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Foreign body in the tongue: an unusual site for a common problem

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Abstract
Foreign bodies in the upper aerodigestive tract represent one of the commonest ENT emergencies. A case report of a fish bone penetrating the anterior tongue is presented which exemplifies this frequent problem, but at a rare site.

Introduction

Foreign bodies in the oral cavity are infrequently reported in the literature. The majority of reported cases are associated with varying degrees of trauma and include glass (Worth, 1963), metallic projectiles (Kasle, 1969), teeth (Srivastava *et al.*, 1977) and dental material (Price, 1972).

Fish bones are the commonest foreign body encountered in Otolaryngology. Most of these are found impacted in the tonsil, soft palate, base of tongue, vallecula, posterior pharyngeal wall, and upper oesophagus (Jones *et al.*, 1991). A review of the literature reveals only one other documented case of a fish bone involving the anterior two-thirds of the tongue (Arora and Ruprecht, 1978).

Case report

A previously healthy 62-year-old man presented with a short history of pain affecting his tongue in the mid-line. Symptoms began during a meal of fish, the nature of which he was unsure. He denied any dysphagia or respiratory problems.

On examination of the tongue, a small bleeding point was noted in the midline on the dorsal surface of the tongue approximately 3 cm from the tip. Careful examination of this area with a magnifying glass and palpation of the dorsal surface of the tongue failed to demonstrate the protruding end of a foreign body. The remainder of the examination, including indirect laryngoscopy, was normal.

Intra-oral radiographs and lateral views of the protruding tongue (Fig. 1) demonstrated the presence of a calcified foreign body, suggestive of a fish bone, in the substance of the middle one-third of the tongue. The fish bone was directed backwards and slightly downwards.

At operation, a transverse incision was made on the dorsal surface of the tongue 1 cm posterior to the point of entry. After dividing the muscle fibres the fish bone was found without difficulty (Fig. 2) and without using localizing wires under X-ray guidance. The postoperative period was marked by moderate lingual swelling which settled within four days.

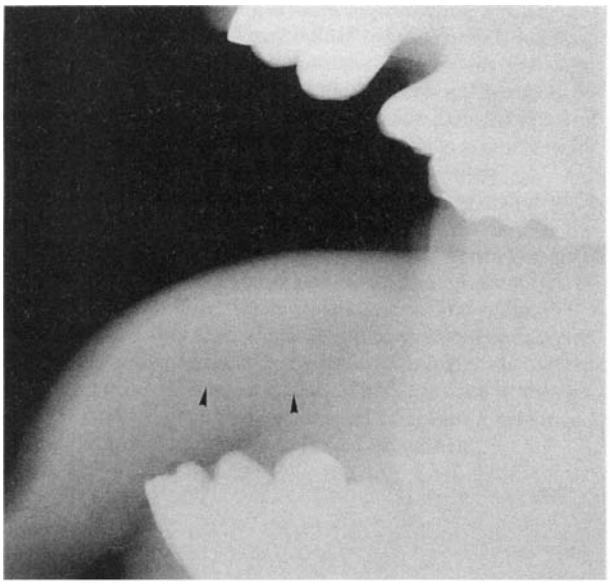

FIG. 1
Lateral view of the protruding tongue showing a faint linear calcified fish bone in the middle one-third.

Discussion

Foreign bodies in the tongue are rare with only one other well documented case of a fish bone in the anterior part of the tongue (Arora and Ruprecht, 1978). The rarity of patients presenting with foreign bodies in the tongue is probably a reflection of the tough, fibrous, mucous membrane covering the dorsum of the anterior two-thirds of the tongue, the high degree of sensitivity of the tongue to pain and the relative ease with which a foreign body, such as a fish bone, can be removed by the patient.

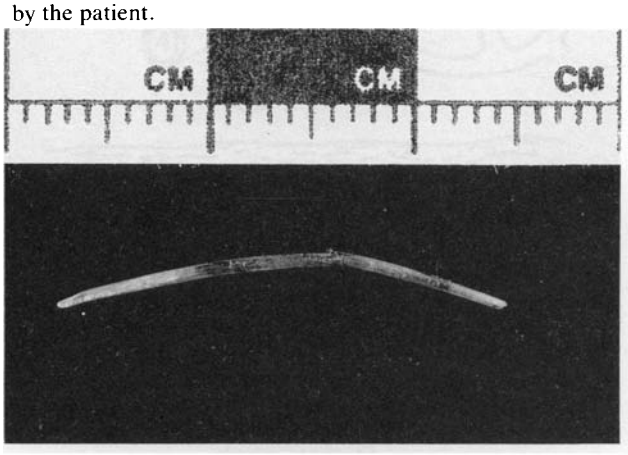

FIG. 2
Foreign body upon removal.

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The radio-opacity of fish bones is related to the species. Cod, haddock, coley, plaice and salmon being radio-opaque whereas those of mackerel and herring are radio-lucent on soft tissue radiographs (Ell, 1989). The localization of foreign bodies by plain radiographs is often difficult especially if they are radio-lucent (Caruso, 1969). As many views as possible should be taken to avoid superimposition of bony structures as mentioned in the case reported by Arora and Ruprecht (1978). Needle localization techniques employing multiple X-rays in differing planes of view may be required to establish the position of the foreign body prior to exploration. This method, however, necessitates a lengthy general anaesthetic and may be difficult to perform safely in some parts of the head and neck. Lydiatt *et al.* (1987) considers computed tomography the best modality available for the evaluation of foreign bodies since it is able to distinguish radio-lucent objects from the surrounding tissues and elucidates its spatial arrangement in three dimensions. In addition the presence of inflammation with or without abscess formation can be detected.

Failure to locate and remove a foreign body may lead to complications such as granuloma or abscess formation either at the original site of entry or at a distant site following migration (Lannigan *et al.*, 1988; Gertner *et al.*, 1991).

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