CMMB

https://doi.org/10.31689/rmm.2026.33.1.97

CASE REPORTS

# Diagnostic and Therapeutic Pitfalls in the Management of Migrating Foreign Bodies of the Larynx and Upper Esophagus

Iurie NOROC[1,2], Sergiu VETRICEAN[2], Eusebiu SENCU[1,2], Victor ENACHI[1,2], Alexandru DIDENCU[1,2], Anastasia RADUT[1], Zinaida NACU[1]

**Abstract**

Foreign bodies in the hypopharynx and upper esophagus are frequent emergencies in ENT practice, but their migration outside the aerodigestive lumen is rare and associated with an increased risk of morbidity and mortality. Sharp foreign bodies can perforate the hypopharyngeal or esophageal wall, migrating into the cervical spaces and generating significant diagnostic and therapeutic difficulties. We present the case of ingestion of a sharp foreign body (chicken bone), complicated by its migration initially into the deep spaces of the neck, and later into the peripheral spaces. The diagnosis was established by correlating clinical data with imaging investigations, and the treatment consisted of surgical extraction of the foreign body, associated with antibiotic therapy and careful monitoring. The evolution was favorable. These situations highlight the importance of clinical suspicion, early imaging explorations and individualized therapeutic conduct in the management of migrating foreign bodies of the hypopharynx and upper esophagus.

**Keywords:** migratory foreign body, hypopharynx, upper esophagus, cervical spaces, upper aerodigestive tract

[1]Department of Otorhinolaryngology, "Nicolae Testemitanu" University of Medicine and Pharmacy, Chisinau, Republic of Moldova

[2]Republican Clinical Hospital „Timofei Moșneaga" Chisinau, Republic of Moldova

***Corresponding author:**

**Noroc IURIE,** "Nicolae Testemitanu" State University of Medicine and Pharmacy, 165 Stefan cel Mare si Sfânt Blvd., Chisinau, Republic of Moldova, MD-2004

**E-mail:** iurie.noroc@gmail.com

## INTRODUCTION

Foreign bodies located in the hypopharynx and upper esophagus are a common pathology in ENT practice, being considered medical emergencies due to the risk of airway obstruction, severe inflammation and the appearance of potentially lethal complications. Accidental ingestion of foreign bodies is mostly found in children, the elderly and patients with swallowing disorders, but it can occur in any age group.

Most foreign bodies remain located in the upper aerodigestive lumen and can be identified and early extractions. However, in certain situations, especially in the case of sharp foreign bodies, they can perforate the hypopharyngeal or esophageal wall and migrate into adjacent structures. Foreign body migration is a rare complication, reported in about 3–4% of cases, but is associated with a significant risk of morbidity and mortality, by affecting the deep cervical spaces, large vessels, or by developing severe infections.

The diagnosis of migratory foreign bodies can be difficult, the symptomatology is often non-specific, and the initial endoscopic examination may be negative. In this context, imaging investigations, especially computed tomography, play an essential role in the precise location of the foreign body and in the evaluation of associated complications. The therapeutic approach is complex and requires individualized conduct, which may include surgical treatment, antibiotic therapy, and close monitoring.

The purpose of this article is to highlight the diagnostic and therapeutic pitfalls of migrating foreign bodies of the hypopharynx and upper esophagus, by presenting the clinical case of migration of an ingested sharp foreign body, emphasizing the importance of clinical suspicion and individualized management for the prevention of severe complications.

**Clinical observations:**

The 71-year-old patient presented with persistent foreign body sensation, pain and periodic stinging in the left lateral cervical region, associated with general asthenia and fatigue, with onset approximately 5 days previously, occurring after accidental ingestion of a chicken bone during feeding. Immediately after ingestion, an intense, stinging pain occurred, located in the left lateral cervical region, in the projection of the hypopharynx. After several unsuccessful attempts to self-removal of the foreign body, the patient went to the District Hospital, were at indirect laryngoscopy.

A foreign body described as "bird wing bone" was intermittently visualized at the level of the posterior wall of the hypopharynx. Several attempts to draw were made, without result. Subsequently, following the interdisciplinary consultation, the patient was redirected to IMSP SCR "Timofei Moșneaga" for further investigations and specialized treatment.

In our clinic, the patient was investigated by videolaryngoscopy (Figure 1), which revealed pronounced edema of the left aryteno-epiglottic plica mucosa and the ipsilateral piriformis sinus, with the impossibility of direct visualization of the foreign body.

**Figure 1**. Give her videolaryngoscopic internment

An emergency cervical computed tomography (CT) scan (Figure 2) was performed, which revealed a foreign body located anterior to the C4 vertebral body, at the level of the left piriformis sinus, with transverse orientation towards the right piriformis sinus and approximately 3–4 cm in size. Marked edema of the soft tissues of the left hypopharynx was also found, associated with minimal gas inclusions.

