

Extraluminal Migration of a Foreign body from upper digestive tract: A Case Report

Abstract

Fish bone ingestion is a common cause of foreign body impaction in the aerodigestive tract, particularly in regions with fish-rich diets. While most cases resolve without complications, rare occurrences of extraluminal migration can result in severe morbidity and potential mortality. This case report discusses the clinical presentation, diagnostic challenges and surgical management of a 35-year-old male with extraluminal migration of a catfish bone into the neck at Rivers State University Teaching Hospital, Nigeria. The report highlights the importance of early diagnosis and timely intervention to prevent severe complications.

Keywords: Foreign body, Extra luminal migration, Neck exploration, fish bone, endoscopy, ultrasound scan

INTRODUCTION

Ingestion of foreign bodies in the hypopharynx and cervical esophagus is one of the most frequently encountered emergencies in otolaryngology practice ¹. A swallowed foreign body can become embedded in the tonsil, base of the tongue, pyriform fossae, or any area of the upper esophagus ². This can imitate symptoms of other conditions and cause a delay in management which can further lead to life-threatening complications ³. About 80–90% of foreign bodies pass naturally and simply through the digestive tract, but a significant percentage impacts the upper aerodigestive tract ⁴. They are easily removed by endoscopy, however, in some cases, sharp foreign bodies can perforate the upper digestive tract and migrate into the soft tissue of the neck ^{1,2}. Migrating foreign bodies can remain quiescent or can cause life-threatening suppurative or vascular complications ¹. Open Surgery is necessary when endoscopic attempts fails. This is a report of an extraluminal migration of a fish bone residing in the soft tissue of the neck and which was extracted by neck exploration.

Extraluminal migration is particularly challenging to diagnose, as symptoms are often nonspecific and imaging findings can be subtle. This report presents a case of extraluminal migration of a catfish bone in a 35-year-old male and discusses the diagnostic and therapeutic approaches taken at Rivers State University Teaching Hospital.

CASE REPORT

A 35-year-old male presented to our facility with the complaint of pain and swelling on the right side of his neck of 3 months' duration. There was a positive history of accidental ingestion of fish bone two years prior to presentation. This was associated with persistent foreign body sensation in the throat for which he was evaluated at a peripheral facility, x-ray Soft tissue of

the neck and endoscopy done revealed no foreign body. The patient was absolutely free of symptoms after the endoscopy until 3 months before presentation when he developed pain and swelling on the right side of his neck.

On examination his general condition was satisfactory. His vital signs were within normal limits. Neck examination revealed a swelling of 5cm x 4cm with tenderness and differential warmth on the right supraclavicular region. Neck movements were painless. Initial laboratory investigations revealed leukocytosis (suggesting an inflammatory response). A lateral soft tissue neck X-ray was inconclusive, as it did not reveal a radiopaque foreign body. A barium swallow done was not contributory. A CT scan was ordered but was not done for financial reasons. Ultrasound scan was done in place of CT scan since swelling was thought to be more superficial.

The patient was admitted for observation and surgical intervention. Empirical intravenous antibiotics, including ceftriaxone and metronidazole, were initiated to address the localized infection and prevent systemic spread.

Under local anesthesia, neck exploration was performed via a transverse cervical incision. Careful dissection revealed the foreign body embedded in granulation tissue and surrounded by purulent material. The catfish bone was removed intact, and the abscess cavity was drained and irrigated thoroughly. A sample of the purulent material was sent for microbiological analysis. The wound was closed in layers.

The postoperative period was uneventful. The patient was placed on oral antibiotics based on culture results, which identified *Staphylococcus aureus* sensitive to ciprofloxacin. A week later he was seen in otorhinolaryngological clinic for follow-up, the patient reported complete symptom resolution, and there was no evidence of residual infection or complications.



Fig 1- Removal of the catfish bone during surgery

Discussion

Ingestion of fish bones is a common occurrence in our sub region (Southern Nigeria) , given the widespread availability and consumption of fish in local diets⁵. Catfish species, are among most prevalent due to its availability and affordability⁵. While most ingested fish bones pass harmlessly through the digestive tract, a small percentage become lodged in the upper aerodigestive tract, with the potential for extraluminal migration¹.

Extraluminal migration occurs when a sharp foreign body perforates the mucosa and moves into adjacent soft tissues^{6,7}. Common sites of impaction include the oropharynx, hypopharynx, and esophagus^{8,9}. Migration into the neck is uncommon but can lead to severe complications such as -abscess formation, vascular injury, or mediastinal involvement^{10,11}. In this case, the catfish bone migrated into the parapharyngeal space and eroded the overlying tissues.

The clinical presentation of extraluminal migration is often nonspecific, with symptoms such as persistent neck pain, dysphagia, or fever¹². A high index of suspicion is essential for timely diagnosis, particularly in patients with a clear history of fish bone ingestion and persistent symptoms.

Plain radiography is often the first-line imaging modality but has limited sensitivity for detecting non-radiopaque foreign bodies, such as fish bones¹³. In this case, the lateral neck X-ray was inconclusive. CT imaging, which provides detailed visualization of both the foreign body and surrounding structures, was not done in this case because patient couldn't afford it. An ultrasound scan was rather done because the swelling looked more superficial

Management Approaches

The management of extraluminal migration of fish bones involves prompt surgical removal and infection control. In this case, neck exploration provided definitive treatment, allowing safe removal of the foreign body and drainage of the associated abscess. Empirical antibiotic therapy was initiated based on the clinical suspicion of infection and later tailored to microbiological findings.

Delayed diagnosis and treatment can result in significant morbidity, including deep neck space infections, vascular injury, or mediastinitis. Therefore, early intervention is critical to prevent such complications.

Public Health Implications

This case underscores the importance of public awareness regarding the risks associated with fish bone ingestion. Educating the public about safe eating practices, such as careful de-boning of fish before consumption, could help reduce the incidence of such cases.

In our setting, advanced diagnostic tools like CT imaging though available is not affordable to the poor masses. Strengthening health insurance scheme to reduce out of pocket funding for health services should be prioritized. Training of clinicians to recognize and manage foreign body complications are essential steps toward improving outcomes in our settings.

Conclusion

Extraluminal migration of a catfish bone is a rare but potentially serious complication of foreign body ingestion. This case highlights the importance of high clinical suspicion, appropriate imaging, and timely surgical intervention in managing such cases. The successful outcome in this patient underscores the role of a multidisciplinary approach involving otolaryngologists and the radiologists. Future efforts should focus on preventive education and improving access to diagnostic and surgical facilities in resource-limited settings like ours.

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