

ACUTE DYSPHAGIA: AN UNUSUAL CAUSE

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Abstract

Anterior cervical spine surgery with placement of osteosynthesis material is common in cervical trauma. The following is the case of a 52-year-old with progressive dysphagia and endoscopic examination incidentally evidenced a plate anterior metal in the posterior aspect of the hypopharynx.

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ABSTRACT

Anterior cervical spine surgery with placement of osteosynthesis material is common in cervical trauma. The following is the case of a 52-year-old with progressive dysphagia and endoscopic examination incidentally evidenced a plate anterior metal in the posterior aspect of the hypopharynx.

Keywords: foreign body, osteosynthesis plate, endoscopy

INTRODUCTION

Dysphagia is one of the main symptoms associated with the accidental ingestion of a foreign body. Foreign body ingestion is not uncommon and represents approximately 4% of urgent endoscopies performed (**1,2**). Most ingested foreign bodies will pass spontaneously. Pre-endoscopic series have shown that 80% or more of foreign objects are likely to pass without intervention (**3, 4, 5**). However, two recent studies have shown that in the setting of intentional ingestion, the rate of endoscopic intervention can be much higher (63% - 76%), and the need for surgical intervention ranges between 12% and 16%. The incidental finding of a foreign body in adults is very infrequent in endoscopy, especially if the geriatric population is excluded. Below, we present a clinical case of a foreign body found incidentally during an endoscopy due to dysphagia in a middle-aged adult patient

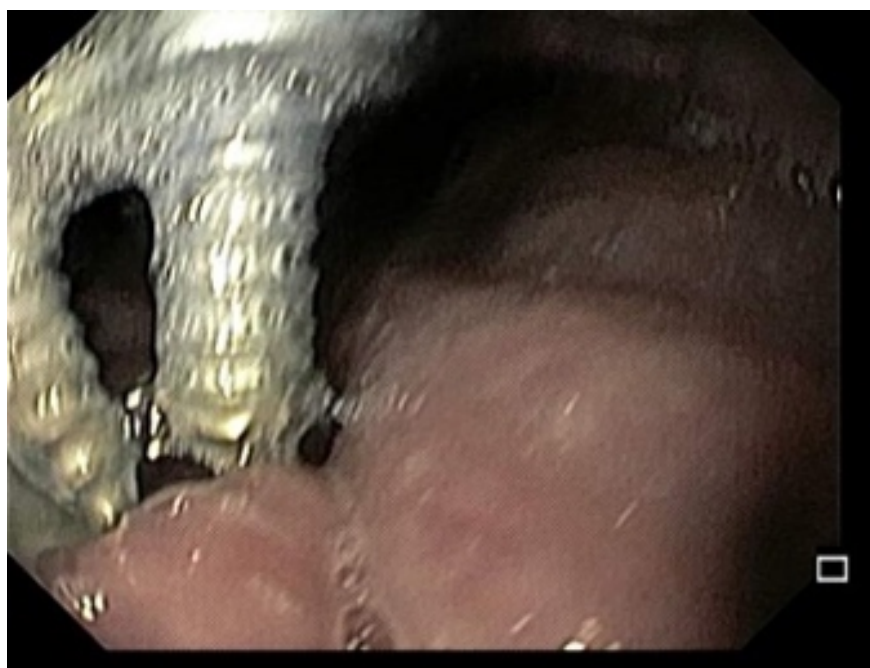
CASE PRESENTATION

A 52-year-old male patient with a history of major depressive disorder managed with Fluoxetine, GSW (wound by firearm projectile) at the cervical level in 2011 with fracture of C4 and C5 requiring cervical

corpectomy and end-to-end anastomosis of the crico-pharyngoesophageal junction. He was admitted to the emergency department in September 2021 due to symptoms of dysphagia of 2 weeks of evolution, associated with holocranial headache of intensity 8/10 and bilateral otalgia. No fever, odynophagia, or associated symptoms.

