



## Migration of Pharyngeal Foreign Body to The Skin

Saidatur Md Ali <sup>1</sup>, Irfan Mohamad <sup>1</sup>, Nurul Farahiyah Abdullah <sup>2</sup>

1. Department of Otorhinolaryngology- Head and Neck Surgery, School of Medical Sciences, Universiti Sains Malaysia Health Campus, 16150, Kubang Kerian, Kelantan, Malaysia
2. Department of Otorhinolaryngology-Head & Neck Surgery, Hospital Kulim, Kulim, Kedah Otorhinolaryngology Department Faculty of medicine Kafrelsheikh university

### Abstract:

**Background:** Impaction of the fishbone over the throat is a common presenting complaint to emergency department (ED). In an uncomplicated case, removal can be done easily in emergency department or clinic setting using Keluskar fish bone forceps under direct visualization or endoscopic guidance. In some unfortunate cases, fishbone may migrate to other structures causing complications such as neck abscess, airway obstruction, major vessels injury, mediastinitis and even death. High suspicion based on history and clinical examinations are vital so that patient can be referred to Otolaryngologist early and prevent these complications.

**Keywords:** Complication, Fish Bone, Foreign body, Migration, Pharynx.

### Introduction

Patient with fish bone impaction may present with foreign body (FB) sensation, localized odynophagia and dysphagia.<sup>1</sup>

Common sites of impaction are the oral cavity, oropharynx/hypopharynx, and esophagus<sup>1</sup>. However, in some cases, extraluminal migration of sharp FB is possible, leading to symptoms despite negative scope findings.<sup>2</sup>

Plain radiograph although cheap and easily done, it offers great value to assist in the diagnosis of radiopaque FB.

### Case Report

A 40-year-old female with no known comorbid presented to ED with two

days history of painful neck swelling. Thorough palpation of the swelling reveals a protruding sharp material just underneath the skin (**Figure 1**).

Further history revealed that one week prior, she had a history of anchovies stuck in her throat, which caused her to induce vomit and swallow rice balls to dislodge the fishbone distally. The odynophagia later resolved spontaneously, thus; she did not seek further treatment. Based on both patient's clinical histories and physical examination finding, these arose suspicion of migrating fish bone. A lateral neck radiograph showed suspicion of FB at the level of C6

(Figure 2). Nasopharyngolaryngoscopy however showed no abnormalities.



**Figure 1:** Inflamed left neck swelling, 3x3cm with sharp material underneath skin at the centre.



**Figure 2:** FB at the level of C6 (arrow).

An emergency direct laryngoscopy was performed under general anaesthesia to visualize any possible FB remnant or sign of injury in the larynx or oesophagus and no remarkable finding was seen. We then proceeded with neck exploration under the same setting. An incision was made over the most prominent site of the FB. At the subcutaneous level, an intact fishbone was found protruding through the

sternomastoid muscle. The fishbone was removed successfully (Figure 3).



**Figure 3:** Fish bone measuring 2.5cm after a complete removal

Inflammation surrounding tissue was noted, but no pus was seen. The wound was cleaned with a copious amount of diluted povidone and normal saline before being closed with primary closure and an intravenous amoxicillin/clavulanic acid was given for two days.

The patient was discharged home two days post-surgery, and oral antibiotics continued for one week. At one-month follow-up after discharge, the patient was well without any immediate or late complications of the fishbone migration.

### **Discussion :**

Acute presentation following fishbone impaction prompts immediate identification and removal of FB to prevent complications. In most cases, the patients present within 24 hours.<sup>2</sup>

If the patient presents later with neck swelling with a preceding history of fishbone impaction, abscess formation or FB migration should be considered.