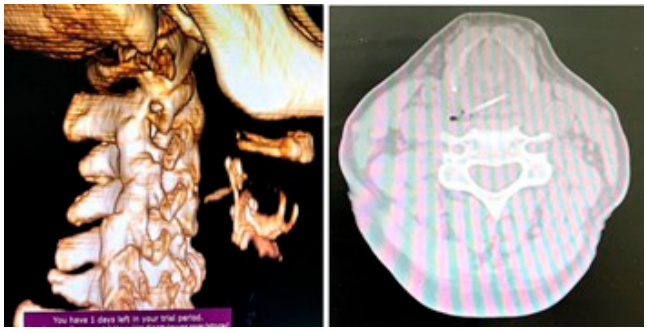

**Figure 2**. CT at the Emergency Department

Rigid esophagoscopy was performed under general anesthesia with oro-tracheal intubation.

Intraoperatively, fibrin deposits were identified, and after their aspiration, a tissue defect of approximately 3 × 3 mm was revealed at the level of the posterior wall of the pharynx, located about 1.5 cm above the esophageal opening, probably considered the penetration hole of the foreign body. When exploring the migration channel, the foreign body was not identified.

Considering the patient's stable general condition, it was decided to institute nasogastric tube feeding (Figure 3), initiate double antibacterial, anti-inflammatory and systemic corticosteroid therapy, in order to reduce edema and monitor.

**Figure 3**. Give her postoperator video laryngoscopic

The CT scan performed at 48 hours showed the maintenance of the position of the foreign body, with the remission of the gaseous inclusions. Videolaryngoscopic examination showed moderate edema of the left aryteno-epiglottis plica and ipsilateral piriformis sinus, without visualization of the foreign body. The clinical evolution was favorable, with significant improvement of pain symptoms and hemodynamic stability.

The control CT performed 7 days after admission revealed the migration of the foreign body into the paravertebral soft tissues, at the C4 level, on the right side (Figure 4). In the absence of acute complications, the patient was discharged home in satisfactory condition, with periodic monitoring. At the CT examination performed at 2 months, the progressive migration of the foreign body to the peripheral planes was found.

In this context, the patient was readmitted for specialized surgical treatment. Lateral cervicotomy was performed, with successful extraction of the foreign body (Figure 5). The postoperative CT scan confirmed the absence of the foreign body, without any other associated pathological changes.

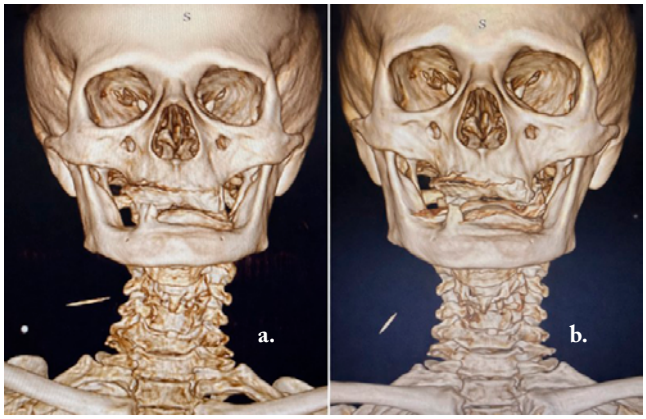


**Figure 4**. CT scan of the cervical region: a. 7th day after admission, b. over 2 months

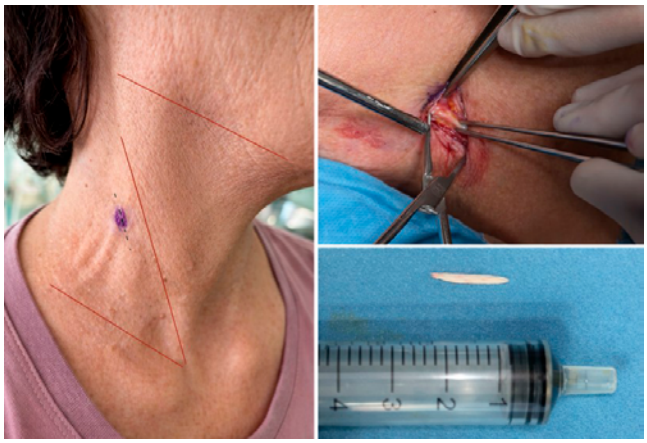

**Figure 5**. Pre- and intraoperative image in cervicotomy with foreign body removal (chicken bone).

## DISCUSSIONS

Migration of sharp foreign bodies to the hypopharynx and upper esophagus is a rare but potentially severe complication. Ingested foreign bodies are a frequent emergency in ENT practice, with a reported incidence of approximately 30–60% of cases of accidental ingestion, most of which are located in the pharynx and upper esophagus. Most common

Types of foreign bodies include bird and fish bones, cartilage, dense food proteins (meat), metal objects, plastic, coins and small jewelry, each with peculiarities of risk and complications.

