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Case Report

Successful Removal of A Fishbone From The Right Vestibular Fold by Flexible Bronchoscopy: A Case Report

Menghak Heng[1*], Sophou Chit[2], Uypeng Gouv[2], Saly Saint[3], Sopha Uy[4], Ing Cheng[5], Thy Try[5], Pathy Ngeth[6], Vibopha Srey[7], Bunpaul Chhar[1,8]

[1]Pulmonologist, Pulmonology Unit, Medical Ward "A", Calmette Hospital, Cambodia
[2]Pulmonology Residency, Faculty of Medicine, University of Health Sciences, Cambodia
[3]Pulmonologist, Faculty of Medicine, University of Health Sciences, Cambodia
[4]Gynecologist, Calmette Hospital, Cambodia
[5]Neurosurgeon, Calmette Hospital, Cambodia
[6]Chief of Anesthesiology Department, Anesthesiologist, Calmette Hospital, Cambodia
[7]Chief of Intensive Care Unit B (ICU-B), Intensivist, Calmette Hospital, Cambodia
[8]Chief of Pulmonology Unit, Medical Ward "A", Calmette Hospital, Cambodia

Correspondence
Menghak Heng
Pulmonology Unit, Calmette Hospital, Phnom Penh, Cambodia
Tel: (+855)11681155

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Abstract

Background: *Ingestion of fishbones is a common otolaryngologic emergency, but migration or impaction in the lower airway is rare. When the foreign body lodges in the laryngeal or bronchial region, timely diagnosis and removal are critical to prevent airway obstruction, bleeding, or secondary infection.*

Case presentation: *We report a 45-year-old Cambodian male presenting with persistent throat discomfort and dry coughing following fish consumption. Chest X-ray was inconclusive, but the cervical CT scan revealed a sharp fishbone embedded in the right vestibular fold and confirmed with flexible bronchoscopy. The foreign body was successfully extracted using flexible bronchoscopy under local anesthesia without complications. The bronchoscopy image showed an inflammation, mild bleeding and oedema on the extraction area. The patient's symptoms resolved immediately after the procedure.*

Conclusion: *This case highlights the diagnostic value and safety of flexible bronchoscopy in managing upper airway foreign bodies, even in anatomically delicate locations like the vestibular fold. Prompt recognition and endoscopic intervention can prevent unnecessary surgical exploration.*

Introduction

Foreign body aspiration or ingestion is a common clinical occurrence in Asian countries, where fish consumption is prevalent [1]. Most fishbones become lodged in the oropharynx or esophagus and are removed by otolaryngologists [2,3]. However, rare cases may involve migration to the laryngeal or bronchial structures, posing diagnostic and therapeutic challenges.

Flexible bronchoscopy has become a safe, minimally invasive diagnostic and therapeutic tool for airway foreign bodies [4,5]. Compared to rigid bronchoscopy, it allows better access to distal airways under local anesthesia and is particularly useful in adults with stable airways [3-5].

We report a rare case of a fishbone lodged in the right vestibular fold, successfully removed by flexible bronchoscopy at Calmette Hospital, Phnom Penh, Cambodia. This case underscores the importance of early suspicion, bronchoscopic assessment, and interprofessional collaboration between pulmonologists and otolaryngologists.

Case Presentation

A 56-year-old male presented to the Pulmonology Unit at Calmette Hospital with a one-month history of throat discomfort, cough, and minor hemoptysis after eating grilled fish. The patient reported an immediate foreign-body sensation after swallowing but initially ignored it. The following day, he experienced worsening throat irritation and coughed up streaks of blood. There was no dyspnea, chest pain, or fever.

On examination, the patient was alert and in no respiratory distress. Oropharyngeal inspection was unremarkable. Indirect laryngoscopy was inconclusive due to patient discomfort and the movement of vocal cord. Vital signs were stable, with oxygen saturation of 98% on room air.

A routine blood tests were normal. Given the persistent symptoms and risk of airway foreign body, ENT investigated by endoscopy was normal and no seen the foreign body in the upper airway. A lateral neck CT scan showed clear evidence of a radiopaque foreign body on the right-side vestibular fold which

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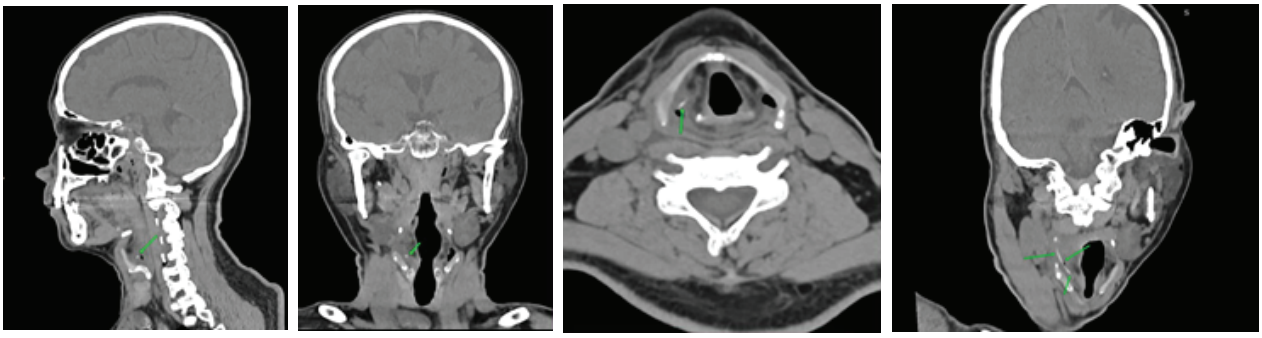
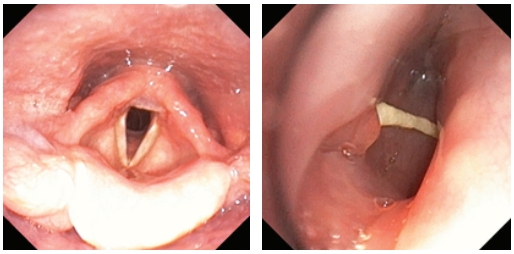
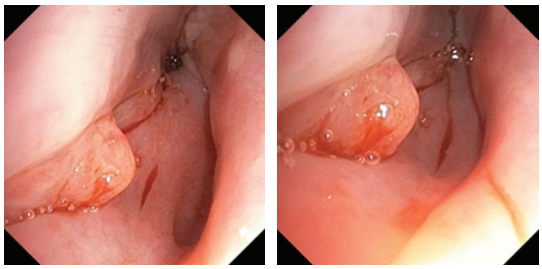


