

An elderly man with acute anterior neck pain and odynophagia after a meal

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Abstract

The upper aerodigestive tract, specifically the cricopharyngeal area, is the most common site of foreign body impaction. Anatomically, this area is the first constriction of the oesophagus. Fish bones, one of the most common foreign bodies encountered in the throat, tend to get stuck in this area. The movement of this sharp-edged foreign body upon swallowing will induce odynophagia and an acute onset of neck pain. We report a case of a healthy elderly man who complained of sudden anterior neck pain and odynophagia after eating yellowtail scad fish.

Introduction

Among the foreign bodies ingested, fish bone is most commonly encountered in the throat. The oropharynx, which consists of the tongue base, tonsils and vallecula, is the common site of impaction of foreign bodies.¹ In the majority of cases, part of the bone will be embedded in these structures leaving the remaining exposed. Thus, removal of oral and oropharyngeal foreign bodies can be done in the outpatient setting. In some cases, the fish bone tends to be dislodged and impacted more distally, such as on the epiglottis itself, in the respiratory tract or commonly into the alimentary tract.² In the gastrointestinal tract, the upper oesophagus is surrounded by the cricopharyngeus muscle, which functions as the upper oesophageal sphincter. This constriction acts as a common site of foreign body impaction.

Case Summary

A 61-year-old man with no past medical illnesses presented with an acute onset of anterior neck pain. The neck pain was associated with odynophagia and dysphagia, and this occurred after eating fish (yellowtail scad) the day before. He also had frequent spitting after the incident.

He was afebrile and the vital signs were normal. Physical examination revealed tenderness over the anterior neck region at the level of the thyroid cartilage, but there was no associated

swelling or overlying skin abnormality. A flexible pharyngolaryngoscopy did not reveal any foreign body in his pharynx or larynx and there was no sign of inflammation. Based on the history, an impacted fish bone was suspected. A lateral neck plain radiograph was obtained, which revealed a radio-opaque object at the level of the sixth cervical (C6) vertebral body (Figure 1).

Figure 1. Lateral neck plain radiograph showing a suspicious radio-opaque foreign body at the level of the sixth cervical vertebral body (arrow).



A rigid oesophagoscopy was done under general anaesthesia, which revealed a triangular-shaped fish bone stuck at the level of the cervical oesophagus. It was also observed that the posterior wall of the oesophagus was slightly lacerated. The fish bone which was 1.5 cm x 2.0 cm in dimension was removed completely (Figure 2).

Figure 2 Triangular-shaped fish bone (measuring 1.5 mm x 2.0 mm) lodged at the cervical oesophagus.



neck pain and odynophagia disappeared on the next day. He was able to take orally and was discharged on the third day after the procedure.

Discussion

Bony fish is common in the diet among Malaysians. It is a readily available source of protein and more economical compared with other types of meat or poultry. The fact that Malaysians like to cook whole fish, unlike the Western population that prefer to use fish fillet, has made the incidence of fish bone in the throat more common in our population.

The diagnosis of fish bone in the throat is largely dependent on the history. The acute onset of odynophagia would support the diagnosis of a fish bone rather than an infection or inflammation. The area of origin of the neck pain pointed out by the patient is critical and helpful in localising the probable location of the foreign body. As most fish bones are found in the tonsils or at the base of the tongue, the patient will commonly point to the area below the angle of the mandible, on the affected side,

and will also experience odynophagia with every act of swallowing. Thus, a primary search should be made in this location. In our case, the patient pointed to an area anterior to the thyroid cartilage, which corresponds well to the anatomical location of the impacted fish bone indicated on the radiograph.

Nevertheless, some pre-existing pathology which can be incidentally discovered during swallowing should be considered as differential diagnosis. These include a retropharyngeal abscess, Zenker's diverticulum, or severe cervical spondylosis. On the other hand, cricopharyngeal spasms and anxiety could also produce a sensation of a lump in the throat, a description coined as globus hystericus. However, this entity is usually unrelated to swallowing food or drink. The initial workup is the same as that for any foreign body sensation in the throat.

In more distal locations, the fish bone needs to be removed under general anaesthesia. In these cases, a plain radiograph of the soft tissues of the neck, especially the lateral view, is very valuable. Despite this, not all fish bones in the throat can be visualised on plain radiographs. The sensitivity is dependent on a few factors such as location, opacity and position of the fish bones. A study conducted involving 15 different species of bony fish which are commonly consumed by Malaysians showed that the majority of our local fish, including the yellowtail scad, is radio-opaque on a plain radiograph.³

In the case of a symptomatic patient, even with negative plain X-ray findings, an otolaryngologist referral is justified as a radiolucent sharp object is not uncommon.⁴ An office pharyngolaryngoscopy may be the initial procedure before resorting to rigid direct laryngoscopy and oesophagoscopy under general anaesthesia. The fish bone is a sharp object, which can easily traumatise the structures surrounding it. In this case, the fish bone removed is triangular in shaped and is commonly found while eating fish heads. This can induce more damage to the surrounding structures than usual, if it is not discovered early and carefully retrieved.

A computed tomography (CT) scan is indicated in persistently symptomatic patients whose plain neck radiographs are negative but have a history of having consumed fish.⁵ The reported sensitivity and specificity of plain X-ray are 54.8% (17 of 31) and 100% (45 of 45), respectively, whereas both sensitivity and specificity of the CT scan are 100%. As such, a fish bone that has migrated and thus not evident on clinical examination, endoscopies and X-rays could be seen on the CT scan. The sequelae of these missed fish bones can be abscess formation, damage of major structures in the neck and even spontaneous protrusion onto the skin.^{6,7}

Conclusion

A patient presenting with odynophagia with a positive history of fish bone ingestion should be dealt with carefully. Even with negative X-ray findings, clinical suspicion should lead the practitioner to seek referral for additional endoscopic examination or CT imaging if indicated. Failure to detect or locate a sharp foreign body such as a fish bone in the throat may lead to catastrophic complications.

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