

# Unusual migratory foreign body in the neck

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## ABSTRACT

Reports of ingested foreign bodies penetrating the pharynx and migrating through the neck are rare, and mostly involved fish bones. We describe a 44-year-old man who was involved in a motor vehicle accident and accidentally swallowed his tooth. The swallowed tooth penetrated the pharynx and became lodged adjacent to his right thyroid gland. It was successfully removed via neck exploration and the patient recovered well.

**Keywords:** foreign body, neck, thyroid gland, tooth

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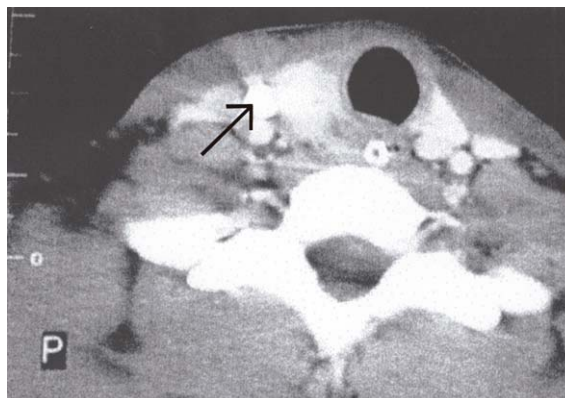
## INTRODUCTION

Although there are numerous case descriptions of ingested foreign bodies of the upper aerodigestive tract, only a small number perforate the oesophagus and an even smaller fraction migrate extraluminally. Most of these migratory foreign bodies reported so far have been fish bones and other sharp objects. The case described here is the first report of a patient's own ingested tooth migrating into the neck. This case highlights the possibility of swallowed teeth or dentures following maxillofacial trauma presenting as a foreign body in the neck.

## CASE REPORT

A 44-year-old Malay man presented with a one week history of dysphagia and low-grade fever. He was apparently involved in a motor vehicle accident one week prior to presentation, where he fractured his incisor tooth and presumably ingested it. He did not complain of any shortness of breath, vomiting of blood or retrosternal chest pain. On examination, there was some tenderness and surgical emphysema in the right anterior triangle of the neck, but no mass was palpable. Indirect laryngoscopy showed the right aryepiglottic fold and epiglottis to be oedematous and thickened. The right pyriform fossa was obliterated. There was no other remarkable finding.

Rigid oesophagoscopy was performed and the foreign body was visualised. Removal was



**Fig. 1** Enhanced axial CT image of the neck shows the tooth (arrow) lying anterior to the common carotid artery and lateral to the right thyroid lobe.

unsuccessful due to granulation tissue surrounding it at the level of the laryngopharynx. Computed tomography (CT) was subsequently done and showed the foreign body to be lodged in the right side of the neck, lateral to the thyroid gland and lying on the right common carotid artery (Fig. 1). The thyroid gland appeared deformed and fragmented in its superior and lateral aspects. Neck exploration was done via a collar incision and the offending tooth was found anterior to the right common carotid artery and next to the right thyroid lobe, which appeared normal. The patient recovered well with no complications after a period of oesophageal rest and intravenous antibiotics.

## DISCUSSION

The incidence of ingested foreign bodies penetrating the oesophagus and lying extraluminally in the neck is fairly rare. Goh and Tan described a series of four cases of oesophageal penetration and migration into the thyroid gland by fish bones over a period of 11 years<sup>(1)</sup>. All the bones were successfully removed by neck exploration and only one case required thyroid lobectomy.

An extensive search of current literature did not reveal any documented case of a displaced tooth penetrating the oesophagus to present as a foreign body in the neck. Abe et al reported a series of 41 cases of dentures presenting as foreign bodies in the

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upper aerodigestive tract<sup>(2)</sup>. Of these, 37 were found in the oesophagus and two each in the hypopharynx and air passages, respectively. Thirty-nine dentures were removed by oesophagoscopy and none of the cases required external neck exploration.

Al Muhanna et al described a case where repeated oesophagoscopy failed to locate any foreign body in a patient presenting with painful dysphagia<sup>(3)</sup>. CT subsequently showed a fish bone embedded in the right thyroid lobe. Sethi and Stanley also described two cases of fish bones penetrating the oesophagus and concurred that CT is the investigation of choice not only for localising the foreign body, but also for planning the neck exploration<sup>(4)</sup>. Furthermore, it provides the surgeon with an estimated dimension of the foreign body. This could prove vital as inadvertent breakage of foreign bodies sometime occurs during exploration, and a second look may be necessary when the extradited foreign body is smaller than expected from radiological examination.

The patient was fortunate in that surgical intervention was instituted expeditiously despite the patient presenting one week after swallowing the tooth. Any further delay may have resulted in the

tooth eroding into the right common carotid artery. Oesophageal perforation, if left untreated, carries a high mortality rate. In a study of 80 cases (26 cervical, 45 thoracic and 9 abdominal), Ribet et al found a mortality rate of 35%<sup>(5)</sup>. The most important prognostic factor appears to be the presence of infection.

In conclusion, the possibility of a migratory tooth or denture needs to be considered when a patient with recent maxillofacial trauma complains of painful dysphagia, especially when there is evidence of lost tooth or dentures. If standard radiographs and oesophagoscopy fail to locate the foreign body, CT and subsequent neck exploration are indicated.

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**(Dr. S. Y. Tan, UH Professor of Medicine,**

**will be in Singapore to conduct interviews during the first 3 weeks of November).**