

Case Report

Foreign body, which came out of hiding after 14 years

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We present a case of FB ingestion that mimicked a neoplasm whereby a 58-year-old gentleman with a history of near fatal accident 14 years ago, complains of foreign body sensation in the throat for 4 months. Flexible laryngoscopy revealed a smooth surfaced bulge at the right lateral pharyngeal wall, pushing the right aryepiglottic fold and arytenoid medially obscuring the right vocal fold. Biopsy twice via direct laryngoscopy reported as no evidence of malignancy. Imaging findings revealed a heterogenous enhancing

mass of the lower oropharynx and hypopharynx extending from C2-C7 levels. Within the center of this mass, lay a slightly curvilinear structure returning hypointense signal at both T1- and T2-weighted sequences, highly suggestive of a FB. On third laryngoscopy, a broken denture was found hidden inferior to the mass, partly embedded at the posterior pharyngeal wall. (Rawal Med J 201;42:437-439)

Key words: Foreign body, granuloma, denture, pharynx, aspiration.

INTRODUCTION

Foreign body (FB) ingestion or inhalation is a common problem in pediatric age group, elderly and psychiatric patients. In children, coins are the most common FB that got stuck in the aerodigestive tract (ADT) while in the adult population, bones and food boluses are the most common.¹ In the elderly population, dental prostheses account for a significant number of impacted FB in the ADT. Abdullah et al in 1998 found that 11.5% of adults had impacted dental prosthesis and they commonly give a history of ingestion usually during trauma, seizure or while sleeping with the dentures on.² However, not infrequently, patients may not give a definite history of swallowing their dentures, especially following an episode of intoxication, or loss of consciousness.²

The challenge in diagnosing an impacted dental prosthesis in the ADT lies in the fact that methylmethacrylate, which is used to make dentures has a radiolucent property on radiography. This complicates diagnosis of an impacted or ingested dental prosthesis, whether or not the patient present early to the otorhinolaryngology facility. Our case is special because the patient presented 14 years after the accidental ingestion of a denture, with symptoms and signs mimicking a neoplasm.

CASE PRESENTATION

A 58-year-old gentleman with background history of multiple near fatal motor vehicle accidents (MVAs) presented with complain of FB sensation in the throat for 4 months. It was associated with worsening dysphagia to solid and change in voice. There was no odynophagia, fever, neck swelling, noisy breathing, and shortness of breath or aspiration symptom. He denied any history of corrosive ingestion but recalled losing his denture after an MVA in year 2002. Aside from losing 4kg of weight over 2 months without loss of appetite, there were no symptoms of tuberculosis (TB) or TB contact.

On examination, his voice was muffled but there was no stertor. There was no neck swelling or cervical lymphadenopathy but laryngeal crepitus was absent. Oropharyngeal examination was unremarkable. Flexible laryngoscopy revealed a smooth surfaced bulge at the right lateral pharyngeal wall, pushing the right aryepiglottic fold and arytenoid medially obscuring the right vocal fold (Fig. 1). Blood investigation and TB work up were normal. An initial differential diagnosis of hypopharyngeal carcinoma was considered. Biopsy twice via direct laryngoscopy under general anesthesia reported as no evidence of malignancy.

Fig. 1. Flexible laryngoscopy view of a smooth surfaced bulge at the right lateral pharyngeal wall, pushing the right aryepiglottic fold and arytenoid medially obscuring the right vocal fold.

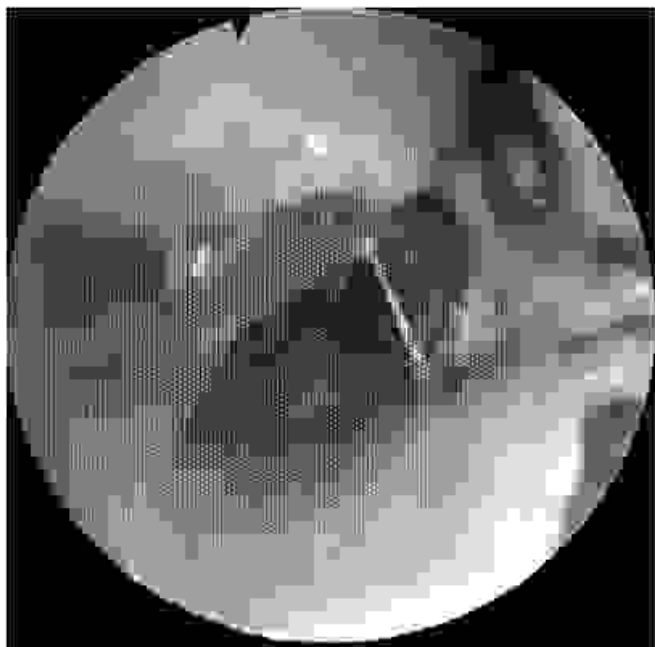
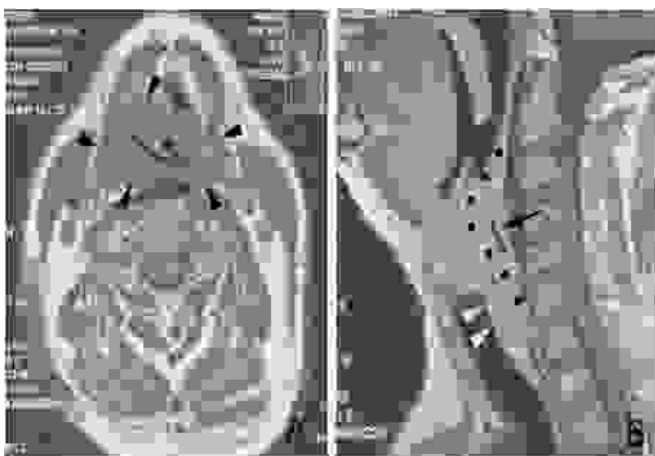


