

## Self-extrusion of a foreign body from the upper digestive tract to the skin

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### Abstract

Migrated ingested foreign bodies from the upper digestive tract have the potential to cause life-threatening complications. Cases of spontaneous expulsion to the skin of the neck are very rare. We present an unusual case of an ingested foreign body that migrated out of the upper digestive tract and self-extruded via the skin of the neck. An approach to the safe management of such seemingly innocuous foreign bodies is discussed. This report highlights the message that unfound ingested foreign bodies should be treated seriously due to the possibility of migration and resulting complications.

**Key words:** Foreign Bodies; Pharynx; Complications

### Introduction

The commonest otolaryngological emergency seen in Singapore is the accidental ingestion of foreign bodies. The majority of these foreign bodies consist of fish bones (85 per cent).<sup>1</sup> This high incidence of fish bone ingestion reflects the local preference of cooking and eating fish that is not de-boned and using the mouth to separate the bone from the meat.

Foreign bodies found at the upper aerodigestive tract can usually be removed in the out-patient clinic with forceps. If the foreign bodies are lodged at the cricopharynx or at any of the anatomical constrictions along the oesophagus, rigid oesophoscopy under general anaesthesia is mandatory for extraction. Rarer outcomes for ingested foreign bodies include migration of the foreign body into the soft tissues of the neck<sup>2</sup> or even the mediastinum.<sup>3</sup> A migrated foreign body has the potential to cause suppurative as well as vascular complications such as an arterial-oesophageal fistula.<sup>4</sup>

We present a unique case of spontaneous self-extrusion of a migrating fish bone from the pharynx to the skin of the neck, without causing any adverse effect to the patient.

### Case report

A 73-year-old Chinese gentleman presented to the Accident and Emergency department after having swallowed a fishbone on the same day of consultation. No foreign body was found on clinical examination. A lateral neck X-ray did not show evidence of any foreign body. An ENT follow-up appointment was given.

Nine days following ingestion, he was seen in the ENT out-patient clinic. His symptoms had improved and no foreign body was found on examination. A week later his symptoms had completely resolved and once again, no foreign body was found on examination. He was discharged from follow-up.

At exactly 46 days after ingestion of the fish bone, he re-attended complaining of a fish bone protruding from the



FIG. 1

Foreign body protruding from left side of patient's neck.

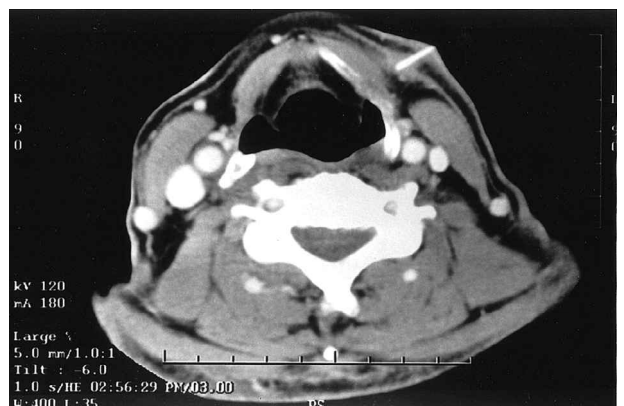


FIG. 2

Axial CT scan of the neck showing foreign body emerging from left side of neck.

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left side of his neck. He was well with no other symptoms. The tip of the fishbone could be seen protruding from the left side of his neck (Figure 1). An immediate computer tomography (CT) scan of his neck was performed to exclude possible complications. This showed a 12 mm linear density foreign body embedded in the superficial subcutaneous tissue overlying the thyroid cartilage (Figure 2). No suppurative or vascular complications were demonstrated. The foreign body was safely removed under local anaesthesia and antibiotics prescribed.

One week later, he was reviewed and the puncture wound on the left side of the neck where the foreign body had penetrated the skin was noted to have healed.

### Discussion

The local diet has a predilection for fish to cater to the Singaporean taste buds, as a result, fish bones are the most commonly ingested foreign bodies. Due to their sharp contours, there is a higher risk of perforating the oesophagus, migration and complications. In a local study on 273 patients with ingested foreign bodies in the oesophagus, 20 (7.3 per cent) had major complications, which included oesophageal perforation, mediastinitis, pneumonia, retropharyngeal abscess and arterial-oesophageal fistula.<sup>4</sup> There were two (0.7 per cent) deaths as a result of these major complications, one of which was due to a subclavian-oesophageal fistula, and the other was due to mediastinitis and pneumonia.

In the English medical literature, there have been multiple case reports of migrated ingested foreign bodies. These have been found at various sites including the common carotid artery,<sup>5</sup> thyroid gland<sup>2</sup> and mediastinum.<sup>3</sup> In such situations, a CT scan is usually mandatory to localize the foreign body and exclude suppurative and vascular complications. This is followed up with surgical exploration to locate and remove the foreign body as well as to deal with any resulting complications.

A much rarer outcome is the spontaneous extrusion of an ingested foreign body via the skin of the neck. Thus far, a search of the literature has only produced two reports of self-extrusion of the foreign body, the first in 1972<sup>6</sup> and the second in 1991.<sup>7</sup> As in our case, these patients present with a visible foreign body protruding out from the skin of the neck, with a recent history of foreign body ingestion. In such cases of self-extrusion of foreign body, localization is not an issue and it would be very tempting to simply extract the protruding foreign body from the skin and close the case. However, that could be a rather dangerous and inadequate form of treatment.

Bearing in mind all the possible complications that can arise from a migrated foreign body as highlighted earlier, such patients with spontaneous extrusion should similarly be managed with great care and caution. After all, the foreign body has usually been ingested for a rather long time and it has had to traverse all the vital structures in the neck to protrude out of the skin. The potential for any complications is appreciably magnified. This point is supported by evidence, which shows that the duration of foreign body is a statistically significant factor associated with major complications.<sup>4</sup>

We propose that for patients with self-extruded foreign bodies, a CT scan of the neck is mandatory before attempting removal. The main reason is to exclude vascular complications such as a pseudoaneurysm of the great vessels of the neck, or the foreign body may be so long that the other end is in one of the great vessels, removal of which could trigger a fatal haemorrhage. A CT scan will also rule out suppurative complications such as a deep neck abscess that might require surgical drainage and antibiotics. A third reason for radiological investigation is

that the path taken by the foreign body in migrating to the skin may result in the formation of a fistula track to the digestive system, which may require surgical excision and closure, or regular wound dressing.

- **A patient presented with signs and symptoms compatible with an ingested fishbone**
- **The bone was not seen on routine examination but, six weeks later, he presented with the bone protruding from the side of the neck**
- **This atypical presentation is not unknown but is very uncommon. The authors suggest that CT scanning should be undertaken to rule out abscess formation and to ensure there is no underlying damage to the great vessels**

Once complications are excluded, the foreign body can be safely removed from the skin. The resulting wound can either be irrigated or debrided until clean. Prophylactic broad-spectrum antibiotics can be used, and the patient should be reviewed until the neck wound heals. During the period of follow-up, a vigilant look-out should be kept to pick-up infective changes or fistula formation.

### Conclusion

Self-extrusion of a migrated ingested foreign body via the skin of the neck is indeed a rare occurrence. Such cases should be treated with utmost respect and caution just like any other case of a migrated foreign body which is embedded in the deep tissues of the neck. A CT scan of the neck is mandatory to exclude possible complications before the foreign body is extracted. Proper wound care is required to deal with the resultant puncture wound made on the exit site and the patient should be followed up until the wound heals completely.

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Dr A. K. L. Tan takes responsibility for the integrity of the content of the paper.

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