Although most foreign bodies remain localized and can be removed endoscopically, their migration is reported in only 3–4% of cases, but may be associated with increased morbidity and mortality. Possible complications include:

- Pharyngeal or esophageal perforation (most commonly with sharp bones);
- Cervical or parapharyngeal abscess (especially with organic or contaminated foreign bodies);
- Suppuration and fistulas;
- Bleeding and cervical hematoma;
- Persistent dysphagia or secondary stenosis;
- Sepsis or mediastinitis in severe neglected cases.

Fish bone is considered more dangerous due to its fragility and tendency to fragmentation, which increases the risk of suppuration and the formation of abscesses. On the other hand, chicken bone, due to its density and composition – consisting mainly of hydroxyapatite ($Ca_{10}(PO_4)_6(OH)_2$), a dense mineral substance that is practically sterile at the time of ingestion – can perforate tissues and migrate without causing immediate suppuration.

These data emphasize the importance of early diagnosis, evaluation by imaging investigations (CT, X-ray or endoscopy) and the adoption of individualized therapeutic management, for the prevention of severe complications and optimization of clinical evolution.

## CONCLUSIONS

Migration of sharp foreign bodies to the hypopharynx and upper esophagus is rare, but can cause severe complications if not recognized and treated promptly. The type of foreign body influences the risk of suppuration and abscess, fish bone being more dangerous, and chicken bone being able to migrate without immediate suppuration. Early diagnosis and individualized management, including surgery when necessary, ensure favorable outcomes and prevention of complications.

Ethics Statement and Conflict of Interest Disclosures
Financial support and sponsorship: All authors have declared that no financial support was received from any organization for the submitted work.
Ethics Consideration: The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national laws. Written informed consent was provided by the patient participant in this study.
Conflict of interest: No known conflict of interest correlated with this publication.
Availability of data and materials: The data used and/ or analyzed throughout this study are available from the corresponding authors upon reasonable request.
Competing interests: The authors declared that they have no competing interests.
The use of generative AI and AI-assisted technologies: The authors did not use in this article generative AI and AI-assisted technologies.

## REFERENCES

1. Ambe P, Weber SA, Schauer M, Knoefel WT. Swallowed foreign bodies in adults: diagnostic and therapeutic strategies. Dtsch Arztebl Int. 2020;117(25):409–415.
2. Hong KH, Kim YJ. Foreign body ingestion and migration in the upper aerodigestive tract: clinical features and management. Clin Exp Otorhinolaryngol. 2020;13(4):340–346.
3. Liao CY, Wu CW, Wang LF. Migrating fish bone in the hypopharynx: the role of CT imaging in diagnosis and surgical planning. J Laryngol Otol. 2021;135(5):436–440.
4. Kim HU. Oroesophageal fish bone foreign body. Clin Endosc. 2021;54(3):318–326.
5. Pinto A, Reginelli A, Romano L, et al. Imaging of foreign bodies of the upper gastrointestinal tract: role of multidetector CT. Radiol Med. 2021;126(3):362–371.
6. Wu IS, Ho TL, Chang CC, Lee HS, Chen MK. Migratory foreign bodies in the neck: a diagnostic challenge for otolaryngologists. Diagnostics (Basel). 2022;12(6):1379.
7. Cheng YS, Chen CH, Wu YC. Cervical abscess caused by migrated esophageal foreign body: a case report and literature review. BMC Surg. 2022;22(1):310.
8. Aiolfi A, Inaba K, Recinos G, et al. Esophageal foreign bodies in adults: systematic review and guidelines for management. World J Emerg Surg. 2023;18(1):9.
9. Kuo CY, Tsai YT, Lee YS. Computed tomography-negative endoscopy in suspected fish bone ingestion: clinical implications. Eur Arch Otorhinolaryngol. 2023;280(5):2199–2206.
10. Zhang X, Li W, Chen Y. Migrating sharp foreign bodies in the hypopharynx and cervical esophagus: analysis of complications and outcomes. J Int Med Res. 2024;52(2):300060524122345.
11. Sato K, Nishimura B, Watanabe A. Management of deeply migrated pharyngeal foreign bodies: surgical approaches and outcomes. Auris Nasus Larynx. 2024;51(1):78–84.
12. Lee JH, Park JJ, Kim SY. Clinical predictors of complications following sharp foreign body ingestion in the upper esophagus. Front Surg. 2025;12:1298743.