Common sites for fishbone impaction in adults are the oropharynx /hypopharynx, oral cavity, and esophagus.<sup>3</sup>

However, extraluminal migration FB is possible, thus causing symptoms despite negative scope findings.<sup>4</sup> Lateral neck radiograph is helpful to locate radiopaque FB.<sup>2</sup> The specificity and sensitivity of plain radiographs concerning the detection of fishbone have been reported as 72% and 39%, respectively.<sup>5</sup> Identification of FB via plain radiograph however can become challenging when the FB is located near bone due to its similar density or when the object itself is radiolucent.<sup>5</sup> In suspected complications or when other investigative modalities yield negative results, a computed tomography (CT) scan is valuable for detecting the site, size, and relation of the FB with surrounding structures, assessing the extent of damage, and identifying the presence of an abscess.<sup>6</sup>

Pharynx is a common site for linear bone impaction in comparison with flat and geometric bones which are more prone to oesophageal perforation. Sharp, linear bone possesses a higher risk of local damage as it can cause mucosal laceration, perforation, and penetration to adjacent tissue.<sup>4</sup> Swallowing food boluses by the patient might facilitate fishbone migration in this case.<sup>5</sup>

**Johari et al** reported case series where extraluminal migration of FB causes vascular complication (common carotid artery) and neck abscesses involving the thyroid gland, retropharyngeal and parapharyngeal abscess,<sup>7</sup> which can lead to airway compromise, mediastinitis, and carotid rupture.<sup>8</sup>

Once precise localization of FB is identified, usually on CT scan, FB needs to be removed depending on the site of impaction. While the endoscopic technique is the treatment of choice for airway and oesophageal FB,

extraluminal FB migration should be removed via external neck exploration to avoid important neck structures and life-threatening complications.<sup>9</sup>

### **Conclusion:**

The migrated fishbone should be suspected in cases where the patient presents with neck symptoms with a preceding history of FB impaction.

A negative finding in endoscopic examination does not rule out the diagnosis when the clinical histories and other physical examinations are suggestive.

Plain radiograph neck is helpful in the diagnosis of radiopaque material, but a contrast-enhanced CT scan is the standard-of-care imaging when FB is radiolucent or complications such as neck abscess are suspected. Depending on the extent of migration, removal of FB via an external approach should be considered.

### **Reference:**

1. Klein A, Ovnat-Tamir S, Marom T, Gluck O, Rabinovics N, Shemesh S. Fish Bone Foreign Body: The Role of Imaging. *Int Arch Otorhinolaryngol.* 2018;23(1):110–5.
2. Chee L, Sethi D. Diagnostic and Therapeutic Approach To Migrating Foreign Bodies. *Ann Otol Rhinol Laryngol* 1999; 108: 177- 80. (4-2)
3. Thuduvage Vs. Migrated Fish Bone into The Neck: A Case Report. *J Med Case Rep.* 2021; 15: 452
4. Ahmad R, Ishlah W, Shaharudin Mh, Sathananthar Ks, Norie A. Posterior Mediastinal Abscess Secondary to Esophageal Perforation Following Fish Bone Ingestion. *Med J Malaysia* 2008; 63:162–163.
5. Campbell Ea, Wilbert Cd. Foreign Body Imaging. In: *Statpearls [Internet]. Treasure Island (FL): Statpearls Publishing; 2020.*

6. Wu E, Huang L, Zhou Y, Zhu X. Migratory Fish Bone in The Thyroid Gland: Case Report and Literature Review. *Case Rep Med.* 2018; 2018:7345723.
7. Johari Hh, Khaw Bl, Yusof Z, Mohamad I. Migrating Fish Bone Piercing the Common Carotid Artery, Thyroid Gland and Causing Deep Neck Abscess. *World J Clin Cases* 2016; 4: 375-9.
8. Ramachandran K, Divya G, Hameed As, Vinayak K. Extraluminal Migration of Foreign Body: A Report of Two Cases. *Int. J. Head Neck Surg.* 2013; 4: 98– 101.
9. Kim Hu. Orosophageal Fish Bone Foreign Body. *Clin Endosc* 2016; 49: 318– 326.