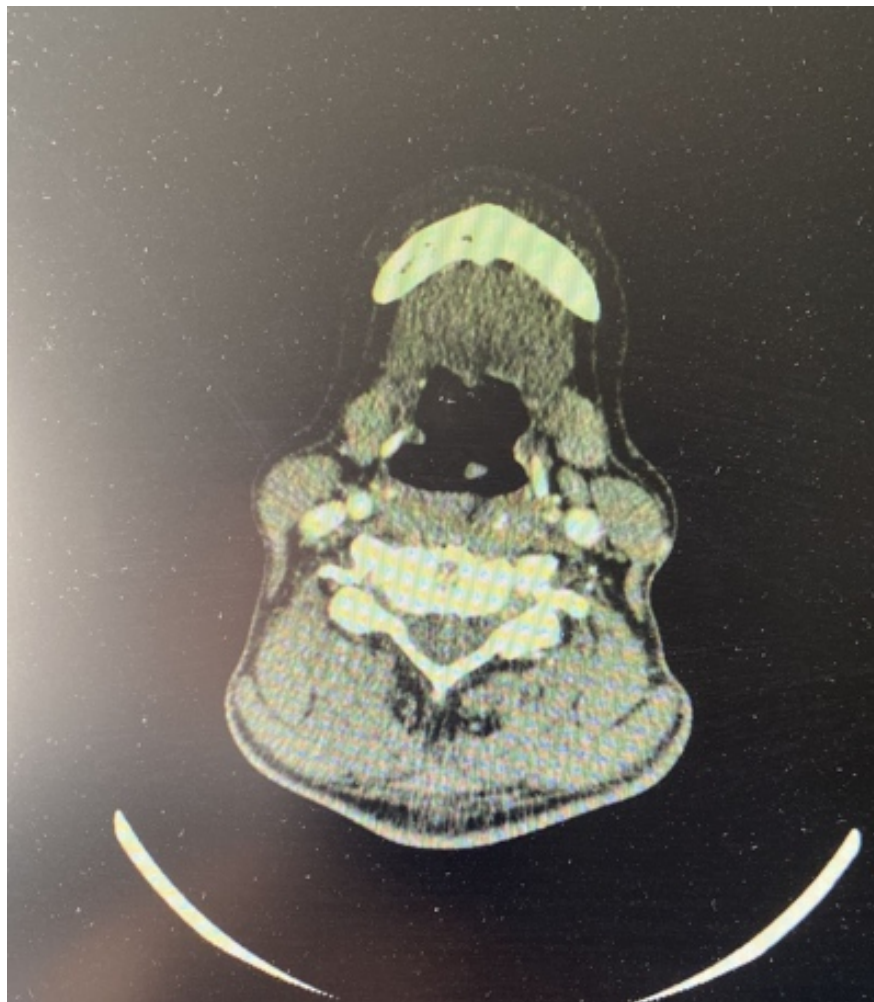
The patient was taken for endoscopy of the upper digestive tract, which revealed at the level of the base of the tongue two mobile screws on a metal plate in contact with the epiglottis; the surrounding mucosa was swollen and ulcerated. The equipment is passed laterally, with a partial displacement of the plate. It was not possible to adequately assess the mucosa at this level. There is slight bleeding in the hypopharynx, below the epiglottis, mainly in the posterior aspect. When the endoscope is removed, the screws and plate detach spontaneously and come together with the equipment (**Image 1**).

Image 1. A, B and C . Endoscopic visualization of a foreign body in the patient's hypopharynx. **D** . Middle esophagus without alterations. **E**. Distal esophagus without alterations. **F**. Normal gastroesophageal junction. **G**. Retroflexed image of normal gastric fundus. **H**. Extracted foreign body: osteosynthesis material (metal plate and screws)

