with necrotic margins. The perforation was widened and the dentures removed. It was a three-toothed prosthesis with hooks (Figure 3). The esophagus was closed at separate points and the wall in three planes after installation of a drain. The postoperative period was marked 48 hours later by fever and polypnea. The haematological workup performed showed moderate anemia. The frontal chest x-ray revealed superior bile-lobar pneumonia. The diagnosis of an ENT and / or pulmonary entry-gate Sepsis is made and the patient is treated with triple antibiotic therapy (3rd generation cephalosporins, tazobactam and imidazoles). The clinical course was good with thermal lysis. The ablation of the drain and the wires was performed on D5 and D10 respectively. On D28, a barium OED transit was performed before the ablation of the nasogastric tube. No stenosis was objectified (Figure 4).



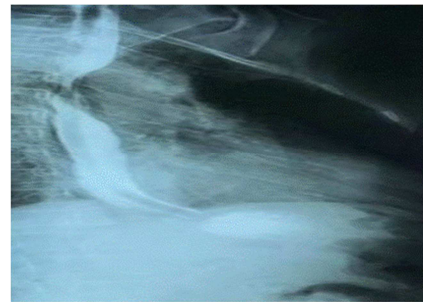
**Figure 1.** Attempting to extract the foreign body using the rat tooth forceps.



**Figure 2.** Left lateral cervicotomy under general anesthesia with orotracheal intubation.



**Figure 3.** 3-tooth prosthesis with hooks.



**Figure 4.** Barium swallow showing esophageal continuity without any stenosis.

### 3. Discussion

Ingestion of a foreign body is a frequent reason for consultation or admission to the emergency room. It is more observed in children in 80% of cases with a peak between 6 months and 3 years [3, 5]. In adults, the population at risk consists of prisoners, psychotic patients, alcoholics and the edentulous elderly [1, 2]. Children and adults with a history of esophageal surgery are at risk of foreign body blockage [3]. In 40% of cases, a risk factor such as peptic, neoplastic or caustic stenosis, oesophageal motor disorders, diverticulitis or hiatus hernia is found [1, 5]. The nature varies with age: in children, it is more coins, medals, batteries, pearls... [4, 6,]; adults most often ingest food foreign bodies and very rarely dentures [5, 7, 11]. Particular foreign bodies include bezoars, body packing and parasitic foreign bodies [2, 3, 12]. The three areas of physiological narrowing of the esophagus (the esophageal mouth, the aortic arch and the lower sphincter) are often responsible for retention [8]. The other sites of retention are: the glottis, valves, esophagus, pylorus, ileocecal valve and anus are the main sites of impact. Patients consult within 24 hours in 60 to 85% of cases, but a delay greater than 1 week has been observed [1, 2, 12-16]. Symptoms are often odynophagia, dysphagia, retro sternal pain, hyper sialorrhea or even vomiting [2, 7, 14]. Respiratory symptoms such as dyspnea and cough are predominant in young children. They result from the presence of the foreign body in the pharynx or from the compression of the trachea by a large foreign body in the esophagus [2, 8, 13].

Bleeding occurs most often with sharp objects, requiring emergency extraction due to the possibility of destruction, ulceration and fistula of the digestive tract [3, 17, 18]. The questioning helps guide etiological research and management. The following items should be systematically researched: the

nature of the foreign body, the size, number, time of ingestion and of the last meal, a possible history of esophageal disease or surgery. The paraclinical diagnosis is made mainly on a frontal chest x-ray, an unprepared x-ray of the abdomen and a lateral cervical x-ray. These examinations make it possible to locate radiopaque foreign bodies, determine their size and nature, and detect complications. X-ray transparent foreign bodies are detected by computed tomography [1, 9, 15]. Regarding therapy, ingested foreign bodies spontaneously cross the digestive tract; 10-20% require endoscopic extraction and less than 1% require external surgery [3, 4]. The indications for endoscopic extraction are a blockage period of more than 24 hours, an underlying esophageal pathology and potentially dangerous foreign bodies, sharp or sharp foreign bodies, miniaturized piles. These are at high risk of perforation [2, 10, 17]. This endoscopic extraction is performed under general anesthesia with orotracheal intubation. The classic flexible endoscope with axial vision is most often used. For foreign bodies with difficult extraction, the use of a flexible endoscope with dual operating channel is the rule. Highly located foreign bodies are removed using a rigid esophagoscope. Depending on the size and consistency of the object, one can use the "rat tooth" pliers, the "alligator" pliers, the trepode claw pliers, the mesh handles [1, 17, 18]. After the extraction, clinical monitoring focuses on looking for signs of perforation, among others: fever, pain, respiratory discomfort, subcutaneous emphysema. After the removal of batteries or sharp foreign objects, a follow-up endoscopy is the rule. Endoscopic extraction failure and complications suggest external surgery. [1, 7, 13] Complications are rare but serious. It is mainly a perforation and sepsis [1]. The risk factors for complications are a long interval between ingestion and consultation as well as age over 50 years [9, 16].

## 4. Conclusion

The ingestion of foreign bodies is a fact frequently encountered in ENT practice, particularly in children. The practitioner has an important role in the clinical and radiological evaluation of patients, allowing endoscopic management to ensure appropriate treatment and prevent complications. Prevention consists of educating populations at risk and those around them.

## Ethical Statement

This manuscript was written in accordance with the Code of Ethics of the World Medical Association.

Helsinki Declaration: We confirmed a patient's anonymity. We have obtained informed consent from the participant presented in the study.

## Disclosure Statement

No potential conflict of interest was reported by the author (s).

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