Figure 1: *CT scan of the neck*



Vocal cord was normal. Fishbone was presented on the right-side of vestibular fold

Figure 2: *Flexible bronchoscopy viewed the fishbone*



Fishbone was extracted from the right-side of vestibular fold, mild bleeding and oedema mucus were noted on that area

Figure 3: *Image of mucosa after the removal of fishbone*

Fishbone was extracted from the right-side of vestibular fold successfully by flexible bronchoscopy

Figure 4: *Fishbone was successfully extracted outside*

was suspicion of the fishbone (Figure 1). The diagnostic was confirmed by flexible bronchoscopy which was performed under local anesthesia with mild sedation.

Flexible bronchoscopy revealed a sharp linear foreign body embedded in the mucosa of the right vestibular fold, oriented obliquely with one end penetrating the mucosal surface (Figure 2). Minimal surrounding erythema and oozing were noted, but there was no airway edema or obstruction (Figure 3).

The fishbone was carefully dislodged and extracted using a flexible alligator forceps through the bronchoscope channel (Figure 4). The procedure lasted approximately 15 minutes. No active bleeding or mucosal tear was observed after removal. The patient tolerated the procedure well.

Post-procedure, the patient reported immediate relief of throat irritation. Hemoptysis ceased completely. He was monitored for 2 hours and discharged with oral steroid and saline gargles. A follow-up examination one week later confirmed full mucosal healing and absence of symptoms.

Discussion

Foreign body ingestion, particularly of fishbones, is a frequent clinical occurrence in Asian populations owing to dietary customs that favor fish consumption [1]. Although the majority of ingested fishbones become lodged in the oropharyngeal region, their migration into the larynx or tracheobronchial tree is exceedingly uncommon, accounting for less than 1% of all airway foreign bodies [4]. The diagnostic process is often complicated by nonspecific symptoms such as a persistent foreign body sensation, odynophagia, or mild hemoptysis, which may easily be mistaken for more benign conditions like laryngitis or pharyngitis [1,2,4]. Moreover, radiolucent fishbones

often go undetected on plain radiographs but specific on CT scan radiation, emphasizing the importance of maintaining a high index of suspicion [3,5]. In cases where symptoms persist despite negative imaging, endoscopic evaluation is essential for accurate diagnosis and management [4,5].

Traditionally, rigid bronchoscopy has been regarded as the gold standard for removing airway foreign bodies. However, flexible bronchoscopy has emerged as an equally effective, less invasive alternative with several advantages such as: can be performed under local anesthesia, provides superior visualization of subglottic and distal airway structures, and is associated with reduced morbidity and shorter hospital stays [3-5]. In this case report, the flexible bronchoscopy not only facilitated definitive diagnosis but also enabled the safe extraction of the fishbone without the need for general anesthesia which was demonstrating both diagnostic and therapeutic value in adult patients with stable airways.

This case underscores three key lessons. First, early clinical suspicion remains crucial; any persistent throat discomfort following fish consumption should raise concern for a retained foreign body, even in the absence of radiographic findings, CT scan is needed. Second, flexible bronchoscopy should be considered early as it provides both diagnostic and therapeutic benefits. Third, optimal outcomes are achieved through effective interprofessional collaboration among pulmonology, otolaryngology, and anesthesiology teams.

Several reports, have documented successful bronchoscopic removal of fishbones lodged within the bronchial or tracheal regions. However, impaction at the vestibular fold remains a rare phenomenon due to the anatomical protection of this area. The current case contributes to the limited body of literature from Southeast Asia and particularly Cambodia which was highlighting the expanding role of flexible bronchoscopy in tertiary healthcare settings for managing rare and complex airway foreign bodies.

Conclusion

This case demonstrates the interest of CT scan for diagnostic as well as the flexible bronchoscopy for diagnostic and therapeutic choice which is a safe and effective procedure for removing sharp airway foreign bodies such as fishbones, even in delicate regions like the vestibular fold. Clinicians should maintain high clinical suspicion in patients with persistent throat symptoms after fish ingestion as well as others foreign bodies, and prompt endoscopic evaluation should be pursued to prevent complications.

Acknowledgments

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Conflicts of Interest

The authors declare no conflicts of interest.

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