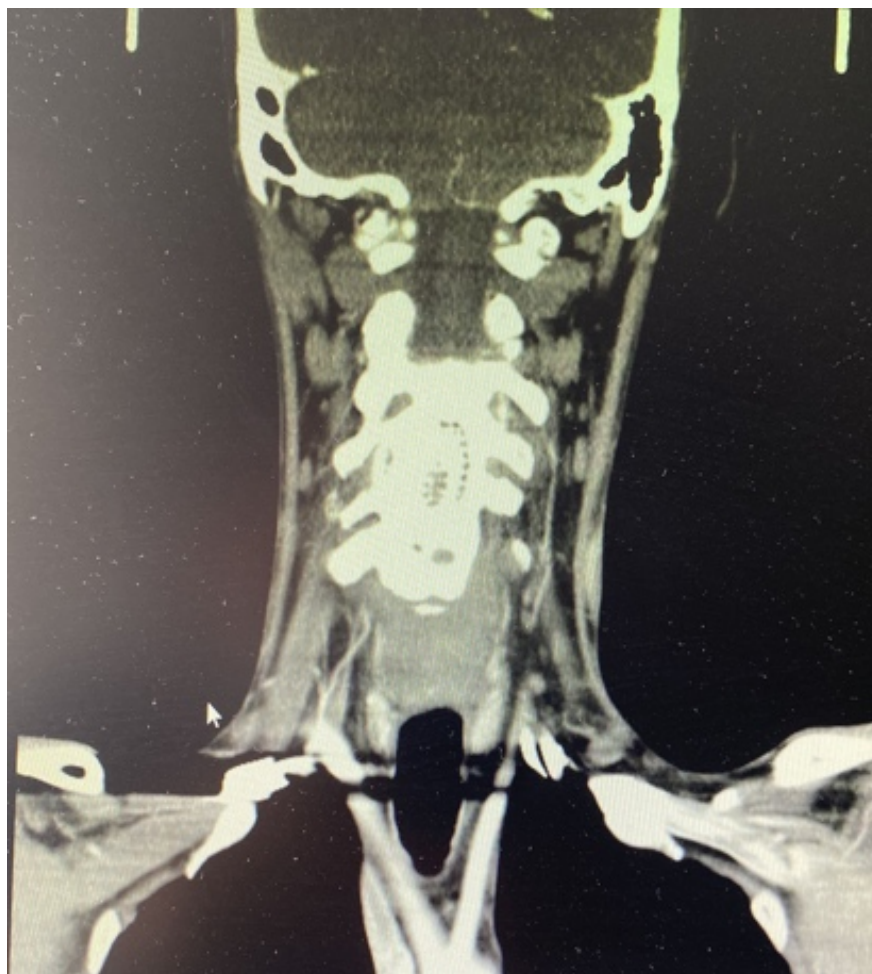


The patient was hospitalized for neurosurgery and otorhinolaryngology evaluation, and antibiotic management. A neck CT scan was performed (**Image 2**), which reported a discontinuity of the posterior wall of the hypopharynx at the C4 level related to the anterior displacement of the arthrodesis material of the cervical spine. Chronic thrombosis of the left internal jugular vein was also noted. The patient presented clinical improvement of the symptoms and did not require further interventions. He was discharged with antibiotic management 72 hours after the endoscopy.

Image 2. CT image of the cervical spine with a fusion of C4 and C5, without displacement of the previous fracture.







DISCUSSION

The incidental finding of a foreign body in adults is very infrequent in endoscopy, especially if the geriatric population is excluded. Dysphagia is one of the main symptoms associated with the presence of a foreign body in the oropharynx or digestive tract. Foreign body ingestion is not uncommon and represents approximately

4% of urgent endoscopies performed (3,4). Most ingested foreign bodies will pass spontaneously. Pre-endoscopic series have shown that 80% or more of foreign objects will probably pass without intervention (2,5, 6). However, the diagnosis of a foreign body in adults without a history of accidental ingestion of any food or material is a challenge for gastroenterologists.

The anterior approach for cervical spine interventions is a well-established procedure, widely used for traumatic, degenerative, infectious, or neoplastic cervical spine surgery (7,8,9,10). The complication usually occurs after spinal fixation and is related to the injury of prevertebral soft tissues (trachea, larynx, esophagus, recurrent laryngeal nerve, and carotid artery) within the first 48-72 hours (11). Among them, pharyngoesophageal perforations are fearsome complications that are rarely reported. Its incidence is around 3% (9,10,12).It can be responsible for mediastinitis or septicemia, leading to a high mortality rate of 20% to 50%, even with adequate treatment (7). In this case, the prevertebral soft tissue injury was related to a rare, very late migration of the osteosynthesis material, generating dysphagia and risk of aspiration and perforation of the gastrointestinal tract by their sharp components (13). In this kind of case, a multidisciplinary evaluation and further imaging are needed to determine the best management approach.

The perforation rate caused by the migration of sharp pointed objects is up to 35%, so it is recommended that these foreign bodies be removed from the esophagus within the first few hours, which is considered an emergency situation (13). In the case presented, the foreign object consists of screws and a metal plate that represents not only a risk of perforation at the intestinal level if they continue their digestive transit but also a risk for the airway in the event of accidental aspiration of any of these pieces. When these clamps were detached with the extraction of the endoscope, the absence of injuries to adjacent tissues was immediately verified. A multidisciplinary evaluation by neurosurgery and otolaryngology was conducted to determine if other complications arose. Late, such as the displacement of the vertebral fracture or severe edema at the glottis level. Fortunately, none of the above occurred.

In endoscopy, some different pieces and accessories help in the extraction of foreign bodies and allow their safe and timely extraction. The protection of the respiratory tract is of particular interest during the extraction of foreign bodies. Standard-sized overtubes (SOCs) that extend beyond the upper esophageal sphincter protect not only the airway but also facilitate passage of the endoscope during multiple objects or sharp object removal (13). Using a CAP allowed us to detach the pieces of the osteosynthesis material spontaneously, with final extraction of each of them with minimal laceration of the mucosa and without loss of any of the parts.

CONCLUSION

Severe progressive dysphagia is a symptom that requires timely endoscopic evaluation. In patients with a history of cervical spine surgery, in whom arthrodesis was performed with metal plates, it is essential to consider the possibility of pharyngoesophageal externalization of this material. The incidental finding of an exteriorized cervical osteosynthesis plate in the hypopharynx is extremely unusual ten years after surgery, so the associated complications that this material can cause should be evaluated. In the case presented, an immediate endoscopic approach and a multidisciplinary evaluation were necessary to manage the outcomes (mucosal infection, pain, and pharyngeal edema), with excellent clinical results for the patient.

AUTHOR CONTRIBUTIONS

Fredy Avila and Angélica Tobón reviewed the literature, drafted and edited the manuscript, and approved the final manuscript.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy

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