Fig. 2A & 2B: 2A. Axial T1-weighted spin echo image at the level of the false cords depicts the foreign body as a hypointense obliquely aligned, slightly curvilinear structure (asterisk).

2B. Sagittal T1-weighted post Gadolinium infused image replicates admirably the findings at lateral cervical radiography. The foreign body (arrow) exhibits the same orientation, surrounded by enhancing soft tissue (dotted line) widening the prevertebral space.



Lateral neck radiograph showed swelling of the prevertebral soft tissue with a hyperdense linear structure seen projected behind the tracheal

cartilages. This curious linear density was considered too large to be attributed as an arytenoid cartilage, and a foreign body was suspected. MRI of the neck revealed a heterogenous enhancing mass of the lower oropharynx and hypopharynx extending from C2-C7 levels. Within the centre of this mass lay a slightly curvilinear structure returning hypointense signal at both T1- and T2-weighted sequences, highly suggestive of a foreign body (Fig. 2A & 2B). On third laryngoscopy, a broken denture was found hidden inferior to the mass, partly embedded at the posterior pharyngeal wall. This was removed in one piece after incision was made on the posterior pharyngeal wall mucosa.

DISCUSSION

Patients with FB ingestion commonly complain of odynophagia, throat discomfort and dysphagia.³ Plain radiography of lateral neck is useful investigation, especially if the FB is radio-opaque. However, only 22% of dental prosthesis impacted in esophageal mucosa were found in lateral soft tissue neck radiograph and all had a metal wire attached.³ Nevertheless, plain films may give added information such as presence of air in the esophagus or gas within the soft tissues.^{2,4} There can also be increased pre-vertebral shadow and loss of cervical lordosis.⁵ Polymethylmethacrylate (PMMA), the resin base used for production of partial dentures, is radiolucent. Unless it is attached to a metallic-based reinforcement or have metallic clasps or wires, these dental prostheses would not be detected on plain radiography. This must be taken into consideration when attending to a patient with history of FB ingestion but without radiological evidence. The surgeon must pay careful attention to relevant findings on the plain film and also findings on indirect laryngoscopy.

Complications associated with FB ingestion and impaction include retropharyngeal cellulitis or abscess, retropharyngeal hematoma, esophageal perforation, mediastinitis, lung abscess, oesophago-aortic fistula and even upper airway obstruction particularly in children.^{2,6} These usually occur within the first week of ingestion.⁷ Nonetheless, rare cases of granuloma formation many months up to years following FB ingestion have been reported.^{7,8}

This granuloma may mimic a neoplasm.⁹ In a series by Hashmi et al it was reported that a severe case of FB impaction has led to erosion of a blood vessel and another had required laparotomy and gastrotomy in its management.⁴

Several differential diagnoses which include hypopharyngeal carcinoma, minor salivary gland tumor, chronic inflammatory disease such as TB as well as FB granuloma should be considered when faced with a mass in the lateral pharyngeal wall. A retained dental prosthesis in the ADT can cause delayed complication as late as several years after it was ingested, as seen in our patient. Hence, it is worthwhile looking hard for it if there is suggestive history and initial investigation for malignancy or chronic inflammatory disease yield negative results. Our patient was exhaustively worked up for neoplasia, given the history of progressively worsening dysphagia and the presence of a lateral pharyngeal wall mass. However, fortunately for him the hunt for a definite diagnosis resulted in the discovery of a missing broken denture.

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Conflict of Interest: None declared

Rec. Date: Feb 4, 2017 Accept Date: Apr 3, 2017

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